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SURVEY
OF
FOOD AND NUTRITION RESEARCH
IN
THE UNITED STATES
1947

FOOD AND NUTRITION BOARD

NATIONAL RESEARCH COUNCIL

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Psychology title page should follow page 158

**SURVEY OF FOOD AND NUTRITION RESEARCH
IN THE UNITED STATES**

1947

**A Compilation of Research Pertaining to Foods and Nutrition
in Academic, Governmental, and Industrial Laboratories**

by

**The Committee on Survey of Food and Nutrition Research
of the Food and Nutrition Board
with the support of
The Committee on Food Research
of the Quartermaster Food and Container Institute
for the Armed Forces**

**NATIONAL RESEARCH COUNCIL
June 1948**

FOREWORD

This survey of active research pertaining to foods and nutrition in the United States was undertaken by the National Research Council upon the request of and with financial support of the Committee on Food Research of the Quartermaster Food and Container Institute for the Armed Forces.

Full responsibility for the content of the present report is assumed by the Committee on Survey of Food and Nutrition Research of the Food and Nutrition Board. It should not be inferred that the report bears the indorsement of the War Department.

The classification and compilation of the information received was carried out by Mrs. Mildred S. Ragan. Acknowledgment is made to Mrs. Myrtle Walker, Mrs. Elizabeth Lee, Miss Marjorie Boone, Mrs. Jeanette Pelcovits, Miss Marjorie Reed, and Mrs. Elizabeth Peterson for faithful cooperation in the detailed work involved.

Acknowledgment is likewise extended to the many individuals, academic institutions, government agencies, members of the food industry, foundations, and others without whose cooperation this report would have been impossible.

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PREFACE

Many times during World War II, scientists working in universities, government agencies, medical schools, private institutions and in the food industry called attention to the need for a comprehensive record, listing the names and addresses of individuals working, or qualified to work, on food and nutrition problems. A similar need was evident in regard to an organized subject matter record of investigative work under way. The value of such information for general use in peacetime had long been recognized, but the need was obviously more critical as the nation was faced with measures incident to efficient action during the war.

The present project was therefore undertaken by the Food and Nutrition Board of the National Research Council, with the advisory assistance and financial aid of the Quartermaster Food and Container Institute for the Armed Forces. Frequent revisions of the report will be necessary to correct changes in address and changes in research activity that are normal to peacetime circumstances.

The great expansion in research activities relative to foods and nutrition preceding and during the war period served to focus attention upon the need for more information regarding work under way in different institutions, where normally there would be little opportunity to avoid unnecessary duplication, both in private and public organizations. Nearly all government agencies and many university type organizations publish records of their research activities, but frequently the compilations are too vague in regard to subject matter and deal too largely with past activities to be of appreciable usefulness to those who are planning research in either public or private research organizations.

Within the food industry, there are competitive aspects to research that make it inadvisable for many organizations to publish detailed accounts of activities, either in accordance with subject matter or on the basis of responsibilities of their personnel. However, the general nature of much industrial research does not need to be restricted, and hence, in practice, is known to the public. In planning the present publication, every effort has been made to protect the wishes of individuals and groups in regard to detailed or confidential information.

There is an obvious service to industrial groups as well as to public institutions in preparing a reference of the kind that is provided in this publication. The relative emphasis currently placed on different areas of research will serve to stimulate increased interest and a sense of confidence in exploring the areas that now receive little attention, in addition to focussing attention upon the areas of greatest concern at the moment. University and government scientists are relatively free to explore areas without regard to immediate applications, and there is a natural desire, in many cases, to extend the frontiers in areas that would not otherwise receive attention. Furthermore, many research organizations are now so extensive and diversified, both in subject matter and in geographic distribution, that it is difficult to keep informed in regard to what is under way in other laboratories within their own organizations, to say nothing of the difficulty of attempting to appraise the entire field of food and nutrition research.

In regard to personnel, a few directories have been available, such as those published by the American Chemical Society, American Institute of Food Technologists, American Public Health Association, Federation of American Societies for Experimental Biology, American Medical Association, American Dietetic Association, and the American Home Economics Association, but these directories have a different basis for selection from that provided in the present publication. This listing is more general as far as training is concerned, and is selective as the basis of personnel now engaged in food and nutrition work, including only those reported as investigators in current research projects. The Office of Scientific Personnel is collecting a more detailed and more diversified record of scientifically trained personnel. Their work is of a different nature than this publication, though their cooperation in the present undertaking has been very helpful.

Suggestions regarding possible improvements in this type of publication will be welcomed, and since frequent revisions are anticipated, changes can be put into effect promptly. The committee realizes that there have been many omissions in the present edition, but there was

unanimous agreement that sufficient material was at hand to justify publication, and further, that sufficient time had been permitted to elapse since requests for information were forwarded to interested organizations. It has been attempted in this first report to list organizations furnishing financial support along with the organization in which the research is being done. Undoubtedly there are unfortunate omissions in this respect and comments will be helpful in determining whether or not this type of information, even though incomplete, should be included in subsequent editions.

The following data provide an approximate summary analysis of the subject matter distribution with the inevitable fallacies of necessity due to any arbitrary classification.

ANALYSIS OF PROJECT DISTRIBUTION IN FOOD AND NUTRITION RESEARCH

Number of organizations contributing ---606
Personnel (investigators) -----5000

Other diseases ----- 104
Total ----- 319

Number of projects

Physiology ----- 1603
Chemistry ----- 1183
Technology ----- 599
Economics ----- 351
Bacteriology ----- 245
Psychology ----- 105
Total ----- 4086

Nutrition Surveys

Food consumption ----- 17
Nutritional status ----- 37
Nutritional status (children) ----- 22
Total ----- 76

Physiology of Farm Animals ----- 213

PHYSIOLOGY (Including animal and plant)

Dietary Requirements

Animal ----- 30
Human ----- 21
In pregnancy and lactation ----- 23
Infants and children ----- 13
Special cases ----- 26
Total ----- 113

Physiology of Plants

Plant breeding ----- 82
Plant disease ----- 26
General ----- 14
Total ----- 122

CHEMISTRY

Chemistry of Nutrients ----- 241

Food Composition and Nutritive Value-- 321

Digestion ----- 22

Metabolism

Amino acids ----- 37
Carbohydrates ----- 48
Enzymes ----- 13
Fats and fatty acids ----- 40
General ----- 35
Hormones ----- 34
Hydrolyzates ----- 34
Infants and children ----- 21
Lipotropic factors ----- 14
Minerals ----- 53
Protein ----- 35
Protein evaluation ----- 54
Vitamins (all) ----- 130
Total ----- 548

Change in Composition

Due to soil ----- 28
canning ----- 29
cooking ----- 52
dehydrating ----- 43
diet of animal ----- 34
environment----- 31
freezing ----- 27
frozen storage ----- 51
genetics ----- 54
packaging ----- 9
processing ----- 42
storage ----- 133
Total ----- 533

Tissues ----- 58

Interrelationships ----- 78

Deficiencies ----- 68

Diseases (with 6 or more listings)

Anemia ----- 8
Cancers and tumors ----- 42
Cardiovascular ----- 23
Dental and oral ----- 31
Diabetes ----- 20
Dystrophy ----- 9
Infection ----- 14
Liver disease ----- 19
Nephrosis ----- 7
Nervous disorders ----- 7
Toxicity ----- 29
Tuberculosis ----- 6

Enrichment

Minerals ----- 4
Proteins and amino acids ----- 9
Vitamins ----- 21
Total ----- 34

Chemicals and Preservatives in Foods 65

TECHNOLOGY

Equipment and Methods ----- 89

Development of Products

Infant foods ----- 8
Cereal and grain products ----- 42
Dairy products ----- 41
Egg products ----- 4
Fats ----- 14
Fish products ----- 3
Fruit & vegetable products ----- 20
General ----- 4

TECHNOLOGY (Continued)

Meat products -----	12
Nuts & legumes -----	17
Sweets, beverages, and miscellaneous -----	63
Therapeutic products -----	63
Total -----	291

Processes for Preserving Foods

Canning -----	25
Dehydrating -----	31
Freezing -----	73
Packaging -----	98
Total -----	227

ECONOMICS

<u>Pasture Research</u> -----	40

<u>Fertilizers</u> -----	17

<u>Soil Management</u> -----	40

<u>Entomology</u> -----	35

<u>Fishery Investigation</u> -----	26

<u>Utilization of By-products</u> -----	92

<u>Marketing and Supply</u> -----	101

BACTERIOLOGY

<u>Food Spoilage & Prevention</u> -----	91

<u>Nutritive Requirements for Microorganisms</u> -----	36

<u>Microbiological Assays</u> -----	37

<u>Intestinal Microorganisms</u> -----	21

<u>Sanitation</u> -----	28

<u>Fermentation</u> -----	22

<u>Antibiotics</u> -----	14

PSYCHOLOGY

<u>Food Acceptance</u> -----	52

Nutrition Education

Publications -----	31
Community projects -----	15
Grants & fellowships -----	7
Total -----	53

PROJECTS LISTED ACCORDING TO NUTRIENTS**Proteins and Amino Acids**

Chemistry -----	51
Deficiencies -----	6
Enrichment -----	9
In foods -----	50
Losses in processing -----	5

Metabolism -----	169
Requirements -----	31
Total -----	321

Fats and Fatty Acids

Chemistry -----	28
Metabolism -----	42
In foods -----	13
Requirements -----	2
Total -----	85

Lipotropic Factors**Carbohydrates**

Chemistry -----	41
In foods -----	17
Metabolism -----	47
Total -----	105

Minerals

Chemistry -----	1
Deficiencies (General 7, P 1, Ca 4, Fe 4, trace 1, Mn 1) -----	18
Enrichment -----	4
Losses in processing -----	9
Metabolism (P 8, Ca 13, Fe 11, S 2, Na 1, K 3, I 4, trace 6) -----	48
Requirements (P 3, Ca 5, Mg 2, Cu 2, Fe 8, trace 9) -----	29
Total -----	109

Vitamins (General)

Chemistry -----	10
Deficiencies -----	11
Enrichment -----	11
In foods -----	35
Losses -----	45
Metabolism -----	23
Requirements -----	15
Total -----	150

Vitamin A & Carotene

Chemistry -----	22
Deficiencies -----	6
Enrichment -----	1
In foods -----	39
Losses -----	23
Metabolism -----	38
Requirements -----	14
Total -----	143

Vitamin B Complex

Chemistry -----	3
Deficiencies -----	3
Enrichment -----	8
In foods -----	7
Losses -----	13
Metabolism -----	37
Requirements -----	13
Total -----	84

Thiamine

Chemistry -----	2
Deficiencies -----	5
Enrichment -----	4
In foods -----	8
Losses -----	24

**PROJECTS LISTED ACCORDING TO
NUTRIENTS (Continued)**

Metabolism -----	5
Requirements -----	4
Total -----	52

Riboflavin

Chemistry -----	4
Deficiencies -----	7
In foods -----	8
Losses -----	13
Metabolism -----	9
Requirements -----	8
Total -----	49

Niacin

Chemistry -----	2
Deficiencies -----	5
In foods -----	16
Losses -----	10
Metabolism -----	4
Requirements -----	6
Total -----	43

Pyridoxine

Chemistry -----	1
In foods -----	1
Requirements -----	1
Total -----	3

Pantothenic Acid

Chemistry -----	1
Deficiencies -----	5
In foods -----	1
Losses -----	1
Metabolism -----	2
Requirements -----	3
Total -----	13

Choline

Deficiencies -----	6
Metabolism -----	7
Total -----	13

P.A.B.

Metabolism -----	1

Inositol

Chemistry -----	2

Biotin

Chemistry -----	4
Deficiencies -----	3
Metabolism -----	7
Total -----	14

Folic Acid

Chemistry -----	10
Deficiencies -----	4
Losses -----	1
Metabolism -----	10
Total -----	25

Ascorbic Acid

Chemistry -----	3
Deficiencies -----	3
In foods -----	29
Losses -----	22
Metabolism -----	16
Requirements -----	4
Total -----	77

Vitamin D

Chemistry -----	4
In foods -----	5
Metabolism -----	12
Requirements -----	4
Total -----	25

Vitamin E

Chemistry -----	2
Deficiencies -----	5
In foods -----	5
Metabolism -----	10
Requirements -----	2
Total -----	24

Vitamin K

Metabolism -----	3

Rutin and Related Materials

Chemistry -----	2
Deficiencies -----	1
In foods -----	1
Metabolism -----	4
Total -----	8

Unidentified Factors

Chemistry -----	11
In foods -----	2
Metabolism -----	14
Requirements -----	7
Total -----	34

Calories

Requirements -----	8

Enzymes

Chemistry -----	27
In foods -----	5
Losses -----	9
Metabolism -----	13
Total -----	54

Hormones

Chemistry -----	8
Feeding -----	21
Metabolism -----	34
Total -----	63

Antibiotics ----- 14

Anti-metabolites ----- 17

Isotopes ----- 15

CONTENTS

I. PHYSIOLOGY

DIETARY REQUIREMENTS

Human	1
Animal	2
Requirements in pregnancy and lactation	3
Requirements in infants and children	4
Requirements in special conditions	4

DIGESTION	5

METABOLISM

General	6
Metabolism of infants and children	7
Protein metabolism	8
Biological evaluation of protein	10
Metabolism of amino acids	12
Protein hydrolyzates	13
Carbohydrate metabolism	15
Lipotropic factors	16
Fats and fatty acids	16
Minerals	18
Vitamins in metabolism	20
Enzymes in metabolism	25
Hormones in metabolism	26
Tissue chemistry	27
Interrelationships	29

DEFICIENCIES	33

PATHOLOGY	36

NUTRITIONAL SURVEYS	50

PHYSIOLOGY OF FARM ANIMALS

Breeding of farm animals	53
Feeding and requirements of cattle, horses, sheep and swine	53
(a) Endocrines in feeding	57
Diseases of cattle, horses, sheep and swine	58
Requirements and diseases of poultry	59

PHYSIOLOGY OF FOOD PLANTS

Genetic studies for improved yield and quality	61
Plant pathology	64

II. CHEMISTRY

CHEMISTRY OF NUTRIENTS

General	67
Proteins and amino acids	67
Fats and fatty acids	68
Carbohydrates	69
Minerals	70
Vitamins	71
Enzymes	74
Hormones	75

FOOD COMPOSITION AND NUTRITIVE VALUE	
Food, general	75
Dairy products	77
Fats and oils	78
Meat, fish and poultry	79
Eggs	80
Animal versus vegetable protein	80
Fruits and vegetables	81
Legumes and nuts	83
Grain products and feeds	84
Sugars and sweets	86
Miscellaneous	86
COMPOSITION OF FOOD AS AFFECTED BY	
Soil treatment	87
Diet of animal	88
Genetics (animal and plant)	90
Environment and season	92
Storage	
(a) browning	94
(b) oxidation of fats	94
(c) loss of nutritive value	96
Frozen storage	98
Canning	100
Cooking	102
Dehydrating	104
Freezing	105
Packaging	106
Processing	107
ENRICHMENT OF FOODS	108
CHEMICALS AND PRESERVATIVES IN FOODS	110
III. TECHNOLOGY	
ENGINEERING EQUIPMENT AND METHODS	113
DEVELOPMENT RESEARCH	115
General	115
Dairy products	116
Fats and oils	117
Meat, fish	117
Eggs	118
Baby foods	118
Fruits and vegetables	118
Legumes and nuts	119
Grains, cereals and feeds	119
Sugars, sweets, miscellaneous	121
Vitamin and other therapeutic agents	123
PROCESSING	
Canning	125
Dehydrating	126
Freezing	127
Packaging	130
IV. ECONOMICS	
AGRICULTURAL ECONOMY	
Farm and pasturage	135

Soils and fertilizers	136
Soil management for fruits and vegetables	137
Entomology	
Insect control	138
FISHERY INVESTIGATIONS	139
UTILIZATION OF BY-PRODUCTS AND ABUNDANT PRODUCTS	
Dairy products	140
Fats	140
Meat products	141
Fishery by-products	141
Eggs	141
Fruit and vegetable products	141
Grain products	143
Distillers by-products	143
Miscellaneous	143
MARKETING AND SUPPLY	143
V. BACTERIOLOGY	
FOOD SPOILAGE AND PRESERVATION	
Causes and methods of control (general)	149
Dairy products	149
Meat, poultry and fish	150
Eggs	150
Pre-cooked frozen foods	151
Fruits and vegetables	151
Nuts	152
Grains and bakery products	152
NUTRITIVE REQUIREMENTS OF MICROORGANISMS	
General	152
Amino acids	152
Vitamins and unidentified factors	153
MICROBIOLOGICAL ASSAY METHODS	
Amino acids	154
Vitamins	154
ROLE OF INTESTINAL MICROORGANISMS	155
SANITATION	
Bactericides, detergents and quaternary ammonium compounds	156
FERMENTATION AND YEASTS	157
ANTIBIOTICS	158
VI. PSYCHOLOGY	
FOOD ACCEPTANCE	159
NUTRITION EDUCATION	
Literature	160
Community projects	161
Financial support	163
VII. ORGANIZATIONS	163

VIII. PERSONNEL	177
LATE PROJECTS AND PERSONNEL	213
IX. INDEX	215

PHYSIOLOGY

**PHYSIOLOGY
REQUIREMENTS**

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Human, General</u>			
1	Studies in nutrition.	4120	4090
2	Study of nutrition problems.	3920	570
3	Nutritional factors.	2100	2260
4	Human nutrition. (Study on protein requirements completed).	1440	
5	Nutritional requirement of the adolescent and its relation to development of disease.	1580-0	
6	Nutritional requirements for man at work.	1440	4010-F
<u>Amino Acid</u>			
7	Amino acid requirements of man.	1610	2950
8	Amino acid requirements of man in health and disease.	2770	2590
<u>Vitamins</u>			
9.	Minimum needs of vitamins by adult humans.	4490	2850
10	Two projects on vitamin requirements of man.	1250	
<u>Vitamin A</u>			
11	Differential vitamin A requirement of the male and female.	3780	
<u>B Vitamins</u>			
12	B vitamins - deficiencies and requirements. Biosynthesis of B vitamins.	2770	3750
13.	B vitamins in human nutrition requirements. Intestinal synthesis, macrocytic anemia and pellagra. Folic acid for anemia. Diets in pregnancy. PAB and folic acid for Lacto Bacilli.	3950	4040-C
<u>Thiamine</u>			
14	Effects of different levels of thiamine intake upon health and physical fitness of human subjects.	1660	1250
15	Relations between thiamine and pyramin in man as they pertain to thiamine "requirements" in general and in the individual.	2360	
<u>Riboflavin</u>			
16	Research on the riboflavin requirements of the adult.	710	4460
17	Riboflavin, pantotheinc acid, and biotin requirements of man.	4490	4020
<u>Niacin</u>			
18	The human requirement of niacin and related nutrients.	2830	2850
<u>Ascorbic Acid</u>			
19	Ascorbic acid metabolism and dietary intakes. Requirements; effect of age, weight, temperature, and type of diet.	3830	4020
<u>Mineral</u>			
20	The iron requirement of the adolescent girl.	710	2850

**PHYSIOLOGY
REQUIREMENTS**

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
21	Iron metabolism. (a) Study of the absorption of iron from beef by women. (b) Study of the iron requirement of women.	850	4020
<u>Animal</u>			
22	Water requirements and water economy in a variety of mammals.	3340	
23	Nutritive value of fats, with special reference to needs of certain fatty acids in diets of animals. Stability of certain vitamins in these fats and relation of fats to activity of certain members of the B complex and vitamin E.	4490	
24	Studies on the comparative value of fats. Minimum fat requirements as demonstrated by growth hormone experiments.	3620	
25	Adaptation of diets. Vitamin requirements of various animal species.	4120	3750
<u>Animal Cells</u>			
26	A study of the nutritive requirements of embryonic tissue cells in vitro.	1700	
27	Nutritional requirements and cell respiration.	790	2850
28	Nutritional requirements for tissue culture.	3890	
29	Nutritional requirements of animal cells and the effects of growth deficiencies and growth stimulants on proliferation and survival.	220	90
<u>Mice</u>			
30	Nutritive requirements of mice, supplementing artificial diets with B vitamins, vitamin K and cystine.	4540	90
31	Studies of the vitamin B-complex with mouse as experimental animal. Vitamin requirements of different genetic strains of mice.	4540	2850
32	Nutritive requirements of the mouse for growth, reproduction and lactation. Beneficial effect of xanthopterin and biotin in mice on purified diets.	1180	2090
33	Study of the nutritive requirements of the mouse. Fertility of male mouse on synthetic diet. Folic acid in lactation.	1180	2660
<u>Cotton Rat</u>			
34	Nutritional requirements of the cotton rat. Qualitative and quantitative requirements of B vitamins.	3850	4040-C
<u>Rat</u>			
35	Nutritive requirements of the rat for growth, reproduction and lactation. Effect of folic acid (four generations).	1180	
36	Factors concerned in differences in weight potentials of rats, due to variations in the quality and composition of food.	1700	
37	The fat soluble vitamin requirements of the rat.	4123	
38	Vitamin E. Tocopherol requirement and effect of deficiency on fertility and growth in rats.	790	2090
39	Unrecognized nutrients required for the complete life cycle of rat and of pigeon. Vitamin requirements of rat for normal gestation and lactation. Cause of hydrocephalus in rat.	2390	

**PHYSIOLOGY
REQUIREMENTS**

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Dog</u>			
40	Studies of the nutritive requirements of dogs.	3800	
41	Nutrition of dogs. Satisfactory ration for dogs. Balanced and palatable dog food.	1510	
42	Evaluation of certain rations on the physical fitness of dogs.	3800	
43	The amino acid requirement of the dog for maintenance, growth and nitrogen balance.	2280-A	
<u>Rabbit</u>			
44	Requirements and metabolism of riboflavin, pantothenic acid, biotin, and unknown factors for the rabbit.	3850	
45	Magnesium requirements of the rabbit and the availability of magnesium from various sources.	3850	
46	Growth factors necessary for rabbits.	100-A	
<u>Guinea Pigs</u>			
47	Growth factors necessary for guinea pigs.	100-A	
<u>Cat</u>			
48	Studies of the nutritive requirements of cats.	3800	
49	On the heat labile factor required by cats.	3820	
<u>Opossum</u>			
50	Diets for proper maintenance of tropical and American opossums.	4500	
51	Studies on field and laboratory feeding habits of non-biting flies.	810	
<u>Requirements in pregnancy and lactation</u>			
52	Relation of prenatal diet of mothers to health of mother and infant; pregnant women from two different income levels.	3860	
53	Study of influence of diet on complications of pregnancy and on the health of newborn infants.	3340	
54	Study of maternal nutrition in relation to maternal and infant health.	1440	2850
55	Survey of nutritional state of mothers during reproductive cycle with some observations on infants fed breast and cows milk.	730	2850
56	Metabolism of women during the reproductive cycle (pregnancy, lactation, reproductive rest).	730	
57	Relation of diet to blood of pregnant women served by U. S. Public Health Service.	1980	4020
58	Significance of nutritional deficiencies in pregnancy.	1580-00	2660, 4460
59	Correlation of food intake with laboratory and clinical findings during pregnancy and lactation.	710	
60	Relationship of nutritional state of pregnant women to course of pregnancy and health of infant; investigation of relationship between plasma levels of serum tocopherols and course and outcome of pregnancy.	4110	4040-C, 2850 3350, 980
61	Effect of dietary instruction in reducing the incidence of toxemia in pregnancy.	710	
62	Nutritional studies in pregnancy and recurrent abortion.	850	
63	Diet and congenital malformations.	741	2850

**PHYSIOLOGY
REQUIREMENTS**

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
64	Relation between vitamin deficiencies in diet of mother and abnormalities in offspring (rats).	3850	4020
65	Malformations produced by maternal vitamin A deficiency.	3340	2850
66	Thiamin requirements for reproduction and lactation.	4210	
67	Riboflavin and thiamine intakes and urinary excretion of women in the last 5 months of pregnancy.	710	2530
68	Riboflavin needs during pregnancy and lactation.	710	101, 2530
69	Nicotinic acid requirements for reproduction and lactation.	4210	
70	Relation of prenatal diet to mentality of the young.	790	4460
71	Intake and excretion of niacin and its metabolites by women in pregnancy.	710	
72	Dietary factors in production and cure of toxemic pregnancies induced by feeding certain pork diets.	1650	
73	Modifications in blood, urine, and tissues of rats affected with pregnancy disorder induced by feeding diets containing pork.	1650	
74	Relation of sodium to edemas of pregnancy and effect of various diuretic agents on sodium excretion in normal and toxemic pregnancy.	1660	

Requirements for Infants and Children

75	To determine by clinical observations and technical procedures what factor or factors are responsible for the improved results in maternal well-being and infant welfare, the result of improved nutrition in pregnancy and infancy.	1580-DD	
76	Quantitative study of nutrients of mothers milk under specific or known dietary conditions at different stages of lactation.	730	2850
77	Amino acid requirements of infants.	2770	
78	Effect of methionine deficiency during gestation and lactation.	3210-C	
79	Effect of maternal tryptophane-restriction of the offspring.	710	130
80	The extent to which the voluntary intake of infants reflects any instinct for optimal protein.	1580-0	
81	B-complex requirement of the infant.	2770	
82	A study of the riboflavin requirements of infants.	3200	
83	A study of the use of a completely supplemented evaporated milk for infant feeding.	850	
84	Nutritive requirements during growth and chemical changes in body composition at various age periods of childhood. Studies on vitamin D, amino acids, and comparison of nutritive value of casein and that of lactalbumin in infant nutrition.	1660	
85	Bone development of infants and children-optimum vitamin D intake.	3040-A	1110
86	The vitamin requirements of children. 1. Ascorbic acid for children and adolescents.	2910	4020-D
87	Maternal and infant nutrition in primates.	4540	2850

Effect of Work and Fatigue

88	Nutritional requirements of normal men doing hard work.	1440	2850
89	Environment and caloric requirements.	4010-B	
90	Effect of previous diet on the ability of animals to withstand adverse conditions.	4120	4010-F
91	Nutrition and resistance to fatigue in normal man.	2360	2850

PHYSIOLOGY REQUIREMENTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Effect of Temperature</u>			
92	Effects of environment on nutrition and metabolism.	2830	2850
93	Effect of cold on nutritional requirements.	1440	4010-D
94	The effects of accelerated metabolism on the nutritional requirements of the rat. The effects of low environmental temp. on the nutritional requirements of the rat.	3910	4010-F
95	Study of physiological reactions and requirements under varied environmental and climatic conditions.	4010-D	
96	The physiological effects of cold environment.	4010-D	
97	Effects of environment on nutritional requirements and cell respiration.	790	2850

Effect of Surgery or Disease

98	Fluid electrolyte and protein requirements of surgical patients. Intracellular biochemistry and biologic efficacy of parenteral nutritional therapy.	1440	4050-A
99	Problems related to the administration of the requirements of nitrogen, fat, carbohydrate and mineral by vein, or other than enteral routes.	2200	

Requirements in Special Cases

100	Parenteral nutrition; evaluation of minimal requirements for periods of short time. Work concerned with water, salt, and caloric need and particularly protein needs in the form of solutions of hydrolyzed protein or pure amino acid.	4330	
101	Relation of minimal parenteral requirements to oral intake of concentrates; liquid drinks in sick surgical patients unable to eat a normal well balanced diet.	4330	
102	Vitamin requirements in infectious and metabolic diseases; urinary excretion of niacin and riboflavin in patients with acute and chronic diseases.	4270	2090
103	Nitrogen and vitamin requirements in human convalescence.	1580-Z	3160
104	Nutritional status of women; adjustment of young women to the restricted protein intake imposed by wartime conditions; food consumption and requirements of young women with arrested tuberculosis.	2280	4020

Effect of Ageing

105	Dietary requirements of elderly individuals	1580-A	4040-C
106	Vitamins and geriatrics.	1580-S	1530
107	Vitamin administration in geriatrics.	4320	1530
108	Nutritive requirements of aging women; nitrogen calcium, phosphorous, ascorbic acid, thiamin, and riboflavin.	2280	2530

DIGESTION

109	Some aspects of stomach function in health and disease.	2220	
110	Physiologic studies on gastric blood flow with relation to gastric secretion.	2770	4040-C
111	Studies on use of casein and casein hydrolyzates in controlling gastric acidity.	270	2200
112	Influence of food constituents on human gastric function.	1990	

PHYSIOLOGY

DIGESTION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
113	Effect of spices and condiments on gastric mucosa and gastric secretions.	2360	4010-F
114	Effect of vagotomy and sympathectomy upon the digestive tract.	1010	2090
115	Enzymatic digestion of the proteins, particularly soybean protein.	2290	
116	Compilation and evaluation of data on digestibility and physiological fuel value of foods and food groups.	4020-D	4020-D
117	Comparative digestibility and nutritive value of proteins of raw and heated peanuts and soybeans.	4020-D	
118	The digestibility of natural keratins.	4123	
119	Improvement of digestibility of certain inexpensive foods by preliminary treatment with dilute acid.	1630-A	
120	Digestion and tolerance by pre-school children of foods commonly considered unsuitable for them.	710	
121	Food temperature and its effects on gastro-intestinal function and circulations.	2360	
122	Study of effect of foods on volume and composition of pancreatic juice; alterations in pancreatic function relative to nutritive state of organism.	1680	
123	Effect of diet and environment on pancreatic secretion.	600	4010-F
124	Studies on fat digestion and metabolism.	2830	180
125	A comparison of digestibilities of natural and interesterified oils.	3800	
126	Digestibility of rape-seed oil in the rat.	3620	
127	Digestibility of rape-seed oil in human subjects.	3620	
128	Effect of lipotropic agents on bile secretion.	1660	
129	Studies on methods for determination of the bile pigments.	3620	
130	Effect of melting point on utilization of purified triglycerides and mixed tri-glycerides.	3620	

METABOLISM

Diet, growth and Life History

131	Effects of army rations and of various human diets on growth and maintenance of experimental animals.	790	4460
132	Effects of five commercial diets on several generations of rats.	4500	
133	Urges to eat and drink in rats. Effects of food dilution upon caloric intakes and water intakes of rats.	3340	4010
134	Some effects of refeeding male albino rats after caloric restrictions.	4010-B	4010-B
135	A study of the effects of caloric restriction on skeletal development.	1010	
136	Nutritional factors involved in growth and metabolism.	4490	4460
137	A comparative study of the functions of essential metabolites.	850	
138	Controllability of growth, including the part played by nutrition.	1660	
139	Influence of growth upon chemical composition of tissues.	730	
140	Diet and connective tissue growth.	1750	4050-A
141	Diet in relation to health and longevity.	710	
142	Clinical investigations. To improve present medical and nutritional methods to prevent and treat disease and injury and accelerate convalescence.	4010-B	4010-B
143	Nutritional life history as influenced by dietary enrichments. Effects of enriching adequate diet with protein in form of poultry meat with and without added Ca.	790	2090

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
144	Nutritional life history as influenced by dietary enrichment. Effect of enriching an adequate diet with dried meat protein.	790	3800
145	The nutritive value of meat in diets containing high amounts of cereals (wheat) for rats during growth, reproduction and lactation.	3850	2590
146	Growth, reproduction and lactation in rats on highly purified diets.	1180	2850
147	The prolongation of productive life. Interrelationship between water consumed, dietary constituents, and productive life.	850	
148	Human Calorimetry.	3385, 850-A	
149	Calorimeter studies on the metabolism and heat loss of men and women.	850-A	
150	Calorimeter studies on the metabolism and heat loss of hibernating woodchucks.	850-A	
151	Basal metabolism of girls and young women (218 cases) native of southern Arizona.	260	
152	Effects of immobilization upon metabolism and circulation.	850-A	
153	Study of the basal metabolism of women and girls of varying age as related to dietary habits (Kansas). Relation to physical growth and physiological measurements. Effect of iodine on basic metabolic rate.	1740	4020
154	Physical efficiency in relation to diet. To measure losses in physical performance which accompany inadequate diets for varying periods of time. Develop quantitative measures of meaning of optimal nutrition in terms of performance (rats).	4010-B	4010-B
155	Energy cost of work. To determine variations in energy cost of specific tasks performed by (1) different methods by same individuals; (2) different individuals using own characteristic movements, especially extremely obese and thin individuals.	2280	4020
156	Age changes (growth reproduction, senescence) in "basal" and "resting" energy metabolism of various categories of animals and their relation to body size. Present work on hamsters and rabbits.	2390	
157	Characteristic dynamic effects of diets, foods, and food constituents.	3040	4020
158	Effects of breakfasts and abstinence of breakfasts upon physical performance and fitness.	1660	
159	The effects of breakfast on the mid-morning hypoglycemic "lag" on 14 college women.	4340	
160	The effect of diet on the development and maintenance of body temperature control.	780	
161	Economy of food utilization.	3120	
162	Biological availability of nutrients in foods in common dietary use; preliminary work with small laboratory animals and final tests on human subjects.	1590	4020
163	Inheritance of efficiency of food utilization.	2360	
164	Applications of isotope technique to the study of food utilization.	790	4010-F
165	Studies of intermediary metabolism through the media of isotopes.	850-A	
166	Evaluation of the basal metabolic rates of dogs after feeding tests.	3800	

Infants and Children

167	Metabolism and respiratory exchange of premature and newly born infants.	2290	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
168	Existence of anaerobic forms of metabolism in premature and newborn infants.	2290	4040-C
169	Metabolism of the newborn, particularly with reference to vitamin C.	850	
170	Vitamin A absorption in premature infants, newborns, and early infancy. Effect of water soluble vitamin A, a special dispersion form of vitamin A, and vitamin A in oil.	1580-FF	
171	Effect of generous amounts of meat in the diet on the nutritional status of infants from six weeks to two years old.	2680	2590
172	Study of premature infants, to investigate relationship between type of feeding and rate of gain in weight.	850-A, 4540	4040-A
173	Metabolism of creatine in premature infants and its relation to the adequacy of their protein intake.	780	
174	Use of parenteral amino acids as exclusive source of protein in infants and children.	1610-A	
175	Study of folic acid metabolism in pregnant women and infants.	3210-C	
176	Electrolyte balance in premature and newborn infants on diets consisting of evaporated milk and other milk products: effect of ingestion of electrolytes at age periods when kidney function is reduced.	1610-A	
177	Evaluation of the results of introducing inorganic iron into the diet of premature infants.	1980-A	
178	Study of disturbances of nutrition associated with disease in infants and children.	1440	4460
179	Growth and development of children.	1580-R	120
180	Child nutrition; comparison of meat and legumes in child feeding.	3040	3750
181	Nutrition and chemical growth in childhood.	730	
182	Use of a liquid form supplementary diet in malnourished children; calcium caseinate, skim milk, sucrose and cocoa with whole milk.	2220	2200
183	Effects of providing a liberally adequate diet to children in an institution.	710	2530
184	Comparison of vitamin A absorption in normal children and children with cystic fibrosis of the pancreas using oily and water-soluble preparation.	2290	
185	Vitamin A absorption following ingestion of fat and water soluble preparations in health and disease in infants and children.	1610-A	
186	Energy requirements of children of all ages.	780-A	
187	Research program in energy metabolism; BHNHE. 1. Basal metabolism of boys 9-16 years old. 2. Basal metabolism of pregnant women. 3. Energy expenditure and mechanical efficiency of boys and girls during quiet play and cycling. 4. Energy expenditure of boys and girls, 9-11 years, engaged in various activities.	790	4020-D

Protein

188	Protein metabolism. 1. Determination of nitrogen balance index of six different proteins of biological value from excellent to poor, in normal dogs. Also plasma protein regeneration in the depleted dog. 2. Mutually dependent effects of protein depletion and endocrine imbalances on nitrogen and sulfur metabolism. 3. The generation of and the determination of antibodies in normal and protein depleted animals.	3370	3510, 3800, 3660, 280, 10, 2260, 1910, 2200, 370, 230, 2980, 4295, 1645, 455, 545

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
	4. Effect of degree of hydrolysis of casein fed intravenously on the nitrogen balance index in dogs; a study of the utilization of amino acids and polypeptides.		
	5. Polarographic analysis of plasma proteins from normal, protein depleted, and sick dogs.		
	6. Effect of protein depletion upon the activities of tissue enzymes.		
	7. Effects of intra cellular parasitism (Leishmaniasis in the hamster) on the metabolism of the host cell.		
189	Proteins in human nutrition.	1610	4020-D
190	Protein studies in human nutrition.	1440	180
191	Protein metabolism studies in small animals.	3510	
192	Metabolism of proteins and amino acids during partial starvation.	850-A	2850
193	Protein metabolism study on reduced caloric and water intakes.	2730	4010-F
194	Distribution of body protein under changing conditions.	3700	2850
195	Relationship of minimum protein for growth, reproduction, and maintenance, and the net protein value of each of several protein mixtures.	3210-C	
196	Nitrogen metabolism in white rats as affected by source and caloric intake.	1650	4010-F
197	A study of various aspects of protein metabolism in young healthy male subjects on a limited fluid and caloric intake.	2730	4010-F
198	A study of protein metabolism and amino acid utilization in the albino rat, directed at problems of undernutrition and convalescence.	710	4050-A
199	High protein diets for weight reduction in young women.	2680	
200	The relationship of dietary protein and vitamins to the formation and storage of enzymes and co-enzymes in the rat.	1970	
201	Serum proteins; effects of chronic plasma protein loss.	510	
202	Serum proteins; rates of regeneration of serum protein and hemoglobin.	510	
203	Serum proteins; serum protein behavior during and following major surgical procedures with a study of the effect of intravenous fluids and other dietary regimes.	510	
204	Relation of stool nitrogen to nitrogen intake.	3365, 850-A	
205	Transport and excretion of uric acid--permeability through biological membranes, mode of excretion, effect on excretion and blood levels of the intake of higher sugar alcohols, high protein diets, etc.	1580-FF	
206	Development of methods for the determination of the concentration of phenolic bodies in blood and in urine.	2100	
207	A biochemical-clinical study of the concentration of phenolic bodies in blood and urine in health and in disease.	2100	
208	Influence of diet, drugs, etc., upon the formation and excretion of phenolic bodies.	2100	
209	Biochemical research on pyrimidine and purine metabolism.	590	4460
210	Studies concerning the physiology of purine metabolism.	1580-AA	4040-C
211	Investigation of the metabolism of creatine and creatinine; also utilization of guanidoacetic acid.	4540	
212	Intermediary metabolism of histidine, particularly the relationship of histidine destruction in pregnancy.	2290	
213	Study of dietary factors affecting porphyrin formation.	3120	
214	Studies of proteose; plasma mucoprotein; and urinary mucoprotein.	3620	4040-C (2)

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
215	Streptogenin, a polypeptide growth factor.	2920	
216	Metabolism of synthetic nucleosides in tissue cultures.	3620	2635
217	Study of intermediary metabolism of protein, fat, and carbohydrates by means of carbon isotopes.	3050	90
218	Biological synthesis of protein with use of isotopes.	590	4050-A
219	Application of isotopes to the biosynthesis of amino acids and vitamins.	4540	4460
220	Studies in protein turnover with radio-active isotope of sulfur, and on in vitro protein synthesis with radioactive isotope of sulfur.	600	90
221	Synthesis of organic compounds labelled with C ¹⁴ by biological methods.	600	4010-F
222	Synthesis and utilization of liver protein.	3700	2850

Protein Evaluation

223	Growth and reproduction of rats on diets containing varying sources of amino acid nitrogen.	2260-A	
224	Protein utilization by the rat as influenced by the quality and quantity of dietary protein.	4390	
225	The effect of various types of systematic alterations during experimental periods on rat growth.	280	
226	Development of method of defining the nutritive quality of protein by observation of growth of rats during a relatively short feeding period.	3800	
227	Growth of golden hamsters on diets containing different types and percentages of purified proteins.	520	
228	Studies on nutritive value of individual proteins (produced by us), including biological efficiency measured by serum protein and laboratory animal gain in weight.	290	
229	Nutritive value of meat and meat by-products for the growth of dogs.	4490	4470
230	Nutritional effects of supplementation of purified diets with liver extracts and liver fractions.	1910	
231	Utilization of milk proteins.	2420	4020
232	The growth-promoting effect of milk proteins, casein and lactalbumin, singly and in varying mixtures and their effectiveness in the maintenance of nitrogen balance.	2290	2530
233	Comparative nutritive value of commercial casein, commercial lactalbumin and highly purified b-lactoglobulin which is main component of these two, and shortages of sulfur containing amino acids in them.	2290	
234	Biochemical studies on the utilization of milk protein. (1) The effect of sub-optimal thiamine intake. (2) The effect of sub-optimal riboflavin intake. (3) The effect of sub-optimal intakes of both thiamine and riboflavin.	2420	
235	Biological evaluation of proteinaceous food materials such as casein, lactalbumin, yeasts, beef muscle, fish muscle, liver and liver extracts, wheat gluten, soybean products, peanut flour, etc.	1910	
236	The effect upon growth and health of the proportion of egg in the diet.	4020	4020-D
237	The egg replacement value of certain proteins, particularly from legumes, and their value for serum protein regeneration.	4490	4020
238	Protein metabolism and utilization. Necessity of all nine essential amino acids for tissue synthesis.	710	2090
239	Effect of kind and level of protein in the diet on the utilization of other essential nutrients.	710	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
240	Plasma protein regeneration properties of different proteins. Lactalbumin hydrolysate, casein hydrolysate, egg white protein, wheat gluten.	3660-A	
241	Development of methods of defining the nutritive quality of protein by observing the blood protein regeneration in hypoproteinemic rats.	3800	
242	The utilization of special proteins in human feeding.	1610	2850
243	Nutritive value of cereal proteins in human subjects.	4420	1250
244	Metabolic studies on the proteins of wheat.	1250	
245	Evaluation of six pure proteins with human subjects. In cooperation with other laboratories and Bureau of Biological Research, Rutgers University.	3340	4460
246	Evaluating foodstuffs for meeting the human protein requirements.	3340	2850
247	Biological values of proteins in protein concentrates for growth, reproduction and lactation.	270	
248	Blood protein regenerative values of some vegetable proteins.	1300	
249	Factors affecting protein utilization for animal growth.	30	
250	Effect of several conditions on biological utilization of protein for growth. Sex, rate of growth, protein levels, deficiency of calories, fat concentration, calcium concentration, vitamin deficiencies, addition of essential amino acids.	3210-C	
251	Protein evaluation studies. Role of individual amino acids. Influence of processing and storage on amino acid stabilities. Interrelationships of caloric requirement and vitamin systems to protein utilization.	710	4010-F
252	Longevity studies correlated with the character of the protein.	3780	
253	Deficiencies in vegetable protein concentrates and methods of overcoming these deficiencies.	4320	
254	The effect of adding certain vitamins and amino acids to the diet of rats and pigs fed semi-synthetic diets with peas as the protein source.	4320	
255	Deficiencies in vegetable proteins which are corrected with animal protein concentrates.	3830	
256	Protein efficiencies of cereals as determined by the amino acid composition compared to rat growth techniques.	3240	
257	Biological efficiency of plant proteins as affected by processing methods. These include soybean oil, cottonseed meal (in cooperation with the U.S.D.A. Southern Regional Laboratory) peanut meal, sesame meal and sunflower seed meal.	3270	
258	Value of protein of the soybean in the dietary of adult human subjects.	1610	4020-D
259	Utilization of soybean proteins and minerals.	4350	2850
260	Determination of best source of animal protein factors to properly supplement processed soya products when used in diets of animals and humans.	240	
261	The effect of gland-free cottonseed flour and cottonseed pigment glands on the growth of rats.	4020-H 4020-I	
262	Gland-free cottonseed flour as the sole source of protein for weanling rats.	4020-H 4020-D	

Effect of heat on Biological Value

263	Growth promoting value of lipid-free sunflower seed meal fed to albino rats.	1300

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
264	Effect of heat on biological value of proteins. 1. Biological value for dogs of unheated and heated casein and defatted egg proteins supplemented by lysine or methionine. 2. Biological value for dogs and rats of dry skim milk processed at different temperatures and for varying periods.	600	
265	The biological value of the protein of field peas and the effect of heat treatment on pea protein.	1590	
266	The influence of heat upon the nutritive value of lysine.	4350	
<u>Yeast</u>			
267	Nutritional evaluation of yeast and other high protein foods. Purpose to promote use of yeast in food and pharmaceutical products.	3370, 270, 4330, 3890-A, 2830	230
268	Liver damage in rats fed rations containing yeast as the only source of proteins. Amino acids deficiencies of yeast proteins. Growth reproduction and lactation on rations with yeast as the only source of protein.	3210-C	
269	Use of yeast in human diet.	4490	3455
270	Nutritional studies of yeast. (a) Determination of co-efficient of digestibility, biological value and growth promoting value of different types of yeasts. (b) Effect of heat treatments on the nutritional value of yeasts. (c) Influence of growing media on nutritional value of yeasts.	3210-C	
271	Nutritional value and culinary quality of distiller's dry solubles.	770	
272	Growth of golden hamsters on diets containing different levels of yeast. Optimum growth in golden hamsters.	520	
273	Food yeast as a supplement to the average Puerto Rican ration.	3210-C	
274	Protein studies. Measurement of minimum protein growth, reproduction, and maintenance on rice-beans-casein diets.	3210-C	
275	Food yeasts as sources of proteins for growth, reproduction, and lactation.	270	
276	Relation of biological value of proteins to their thermogenic or heat producing effect.	3340	4050-A
<u>Amino Acids</u>			
277	Metabolism of amino acids.	710	
278	Amino acid metabolism.	1440	2090
279	Amino acid metabolism as applied to clinical problems; work includes microbiological assay methods for amino acids in biological fluids as well as their application to human nutritional problems.	3430	
280	Urinary excretion of amino acids.	600	2090
281	Amino acid and polypeptide metabolism.	1440	
282	Protein metabolism with special emphasis on amino acid excretion.	4490	
283	Quantitative determination of several amino acids in blood and urine of human subjects on rigidly controlled diets.	3340	
284	Urinary excretion of 12 amino acids by normal male and female subjects.	600	
285	Nutritional advantage of concurrent feeding of essential amino acids.	2110	
286	The role of amino acids in the organism.	3650	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
287	Amino acid studies with radioactive isotopes.	2830	
288	Metabolism studies with tagged methionine (S 35).	3050, 1580-DD, 1440, 600, 4050-A, 1070, 3920 2290	
289	Metabolism of sulfur-containing amino - acids; various aspects of the relationships of cystine and methionine to body reactions.		
290	Relative rates of metabolism of l, d, and dl-methionine.	1660	
291	Utilization of methionine in its various forms (dl, d, and l) under normal and pathological conditions with special reference to viral hepatitis and cirrhosis.	1580-DD, 3050	
292	Study of metabolism of the amino acid, methionine, by use of radioactive sulfur S-35 to determine the function of methionine in liver disease.	1580-GG, 4490	
293	Metabolism of methionine in tissue slices with particular reference to protein synthesis.	600	2850
294	Relation of d-amino acids to growth.	600	90
295	Serine and threonine as sources of amide nitrogen.	4020-C	
296	Investigation of the metabolism of certain amino acids, specially glycine and alanine in various pathological conditions.	1440	2090
297	Basic studies on protein and amino acid metabolism requisite for protein and amino acid therapy; effects of sulfur containing amino acids on development, growth and composition of specific organs and upon hormonal relationships that may be involved; effects of individual amino acids on nitrogen balance.	3370	4050-A
298	Intermediary metabolism of tryptophane.	1660	2850
299	Urinary excretion of tryptophane in the human subject.	1660	
300	Metabolism of tryptophane by liver brei.	1660	
301	Comparative availabilities of free and acetylated l, d, and dl-tryptophane for nitrogen balance in the human adult.	1660	
302	Study of metabolism of phenylalanine and tyrosine in the chick by means of deuterium-labeled phenylalanine.	600	2850
303	Nucleic acids, metabolism and precursors.	790	90
304	Uncombined amino acids in body fluids and tissues.	1610	2850
305	Synthesis of amino acids not occurring in nature and study of their effect upon nutrition.	3810	
306	Biologically available methyl groups for man and experimental animals; chemical reactions in the liver and kidney.	850-A	2850
307	Biochemical reactions leading to the synthesis of amino acids.	3850	2850
308	The biosynthesis of amino acids and vitamins, with the aid of induced mutant strains of microorganisms.	4540	2850
309	Transmethylation.	850-A	
310	Mechanism of the conversion of methionine to cystine.	850-A	
311	Cystathionine cleavage.	850-A	

Protein Hydrolyzates

312	Protein hydrolyzates.	1380	
313	Proteins and protein hydrolyzates; a study concerning the hydrolysis products of proteins when prepared by various procedures, the biological value of these by-products and the degree of utilization of various mixtures of the amino acids thus obtained.	1670	
314	Synthesis of natural occurring amino acids and the study of their effect alone and in conjunction with protein hydrolyzates on animal nutrition.	3810	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
315	Biological evaluation of protein hydrolyzates from various proteinaceous materials such as casein, lactalbumin, yeasts, beef muscle, fish muscle, liver, liver extracts, wheat gluten, soybean products, peanut flour and from purified or partially purified fractions of natural materials.	1910	
316	Biological assays for protein hydrolyzates.	3450	
317	Methods for the evaluation of amino acid mixtures.	2260-A	
318	Protein and protein hydrolyzate assay by rat growth.	280	
319	Ability of various types of protein hydrolyzates to support growth in rats.	2080	
320	Evaluation of a hydrolyzed protein preparation and another preparation which consists of a mixture of hydrolyzed protein and gelatin.	3050	
321	Comparison of protein and protein hydrolyzates in experimental animals and in man.	280	
322	Comparison of nutritive value of acid and enzyme hydrolyzates of protein.	2730, 1580-N	
323	Protein hydrolyzates and human balance studies.	3890-A	
324	Biological evaluation of amino acid supplementation of dietary materials.	1910	
325	Development of two protein hydrolyzates designed for clinical use as dietary adjuncts, i.e. "protogest" and "nutragedst."	4370	
326	Proteins and protein hydrolyzates in medical practice.	2770	280
327	Usefulness of hydrolyzed versus intact proteins for oral feeding; effect on nitrogen balance.	3660-A	
328	Protein hydrolyzates; ability to maintain nitrogen balance.	3410	
329	Effect of degree of hydrolysis on the nitrogen balance index of protein hydrolyzates.	3660-A	
330	Investigation of amino acid solutions suitable for parenteral administration.	900	
331	Research on oral and parenteral protein feeding studies.	3050	1800
332	Rate of utilization of amino acids and amino acid mixtures by man in health and diseases; a study of parenterally administered amino acids.	1010	4040-C
333	Amino acid utilization in relation to tissue synthesis, appetite, convalescence, and in the application to medical problems.	710	
334	Intravenous feeding by means of amino acid solutions.	3890-A	
335	Study of a method of giving prolonged intravenous therapy to dogs with an evaluation of the nitrogen requirement at certain levels of caloric intake in such animals.	3050	
336	Metabolic changes which occur during feeding by intravenous injection; physiological activity of the gastrointestinal tract during intravenous alimentation; urinary vitamin excretion; bacteriology of colon, calcium and phosphorous metabolism.	1700	4050-A
337	Use of various mixtures of amino acids for intravenous alimentation studied pharmacologically and clinically.	2260	
338	Study of the effect of intravenous alimentation on appetite; intake of food as influenced by intravenous alimentation.	1680	
339	Evaluation of role of gelatin administered intravenously on nutrition (studies on nitrogen balance) when half the patient's nitrogen requirement is provided as gelatin and half as hydrolyzed casein.	3050	
340	Peptide metabolism; plasma peptides; fate of the peptides of partial protein hydrolyzates infused intravenously.	1580-G	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
341	Relation of glutamic and asparatic acid on production of nausea and vomiting in man; effect of rate of administration of amino acid preparation and the blood amino nitrogen level on the production of nausea and vomiting; effect of rate of administration of amino acid preparations on the urinary wastage of amino acid nitrogen.	4350	
342	To study methods for incorporating up to 200 grams of proteins daily into acceptable therapeutic diets, both natural and synthetic protein to be added.	4010-B	
343	Protein needs and assimilation. Relative value of partially digested proteins and the value of mixing proteins when force-feeding malnourished animals or patients.	1610	
344	Use of human serum albumin and other plasma fractions for nutritional purposes.	1440	
345	Influence of human serum albumin on the nitrogen balance of the postoperative patient.	3050	
<u>Carbohydrates</u>			
346	Establishing more exact values for the utilizable carbohydrate contents of foods.	110	
347	Tissue metabolism as it concerns the breakdown of carbohydrate and its connection with carbohydrate synthesis.	350	90
348	Sugar in human metabolism.	2360	3750
349	Metabolism of simple sugars.	2770	2090
350	Study of the metabolism of carbohydrates in animal and plant tissue with special reference to enzymic mechanisms involved.	710	
351	Absorption of sugars.	2195, 1580-Y	3750
352	Studies on the utilization of sugars. (Sucrose, glucose, and fructose.)	1470	
353	The mechanism of carbohydrate reactions in animal tissues.	4330	2850
354	Pyruvate metabolism with special emphasis on the role of acetoin.	1440	2850
355	Pyruvate (carbohydrate) metabolism, with emphasis on the role of acetoin.	3820	2850
356	Respiratory enzymes and the mechanism of the biological oxidation of pyruvic acid.	2770	4460
357	Role of acetic acid in intermediary metabolism.	790	2850
358	The relationship of dietary factors to the metabolism of acetaldehyde.	3820	2850
359	The inhibitory effect of fluoracetate on intermediary metabolism.	1660	
360	The study of fluoroacetic acid as a structural analog inhibitor for the study of acetate metabolism.	3475	4040-C
361	The role of acetates in the synthesis of certain body constituents.	1580-W	2850
362	Turnover of adenosinetriphosphate in cell metabolism.	3050	4040-C
363	Studies on the adenosine triphosphate in sea urchin muscle.	3620	
364	Carbon metabolism in unicellular animal organisms. A study of the specific role of acetate and pyruvate.	220	
365	Phosphate cycle of carbohydrate dismutation and metabolic functions of certain tissues.	600-A	2090
366	Studies of the initial stages of glucose metabolism in muscle extracts.	3200	
367	Metabolic studies; carbohydrates, proteins and vitamins.	4330	
368	To direct oxidative metabolism of carbohydrates in animal tissues.	4490	4040-C

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
369	Reconstruction and analysis of the system in animal tissue which oxidizes hexose aerobically to carbon dioxide and water.	790	90
370	Metabolism of pentoses.	1260	4040-C
371	Some unique properties of lactose as a dietary carbohydrate.	1830	
372	The effect of lactose upon protein utilization.	2360	120
373	The physiological effects and nutritive value of lactose in the diet.	2880	120
374	Effect of lactose on protein utilization.	2360	
375	Lactose synthesis involving the mechanisms of galactose metabolism in order to gain a better concept of their nutritional role.	2911	
376	The intermediary metabolism of galactose.	2290	
377	The metabolism of fructose-rates of disposal, participation of various organs, relation to endocrine balance, especially the action of insulin.	1580-FF	
378	A study of the intermediate metabolism of isopropyl alcohol.	1660	
379	Levulose metabolism.	1580-FF	3750
380	Investigation for an analytical method for fumaric acid, and on metabolism of fumaric acid.	4350	
381	Metabolism of the Schardinger (cyclic) dextrans. Effect of large amounts in the diet of the rat are being investigated. Importance to inhibiting action in polysaccharide synthesis in vitro.	1630	
382	To determine the effect of high cereal diets upon growth, reproduction, lactation, adult vitality and length of life; and if possible to determine the further effect of enforced muscular exercise upon these functions.	4020-D	
383	To determine the relationship between the nature of the breakfast meal and the carbohydrate-thiamine metabolism.	4020-D	
384	Carbohydrate conversion to fat.	850	3750
385	The biochemical conversion of carbohydrate to fat.	3340	2850
386	The mechanism of the biological conversion of carbohydrates to fat.	850	2850
387	The mechanism of the transformation of carbohydrate into fat.	710	
388	Certain aspects of sugar and fat metabolism, carried out with the aid of isotopes.	1440	2850
389	Use of tagged carbon atoms in the study of carbohydrate metabolism.	600	4090
390	Carbohydrate metabolism (with the aid of heavy hydrogen).	790	2850

Lipotropic Factors, Fats and Fatty Acids

391	Physiological lipotropic factors-choline, betaine, methionine and inositol.	3920	2850
392	Lipotropic action of amino acids. The relationship of the amino acids to the storage of fat induced by dietary means in the liver of young rats.	2290	
393	The relation of methionine to growth and lipotropism.	1260	
394	Qualitative nutritional effects of various fats, including the influence of various fats on fatty infiltration of the liver and on growth in rats.	3050, 1580-DD	3800
395	Lipids in relation to nutrition and especially liver disease. Study of the effects of various lipotropic substances.	4540	
396	The unidentified lipotropic factor in pancreas; its isolation, identification and mechanism of action.	600	2850
397	Inositol as a lipotropic factor.	1140	
398	Human cholesterol metabolism.	2360	2530

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
399	Cholesterol metabolism. Biotin deficiency prevents development of fatty livers on high cholesterol diets. Sex differences in biotin deficiency in rats.	600-A	
400	Intermediary metabolism of cholesterol. Growth studies on <i>Attagenus piceus</i> .	1700	2090
401	Lipid metabolism with special reference to cholesterol and lecithin.	600-A	4020
402	Effect of soybean lecithin on the metabolism of lipids, as relating to various skin conditions.	170	
403	The site and mechanism of cholesterol esterification.	3620	1905
404	Intravenous fat administration.	600	900
405	Preparation of fat emulsions suitable for intravenous feeding in man and animals.	2880	
406	Parenteral nutrition. Preparation of fat emulsions suitable for intravenous use.	1440	4460, 2530
407	Preparations of fat-water emulsion suitable for intravenous injection.	3660-A	
408	Effect of fat level of the diet on general nutrition.	3620	
409	Effects of environmental factors on fat usage. (Experiments with frog). Variations in temperature and pressure.	1180	
410	The relationship of dietary factors to lipid patterns in tissues. Development of analytical methods for quantitative determination of various types of phospholipids.	3820	1905
411	Cellular aspects of fat nutrition. Sterile cultures of <i>Colpidium</i> are being studied under various conditions to ascertain the process by which fats are synthesized in the multi-cellular body. Formation of complex lipids from simple amino acids.	1180	
412	Fat metabolism in invertebrates.	1180	
413	The relation of lipid metabolism to migration in birds: seasonal variation in the white-throated sparrow.	1300	
414	Metabolism of phospholipids in tissues. Action of choline and fat in formation of phospholipids in liver and intestine. Action of ethanolamine and derivatives on phospholipid fractions in the liver. Intestinal absorption of phospholipids.	4270	2090
415	Comparative nutritive value of fats. Studies on growth and reproduction of 20 generations of rats on diets of whole milk powder where the butterfat has been replaced by margarine.	3620	
416	Comparative nutritive value of fats. The role of vaccenic acid in growth.	3620	
417	The physiological significance of fatty acids of milk fat.	3340	101
418	Growth promotional efficiency of vaccenic acid and other fatty acids.	3120	
419	The nutritive role of hydroxy fatty acids.	2110	2850
420	Fatty acid metabolism by the deuterium (heavy hydrogen) technique.	2110	2850
421	The metabolism of fatty acids and its relation to carbohydrate metabolism.	710	
422	Availability of fatty acids in hydrogenated fats.	3120	2850
423	The animal synthesis of "essential" fatty acids.	2110	2590
424	The production of derivatives of sterols and their role in nutrition.	1650	
425	Metabolism of sterols and related substances.	710	
426	Steroid metabolism.	2920	
427	The chemistry and metabolism of steroid compounds	2195	2090
428	Intermediary metabolism of steroids.	2830	90

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
429	Steroid secretion in health and disease.	1580-BB	90
430	Effect of steroids on body protoplasm as indicated by metabolic studies.	1580-W, 1440	90
431	Effect of steroid hormones (particularly androgens) on human metabolism.	3340	90
432	The metabolism of polymerized oils.	4123	
433	Intermediary metabolism of fats. Tissue respiration and relation of vitamins to metabolism.	4490	2850
434	Chemical changes in fats associated with breakdown of kidney tissue.	4190	2850
435	Mechanism of biological fat synthesis and oxidation.	3340	4040-C
436	The synthesis of neutral fats from carbohydrate precursors in animal tissues.	710	4040-C
437	Utilization of fat (animal or vegetable origins) by normal and protein depleted dogs.	3660-A	
438	The relation of fat to economy of food utilization.	3040	
439	Determination of the effects of monoglyceride upon the absorption of triglycerides by the white rat.	3800	
440	Mechanism of fat-absorption, children and in adults, with special reference to the so-called partition theory of Frazer. Possibility of improved absorption of fats from intestine thru addition of monoglycerides and/or free fatty acids to dietary neutral fat.	3050, 1580-DD	
441	The relative value of fat and carbohydrate in human diets.	3040	4020-K
442	The metabolic function of the higher fatty aldehydes.	790-A	4040-C
443	Fecal fat. (1) excretion of fecal fat in sprue. (2) excretion of fecal fat by rats fed lipid low diets. (3) influence of sulfa drugs on the excretion of fecal fat by the rat. (4) influence of type of diet on excretion of fecal fat by the rat.	3210-C	
444	Effect of heated or browned fats on the morphology and function of organs.	1610-A	
445	Lipoproteins. Serine as a possible link between proteins and lipids.	790-A	2090

Minerals

446	A study of minerals and vitamins of college women living in the home management house and consuming self-selected diets.	2820	
447	The role of inorganic elements of the food in disease and health.	3650	
448	A study of the effect of the amorphous complex forming $(\text{NaPO}_3)_n$ on calcium metabolism when added to a standard rickets producing diet, using rats as experimental animals.	3610	
449	Radioactive isotopes as tracers of metabolic processes.	2360	2090
450	Investigations of the relation of certain constituents of the diet especially in minerals salts, to growth.	810	4020
451	Relationship of citric acid metabolism to skeletal calcification and decalcification.	850-A	
452	The biochemistry and biophysics (including dynamics) of calcification and ossification and of decalcification.	710	4460
453	Metabolism and composition of the skeleton.	2360	4040-C
454	The effect on the growth and development of young animals of feeding rations low in calcium content.	4020-C	
455	Effect of certain factors on Ca utilization in human subjects. To determine effect on Ca utilization of those dietary and other factors which apparently improve Ca utilization in lower animals.	2360, 2870	4020

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
456	Factors which may alter calcium utilization by the adult man.	1610	2850
457	The effect of certain factors on calcium utilization in human subjects.	2360	
458	Calcium balance studies with calcium citrate in animals and humans.	4420	215
459	To determine if calcium metabolism can be affected by modification of the air temperature and its significance in human nutrition.	220	4020
460	Calcium metabolism. The inhibiting factors in calcium metabolism when both calcium and vitamin D are present in ample quantities.	1990	
461	The effect of the Ca to P ratio on Ca utilization in human subjects.	2870	4020
462	The effect of phytates on absorption of radioactive calcium compounds.	2110	
463	The calcium, phosphorous and nitrogen metabolism of adolescent boys.	1610	101, 2530, 2480
464	The calcium, phosphorous and nitrogen metabolism of adolescent girls, with particular emphasis on calcium requirements.	1610	101, 2530
465	Effect of calcium on the inhibition of the succinic oxidase system by tocopherol phosphate.	980	
466	Investigation of conditions in the gastro-intestinal tract which influence the digestive hydrolysis of phytin, the form of phosphorous in various cereals which is unavailable to the human.	2800	
467	Phosphate nutrition. Project concerned with availability to animals of phosphorous in various experimentally produced phosphatic fertilizer materials.	3830	3970
468	Use of radioactive phosphorus in diagnosis of disturbances in calcium and phosphorus metabolism in man.	850-A	
469	The intake of radioactive phosphorous by normal gastric mucosa and by pre-cancerous and cancerous gastric mucosa is being investigated.	1440, 1580-D	
470	The role of the thyroid in the metabolism of the phosphorous studied with radio-phosphorous.	3620	1910
471	Study of the effects of subnormal temperatures on the metabolism of various phosphorous compounds in rats.	4010-C	
472	Sulfur metabolism.	850-A	
473	The nutritional availability of certain sulfur derivatives in foods.	2800	
474	The effect of phytates on absorption of radioactive iron compounds.	2110	
475	Iron absorption and utilization.	4330	2090
476	A study of iron uptake in 1000 consecutive hospital admissions using radioactive iron.	2230	4040-C
477	The utilization of radioactive iron.	3340	3850
478	Studies in iron absorption, utilization, and excretion; use of isotope.	4330	
479	Studies on the relative availability of different forms of iron.	1150	
480	Utilization of dietary iron by man.	2120	2850
481	To secure data concerning the extent to which man can utilize the iron of foods commonly eaten by man.	2120	4020
482	Iron absorption and loss during menstrual periods in subjects with dysmenorrhea.	2680	
483	The hypophysis and iron metabolism.	457	4050-A
484	Seasonal variation in iron metabolism in vertebrates and invertebrates.	2465, 1180	
485	Investigation of the physiological functions of the trace mineral elements in nutrition.	1870	
486	Studies on growth with aid of cobalt.	2930	4040-C-2

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
487	Sodium excretion during a reduction regimen.	1660	
488	Study of various factors that influence concentrations of potassium and phosphate in the serum and their effects on circulation and especially the electrocardiogram.	4540	
489	Utilization of potassium by normal healthy women 60-70 years of age.	2280	
490	Studies of potassium metabolism in connection with diabetic acidosis and cases of uncontrolled diabetes mellitus.	2730, 1580-N	2725
491	Fluoride and phosphate metabolism of bones and teeth.	3340	2850
492	Work on the mechanism by which phosphatase inhibitors such as fluorine, cadmium and iodacetate prevent dental caries.	3080	
493	Extension of studies of iodine in patients without thyroid disorders with special attention to serum albumin, nutritive state, pregnancy, etc.	4540	
494	Radioactive iodine (I127) and radioactive carbon (C14) as indicators of iodine metabolism and thyroid function.	600-A	4040-C
495	Studies on thyroid function. Metabolism of radiiodine in thyrotoxicosis in human patients.	1580-V, 3620	
496	Spectrographic studies of gastric tissues and gastric tumors. Further investigation of chromium in biological tissues with the view of studying radioactive chromium in the future.	1440, 1580-D	

Metabolism of Vitamins

497	Studies on the vitamin metabolism of human beings. Effect of varying intake of single vitamin on metabolism of others.	850	4020
498	Metabolic transformations of certain of the vitamins.	1070	4040-C
499	Investigations in metabolism of the vitamins.	2980	

Vitamin A & Carotene

500	Investigation of the metabolism of vitamin A.	3340, 1580-HH	
501	Vitamin A metabolism in small animals.	2920	
502	Metabolism of vitamin A.	1580-Z	2850
503	Metabolic investigations of newly synthesized vitamin A.	2920	
504	The utilization by human beings of the carotenoids, with application to some Hawaiian fruits and vegetables.	1480	4020
505	Utilization of carotene in the animal body.	770	
506	The availability to the rat of certain carotenes (alpha, beta, neo beta) in raw and cooked vegetables, carotene vitamin A balance and liver storage.	2280	4020
507	Carotene studies, the conversion of carotene to vitamin A in the rat liver.	4126	
508	Conditions affecting transformation of carotene to vitamin A in animal body. 1. Effect of antithyroid drugs (thiouracil) on transformation of carotene to vitamin A in rat. 2. Relationship of thyroid gland to transformation of carotene to vitamin A in pregnant rats.	600-C	
509	Studies on vitamin A. The site of transformation of carotene to vitamin A.	3620	2850
510	The relation of the thyroid gland to the conversion of carotene to vitamin A in the chick.	600-B	
511	The effect of fats and antioxidants upon the stability and utilization of vitamin A (rats and chicks).	30	4020

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
512	Influence of antioxidants and physical state on the metabolism of vitamin A and carotene.	450	
513	Influence of mineral oil on carotene and vitamin A blood levels.	1660	
514	Effect of soybean lecithin on the metabolism of fat soluble vitamins especially vitamin A.	170	
515	Determination of vitamin A blood levels, following ingestion of various sources of vitamin A and vitamin A precursors, as well as conditions which favor and hinder the absorption of the oil soluble vitamins.	1670	
516	Effects of subnormal temperature on vitamin A levels in blood and tissues of the rat.	4010-C	
517	A study of blood vitamin A and carotene and dark adaptation in human subjects on different levels of intake. This study is being carried out on about 200 subjects in the penitentiary.	3210-A	
518	Biological availability of beta carotene of cantaloupe.	260	
519	The intermediary metabolism of carotene.	3620	2850
520	Vitamin A intake in relation to bodily store and well-being at different stages.	790	2850
521	Mechanism of physiological function of vitamin A. Balance studies, in vivo, using labeled (radio-carbon) vitamin A.	980	
522	Mechanism of physiological function of vitamin A. Biological potency and toxicity of vitamin A ₂ .	980	
523	Factors affecting vitamin A gastro-intestinal stability and utilization. Protective effect of xanthophyll.	30	2850
524	The role of vitamin A and related substances in vision. The biochemistry of vitamin A in animal tissues.	1440	
525	A study of the variations of the vitamin A and vitamin A aldehyde content of the retina of rats on different levels of vitamin A.	3200	

Vitamin B Complex

526	Vitamin B complex in nutrition.	2960	
527	Methods of estimating relative saturation with vitamins of B complex in man.	1010	4040-C
528	Factors influencing utilization and storage of the B-complex vitamins.	2120	
529	A dietary factor which protects against hyperthyroidism and against exposure to low temperature. Effects of B vitamins, liver and yeast on growth under cold room and room temperature conditions.	3620	3910, 4010-F
530	Retention of B vitamins in rats on various diets.	3920	2850

Thiamine

531	Investigation of the role of vitamin B ₁ in the mammalian organism.	3995	4460
532	Thiamine metabolism in normal man under stresses of disease; work and metabolism.	2360	
533	Effect of added thiamine on the health and learning ability of normal children.	790	4460
534	The excretion of thiamine on a low thiamine diet.	1660	
535	To determine 1) extent to which nutrients of yeasts, especially thiamine, can be utilized from various types of yeast eaten fresh by animals and humans; and 2) effects of drying, boiling, and treating yeast with alcohol.	4490	4020

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
536	Availability of B ₁ and other components of vitamin B complex (pyridoxine, pantothenic acid and choline).	270	4020
537	Feeding experiments to determine the availability of vitamin B ₁ in certain medicinal products.	780	
538	Metabolism of thiamine and cocarboxylase in normal and diabetic subjects.	705	2090

Riboflavin

539	Study of riboflavin in human nutrition.	1580-L	2660
540	Riboflavin metabolism in man. Special emphasis on the relations between riboflavin intake, urinary excretion and concentration in the blood.	2360	
541	The riboflavin and ascorbic acid excretion of college women on self-selected diets.	2820	
542	Urinary excretion of riboflavin of college women on different levels of riboflavin intake.	2280	
543	The function of the B vitamins, experiments with dogs. 1. Study of the relationship of riboflavin and pantothenic acid to adrenal cortex activity.	600-A	4020
544	Physiological availability of nutrients in dairy products. 1. Availability of riboflavin in ice cream.	1650	4020
545	The intermediary metabolism of riboflavin, thiamine and choline in human beings.	1770	4030
546	Nutritional aspects of riboflavin.	4490	800

Niacin

547	The metabolism of nicotinic acid. A study of the physiology of niacin deficient animals.	1010	2850
548	Nutritional status studies: studies in progress on microbiological assay of niacin content of blood in college women.	40	
549	The nutrition status of college women with respect to nicotinic acid and folic acid as determined by blood levels and urinary response to test doses.	30	
550	The utilization of nicotinic acid by college women receiving a known dietary intake of nicotinic acid and tryptophane.	30	

P A B

551	Para-amino-benzoic acid. Studies relating to the role of PABA as a co-enzyme, its effects on the life cycle of various organisms and its co-relationship to other members of the B complex. Studies relating to role of PABA as anti-rickettsial.	1670	

Pantothenic Acid

552	Study of physiological role of pantothenic acid in metabolism.	2910	4040-C
553	Physiological availability of pantothenyl alcohol.	1530	
554	Choline, structure, nutritional role.	100	
555	Metabolic fate of choline.	3340	2850
556	The effect of the level of dietary choline on the amount of free and total choline in body tissues and urine.	3850	4460
557	Acetylcholine formation and tissue metabolism in relation to levels of choline and pantothenic acid in the diet of certain insects and the white rat.	1440	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Biotin</u>			
558	Functional role of biotin and pantothenic acid; their relation to carbohydrate metabolism.	1660	2850
559	Biotin metabolism.	850-A	
560	Biotin metabolism in man.	4490	2850
561	Mechanism of biotin action.	850-A	
562	Biotin and carbon dioxide fixation in liver.	100	90, 3350, 4040
563	Mechanism of action of newer members of vitamin B complex, mode of action of biotin. Endeavor to identify the enzyme(s) to which biotin is related.	3120	90
564	Synthesis and biological effects of biotin analogues.	3120	
<u>Folic Acid</u>			
565	Study of hemopoietic activity and other physiological properties of the vitamin M group of substances. Responses of pernicious anemia patients to pteroylglutamic acid and other members of M group and to various liver fractions. Metabolism defects in sprue and pernicious anemia.	4125	2660
566	Newer members of the vitamin B complex with special reference to anti-anemia activity.	850	2850
567	Studies on the biological function of pteroylglutamic acid.	270-A	4040-C
568	Metabolic effects of folic acid.	2870	4050-A
569	Folic acid metabolism in non-sprue, mainourished individuals.	3210-C	
570	Function of folic acid in nutrition of rat. 1. Measurement of minimum folic acid requirement of rat for normal growth. 2. Interrelation between biotin and folic acid in rat. 3. Pathology of folic acid deficiency in the rat.	3210-C	
571	The comparative utilization of pteroylglutamic acid and pteroyltriglutamic acid by chicks on a purified diet.	100	
572	Metabolism of folic acid. Studies of the absorption of dietary conjugated folic acid and the effects of deficient diets, as well as disorders of the digestive system, in causing anemia due to lack of folic acid.	2290-A	
573	Series of normal and hospital control studies on folic acid. a. 24 hours urinary excretion. b. 2 hours fasting excretion levels. c. test dose excretion.	3210-C	
574	Tracer studies with C ¹⁴ folic acid.	3630	
<u>Vitamin C</u>			
575	Studies on vitamin C metabolism.	2730, 1580-N	1145
576	Studies on the ascorbic metabolism of human beings.	850	
577	Ascorbic acid of the blood of college girls.	3850	
578	Utilization of dehydroascorbic acid by college women.	40	
579	A study of the vitamin C status of Kansas college women.	1740	4020
580	The nutritive status of women in the 5th and 6th decades; metabolism of ascorbic acid.	1650	4020
581	Utilization of humans of ascorbic acid from leafy green vegetables.	1980	4020
582	Relation of vitamin C to the vascular system.	1580-CC	2850
583	Biochemical study of vitamin C.	790	4040-C
584	Utilization by human subjects of pure ascorbic acid and of ascorbic acid obtained from food sources such as grapefruit.	3220	
585	Biosynthesis of vitamin C and effect of diet on it.	2360	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
586	Effects of salicylates and other medication on vitamin C levels in blood.	1660	
587	Effect on animal body of varying amount of vitamin C in diet. Studies of guinea pig with reference to a. relation of connective tissue in bones and their mineral content. b. tensile strength and histology of muscle. c. histology of blood.	1740	4020
588	Endocrines and vitamins. Adrenocortical function and vitamin C metabolism as related to cold acclimatization. Appropriate dietary and endocrine therapy for possible increase of military efficiency in cold. Change in C metabolism associated with exposure to cold.	4010-B	
<u>Vitamin D</u>			
589	Dietary factors which affect response to vitamin D.	1020-A	
590	Vitamin D. Use of chick assay instead of rat assay in order to detect presence of synthetic vD2 in vD3 preparations.	3590	
591	Efficacy of vitamin D ₃ in relation to availability of phosphorous.	1020-A	
592	Efficacy of pure crystalline vitamin D in comparison with reference cod liver oil, and chick as test animals.	1020-A	
593	Studies on the relative effectiveness of various forms of vitamin D active materials in laboratory animals.	1910	
<u>Vitamin E</u>			
594	Studies on the metabolic function of vitamin E.	2350	2850
595	Physiological function of vitamin E. Distribution and concentration of vitamin E in tissues and organs of the human body.	980	
596	Metabolic functions of the tocopherols and other antioxidants.	30	
597	Biological effectiveness of mixtures of alpha, beta, delta, and gamma tocopherols.	1910	
598	Mechanism of physiological function of vitamin E. Examination for in vivo inter-conversion of the tocopherols in chickens.	980	
599	Mechanism of physiological function of vitamin E. Balance studies using labeled (radio-carbon) tocopherols in vivo.	980	
600	Mechanism of physiological function of vitamin E. Changes in urinary constituents due to vitamin E deficiency as shown by paper chromatography.	980	
601	Mechanism of physiological function of Vitamin E. Liver protection by vitamin E against injury by chlorinated hydrocarbons.	980	
602	Vitamin E and menopause. Investigations of the significance of vitamin E in human fertility and in the treatment of climacteric syndrome in both sexes.	1580-FF	1530
<u>Vitamin K</u>			
603	Quantitative aspects of vitamin K utilization and prothrombin production in chronically hypoprotrombinemic animals.	1660	
604	Study of vitamin K and liver.	2770	1530
605	A urinary metabolite of vitamin K not having properties of usual conjugation products. An attempt to isolate and identify this metabolite.	3820	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Vitamin P</u>			
606	Research on vitamin P. Effect of rutin on anaphylactic and histamine shock.	1580-FF	
607	Study of vitamin P-like substances and their effect on the animal organisms.	3475	3030
608	Citrin as a factor in influencing capillary permeability.	1140	
<u>Unidentified factors</u>			
609	Animal experimentation on unknown dietary factors.	2980	
610	Investigation of role the animal protein factor plays in human nutrition.	1560	
611	Protein growth factors not specifically identified. Animal and microbiological growth factors.	1910	
612	The role of an unidentified factor, found in animal protein supplements, in the rations of chicks and hens.	850	
613	Studies on an unidentified growth factor for chicks on cereal and soybean meal diets ("animal protein factor").	1020-A	
614	New growth essentials for the chick and the rat.	2260-A	
615	Animal protein factor, assays involving chicks, rats and mammals.	1560	
616	The physiological role (function, mechanism of action, and pathological symptoms of deficiency) of the unidentified nutrients of milk, milk products and liver extracts.	4020-C	
617	Antistiffness factor.	2910	4460
618	The "antistiffness" factor in guinea pigs. A factor regulating calcium deposition in arteries, joint and muscles of guinea pigs.	850	2850
619	A study of naturally existing sterol materials affecting calcium and phosphorus metabolism in guinea pigs. (The so-called "Wulzen Factor" or antistiffness factor).	1910	
620	A search for a heretofore unknown bone-calcifying factor. To determine whether or not any of the organic nutrients, other than vitamin D, enhance the utilization of Ca and P.	2120	4020,2530
621	Isolation of unidentified factors necessary for animal reproduction.	3270	
622	Study of the growth-stimulating properties of organic arsenicals to be used in poultry medication. One of the arsenicals studied, 4-hydroxy-3-nitro-benzenearsonic acid, produces 13% greater gains.	3420	
<u>Enzymes in Metabolism</u>			
623	Kinetic studies on metabolic enzymes.	3120	4040-C
624	Enzymic mechanisms of biological carbon dioxide assimilation. Study of enzyme systems concerned with biological oxidations and synthesis in animal tissues and microorganisms.	2770	4040-C
625	Studies of carbohydrates and the enzyme system. 1. Studies on the synthesis of d-ribose. 2. Studies on chitin and glucose amine.	2360	4020
626	Enzyme studies connected with the vitamins.	2980	
627	Experiments designed to discover in vitro enzymatic methods for the conversion of beta-carotene into vitamin A.	1630	

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
628	Vitamin A nutritional status and enzymatic activity. Succinoxidase, cytochrome oxidase, catalase and lysozyme systems.	1830	
629	Cytochrome C as a biocatalyst of oxidation-reduction processes in metabolism of regenerating liver.	3050	4050-A
630	Enzymic mechanism of hydrogen transport in animal tissues.	710	
631	Studies on proteolytic enzyme action.	4490	2635, 4040-C
632	Enzymes attacking nucleic acids and their derivatives.	270A, 2095	2090
633	Inhibition of intracellular enzymes participating in protein and amino acid metabolism.	3950	2500
634	Isotopic tracer studies on the enzymes and mechanisms of protein synthesis.	600	90
635	Study of enzyme systems in adrenal glands.	1610	4090

Hormones in Metabolism

636	The influence of hormones on various factors in nutrition. a. Water balance as influenced by various hormones. b. Metabolic effects of various hormones.	2730, 1580-N	190
637	Relation of estrogens and thyroid to appetite.	2280	
638	Relation between dietary needs and endocrine secretion.	1700	
639	Nutritional effects of substances which modify endocrine activity.	100	
640	Influence of thyroid on intestinal secretion.	3340	
641	Nature of the circulating thyroid hormones studied with radioactive iodine.	3620	
642	Influence of parathyroid on intestinal secretion.	3340	
643	Cellular mechanism of insulin action.	710	
644	Influence of insulin on intestinal secretion.	3340	
645	Studies in insulin resistance.	2730, 1580-N	2725
646	The protein anabolic properties of testosterone propionate in the adrenalectomized rat.	3340	
647	A comparison of the protein anabolic properties of testosterone propionate and growth hormone in the hypophysectomized rat.	3340	
648	The determination of the nature of the growth stimulated by testosterone propionate in the rat.	3340	
649	Comparison of effect of testosterone propionate and anterior pituitary growth hormone on the body and organ weights and enzymes of the liver and kidney of the castrated mouse.	3340	
650	Comparison of the nature of the growth stimulated by testosterone propionate and anterior pituitary growth hormone in the mouse.	3340	
651	Metabolism of the steroid hormones.	4420	2090
652	The identification and determination of the steroids formed and excreted in association with labor.	2360	2090
653	The influence of age on the neutral steroid hormone production in man.	4505	2090
654	Relation of the steroid hormones to citric acid metabolism. Hormonal control of citric acid metabolism in man.	850	2090
655	Study of therapeutic value of mixed estrogens from natural sources administered to the intact skin as an inunction.	2290	3030
656	Combined use of androgens and estrogens in the management of metabolic disturbances.	850-A	
657	The relationship of protein metabolism to endocrine function.	2890	
658	The endocrine relations of metabolism studied by the use of compounds containing isotopes.	600-A	2090

PHYSIOLOGY

METABOLISM

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
659	Effect of methyl testosterone as influencing retention of nitrogen and calcium in period of growth.	1580-O	
660	The biochemical changes in the urine, blood, muscle and skin of protein - depleted animals receiving injections of desoxycorticosterone.	1970	
661	The role of vitamins, particularly those of the B complex, in the biological action of hormones.	4420	2850
662	The relation of the anterior pituitary to protein metabolism.	2770	4040-C
663	Endocrine factors in protein metabolism.	3410	
664	Endocrine influence on protein and amino acid metabolism.	1010	2090
665	Relation of the anterior pituitary to carbohydrate and protein metabolism.	2770	
666	A comparison of protein-anabolic properties of various steroid hormones.	3340	
667	Mechanism of the dual influence of adrenalin in conjunction with ascorbic acid.	1140	
668	The influence of vitamins and hormones on the specific action of nutrients.	2390	
669	Effect of soybean lechithin on the metabolism of sex hormones.	170	

TISSUE CHEMISTRY

General tissue

670	Electron microscopy of plant and animal tissues.	3120	
671	Amino acids in composition of normal and diseased animal tissue; and in nutrition of lactobacilli.	3500	
672	The distribution of amino acids between cells and extracellular fluids. Relation to protein synthesis, growth and wasting.	1580-G	
673	Utilization of dietary essential amino acids in tissue synthesis.	710	2590
674	Action of serum in enhancing tissue respiration.	850-A	2090
675	Metabolism of tissues of hypersensitive and normal animals.	1700	2090
676	Tissue metabolism as it concerns the breakdown of carbohydrates and its connection with carbohydrate synthesis.	3050	90
677	The mechanism of protein synthesis in living tissues.	710	
678	Isolation and characterization of tissue proteins.	3700	90
679	The rate of metabolic reactions in the proteins of normal and growing tissues.	790	90
680	Function of lipoproteins and lipids in cell organization and proliferation.	790	90
681	The mechanism of glutamine formation with special reference to peptide bond synthesis in animal tissues.	710	

Blood

682	The blood picture of youths participating in 4-H programs. To study the hemoglobin content, red and white cell counts, reticulocyte percent and phosphatase content of the blood of rural boys and girls of preadolescent and adolescent age.	2360, 2870, 2360	4020
683	Local metabolic changes following ischemia.	3700	2090
684	Research on blood substitutes.	1990	1800
685	Studies on blood volumes on surgical patients with common duct obstruction and liver disease. Patients in which malnutrition is created by intestinal lesions, or inadequate food intake.	1610	

PHYSIOLOGY
TISSUE CHEMISTRY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
686	Dietary factors in maintenance of normal level of certain blood constituents, blood regeneration in women blood donors, anemia hemorrhage.	2680	4020
687	Methods of blood analysis.	3040	
688	The effect of vitamin A and vitamin C therapy upon blood levels of these vitamins.	4126	
689	Factors other than diet which influence the blood plasma level of ascorbic acid.	3820	
690	Cholesterol content of the blood as influenced by diet.	960	
691	Blood cholesterol in relation to diet and activity of normal man.	2360	101
692	The correlation of serum iron with dietary intake in adolescent girls.	850	
693	Development of microchemical method for serum iron.	3200	
694	Blood sugars, plasma proteins, etc., improved techniques for chemistry procedures.	1660	
695	Base line data on serum content of different globulins and polysaccharides. Immunological relations of human, bovine, avian type proteins.	4490	2650
696	Blood sugar levels.	1070	3750
697	A rapid micro-method for the determination of albumin in human blood.	3660-A	
698	Behavior of serum albumin under various experimental conditions.	1580-FF	
699	Metabolic studies, protein metabolism: determination of ability of debilitated patients to utilize protein for hemoglobin formation.	3950	
700	Relationship of abnormally low levels of hemoglobin to physical status.	4040-C-4	
701	Determination of range of normalcy for hemoglobins and vitamin C, A and carotene in the blood.	4040-C-4	
702	A study of persons with low hemoglobin values refractory to iron therapy.	2310	
703	The vitamin D content of the blood of Florida dairy cattle.	1150	
704	Effect on the blood vitamin A activity values for dairy animals of certain vitamins and minerals.	2810	
705	Chemistry of the red blood cell in health and disease.	730	
706	Factors concerned in the production of red cells; protein, iron, copper, cobalt, the B vitamins, and other factors concerned in hemoglobin synthesis. Study of pathogenesis of pernicious anemia in attempts to produce pernicious anemia in animals for bioassay of liver extract.	4120	
707	Leucocytes in nutrition and growth.	3170	2090
708	Study of the relation of nutrients to white blood cell formation.	741	2660
709	Studies on colloid (plasma protein and gum acacia) exchange between the liver and the blood.	1580-I	4040-C
710	Study of plasma concentrates of individual amino acids in healthy and in diseased individuals.	2100	4040-C
711	Changes in blood amino nitrogen level following ingesting of proteins and of protein hydrolyzate in infants with normal and with deficient pancreatic functions.	2290	
712	Research on the chemistry of antigens and blood products.	1730	4090
<u>Bone</u>			
713	Studies on the physiology of bone.	710	4040-C
714	The nutritional aspects of the metabolism of bone marrow and leukemic cells.	850-A	90

PHYSIOLOGY
TISSUE CHEMISTRY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
715	Relation of gastric acidity to bone formation.	1610	
716	Influence of modified diets on the response of bones of animals to endocrine administration. X-ray diffraction, electron microscopy, and gross chemical analysis of bone.	1610	
<u>Brain Tissue</u>			
717	Nutrition of brain tissue.	3890-A	4040-C
718	The multiplication of polio virus and the metabolism of mouse brain in vitro.	3620	2570
<u>Liver Tissue</u>			
719	The role of the diet in the liver growth and repair, especially the protein and biotin content.	510	
<u>Muscle</u>			
720	Thiamine changes in skeletal muscle.	1440	2850
721	Muscle protein.	2920	
722	Causes of variations in the vitamin content of various muscles within single animals.	3800	
723	Determination of ratios of thiamine, niacin, riboflavin and pantothenic acid to the protein, fat, moisture and total solids in muscle tissue.	3800	
724	Function of vitamin E in the metabolism of muscle.	1660	2090

INTERRELATIONSHIPS

Anti-metabolites

725	Metabolic antagonists.	850-A	
726	Isotopic tracer studies of tissue synthesis and reactions of metabolic antagonists.	600-F	4040-C
727	The influence of inhibiting substances in nutrition.	3510	
728	Naturally occurring enzyme inhibitors and their nutritional significance. Mode of action. Nutritional significance in beans, peas, soybean and other feeds and counter-measures.	2680	4020
729	Interrelationship and dietary needs of various nutrients as affected by the caloric intake of human subjects.	2320	
730	Molecular isosterism of antivitamin and other specific antagonists.	780	4050-A
731	Effects of antivitamin on weight and nitrogen balance in intact dogs, and on weight, nitrogen balance, glycosuria, and various blood constituents in depancreatized dogs.	1580-O	
732	Antithiamine activity of plant materials.	2910	4460
733	Investigation of new possible antagonists of phenylalanine and a known antagonist of thiamine. Research being started concerning possible antagonists of vitamin A.	1630	
734	Anti-vitamin effects of thiamine and pyridoxine analogues.	1180	
735	Effect of B ₆ antagonists (desoxyxypyridoxin) on normal and neoplastic lymphoid tissue, circulating antibodies and serum proteins.	1440	
736	Vitamin inhibitors; analogues of pyridoxine, thiamine, riboflavin and biotin as potential antagonists of the vitamin to which they are structurally related.	2260	
737	Biochemical experiments with a synthetic preparation having an action antagonistic to that of pteroylglutamic acid.	100	

PHYSIOLOGY
INTERRELATIONSHIPS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
738	Acceleration of pteroylglutamic acid deficiency in mice and chicks by a chemical antagonist.	100	
739	The inhibition of pteroylglutamic acid conjugase and its reversal. The effect of nucleic acid and sulfhydryl-combining reagents.	2980	
740	Antagonistic effects of excesses of single amino acids in purified diets.	4420	4460
741	Antiamino acids.	850-A	
<u>Vitamin-vitamin relations</u>			
742	The relationship between vitamin E and the utilization of carotene.	4020-D	
743	Nutritional relationships of vitamin A and E.	1660	
744	To study 1. Interdependence of ascorbic acid and thiamine in metabolism and 2. utilization of ascorbic acid in oxidized and reduced forms.	4400	4020
<u>Vitamin-amino-acid relations</u>			
745	To determine whether any relationship exists between the functions of vitamin A and the essential amino acids. Microbiological procedure.	3370	4050-A
746	The relation of vitamin A to the utilization of the essential amino acids; growth at sub-optimal level of vitamin A as affected by nutritive value of protein in diet; nitrogen balance at different levels of protein and vitamin A intake.	3370	4020, 4050
747	The relationship of the amino acid composition of the diet to niacin synthesis in the rat.	3620	
748	Physiological effects of specific amino acids and proteins and metabolic relationship between tryptophane and niacin in the production of niacin deficiency in experimental animals.	4040-C	
749	Nutritive requirements of humans; influence of amount and quality of protein consumed by college women on their riboflavin and niacin requirements.	1610	
750	Studies on the intermediary metabolism of tryptophane into nicotinic acid.	600-A	
751	The niacin-tryptophane relationship.	3410	
752	Interrelationship of tryptophane, nicotinic acid, and pyridoxine and fat.	30	4460
753	Interrelationship of metabolism of tryptophane, nicotinic acid and pyridoxine; kinurenic acid, a metabolite of tryptophane, fed with and without nicotinic acid or pyridoxine, for effect on nicotinic acid metabolism.	600-C	
754	Relationship between the urinary excretion of creatinine, ascorbic acid and riboflavin.	4126	
755	Relation of amino acids and vitamins to choline deficiency.	3410	
756	Determination of relationships between the essential amino acids and the vitamins in metabolism.	3370	
757	Relationship of kymurenine to nicotinic acid production (in the rat).	1660	
758	Interrelationships of tryptophane, nicotinic acid and vitamin B ₆ in the nutrition of the rat and other animals.	3850	
759	Study of metabolism in the rat with reference to metabolites occurring in urine, and interrelationships between dietary protein and nicotinic acid.	1010	2850
760	Sparing effects of vitamin E on amino acids and proteins.	980	
761	Interrelationship of vitamins to amino acids.	3830	

PHYSIOLOGY
INTERRELATIONSHIPS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Amino acid interrelations</u>			
762	Synergistic and antagonistic effects of amino acids in animal nutrition.	220	4040-C
763	Interrelationships of amino acids. Amino acid metabolism in aseptically grown monocellular animal organisms (Tetrahymena). Toxicity of non essential amino acids.	220	
<u>Vitamin-amino acid relations</u>			
764	Interdependence and physiological availability of vitamins, amino acids, and other nutrients in foods.	260	4020
765	Effect of dietary components on the requirement of amino acids. Factors affecting growth of rats receiving niacin-tryptophane deficient diets.	4490	2850, 2530
<u>Vitamin-hormone relations</u>			
766	Effect of thyroxin on vitamin A storage in the liver of the albino rat.	3560	
767	Role of the thyroid in the storage of vitamin A. Vitamin A storage in the rat.	3620	2850
768	Influence of vitamin A on the metabolism of iodine by the thyroid gland.	3620	
769	Effects of vitamin A deficiency on tissue structure and storage of the vitamin; effects of deficiency or excess of thyroid secretion on the utilization and storage of vitamin A.	3550	
770	Studies on thyroid activity, carotene and vitamin A in animal tissues as affected by thiocarbamates and iodinated proteins.	2360	
771	Pantothenic acid deficiency in its relation to the adrenal cortex.	2770	
772	Relation of pantothenic acid to adrenal gland; to ascertain exact amount of pantothenic acid necessary for survival of adrenalectomized rats; carbohydrate metabolism and lymphocytic response to adrenalectomy.	2770	
<u>Vitamin-carbohydrate relation</u>			
773	Relationship of pyridoxine and pantothenic acid to carbohydrate metabolism, particularly to the interconversions of protein and carbohydrate substances in the rat.	1970	
774	Effect of different dietary sugars on the biosynthesis of the B-complex group in man.	2770	
775	Relation of carbohydrates to inositols.	3920	2850
<u>Vitamin-protein relation</u>			
776	Influence of the vitamin B complex on protein utilization.	270	
777	Interrelationships of protein, amino acid, enzymes and unknown vitamins.	3680-A	
778	Function of pyridoxine in protein metabolism; effects of cystine, methionine, and tryptophane on rats kept on low-protein, pyridoxine-free diets is being secured.	1180	
779	Relationship of pyridoxine to protein metabolism in human adult.	4490	1530
780	Protein interaction of vitamin E.	980	

PHYSIOLOGY
INTERRELATIONSHIPS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
781	Study of effect of members of B complex on protein utilization.	270	2660
782	Cow's milk protein and vitamin interrelationships in infant nutrition.	1580-KK	1110
783	The nature and extent of combinations and interactions of protein.	2360	4040-C
<u>Enzyme-vitamin relation</u>			
784	Mechanism of physiological function of vitamin E. Enzyme-vitamin E interrelation in vivo and in vitro.	980	
<u>Vitamin-fat relation</u>			
785	The effect of the type of dietary fat on the rate of growth of rats on the vitamin B low diets.	3620	
786	The nutritional interrelationship between pyridoxine and essential fatty acids.	2110	
787	Interrelationships in function of cholesterol, biotin, and choline. Effects of diets rich in biotin and/or cholesterol on blood cholesterol and on sterol deposition in tissues. Effects of level of intake of choline on biotin-deficiency symptoms in the rat.	600-A	
788	Effects of vitamins on the digestion, absorption, and use of lipids (olive, corn, and other oils) in the cold blooded vertebrates (frog).	1180	
<u>Mineral interrelations</u>			
789	Interrelationship of certain minerals in animal metabolism.	1150	
790	The relation of the calcium and magnesium content of the diet to the digestibility of fat.	3620	3800
791	Interrelationship of type of protein and utilization of calcium in the diet.	710	1110
792	Significance of the parathyroid and of plasma calcium in acid base balance.	1010	
793	Studies on the metabolic function of vitamin E and potassium.	2360	
794	Effect of dietary fat on nitrogen retention.	2110	
795	Casec tolerance and absorption in disturbances of fat metabolism and in normal children.	1610	
796	Alteration of vitamin requirements produced by natural foodstuffs. Studies of various interrelations of essential dietary factors.	4540	2660
797	Protein-sparing effects of complex carbohydrates as found in apple, banana and pineapple.	3340	3750
798	Study and influence of hormones on the activity of enzymes and on bone formation.	1700	2850
799	Effects of aromatic hydrocarbons, halogenated hydrocarbons and nitro-benzene derivatives on the requirements for and metabolism of vitamins.	790	4040-C
800	Toxicity of chlorinated hydrocarbons, with special reference to chloroform in relation to protein intake and lipotropic substances.	4540	4040-C

PHYSIOLOGY
DEFICIENCIES

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>General Deficiencies</u>			
801	Clinical manifestations of nutritional deficiencies.	3210-C	
802	Vitamin deficiencies (A,C,E) in certain groups of diseases: chronic wasting, metabolic disturbances, the arthritides, and heart disease.	1010	2090
803	Signs of nutritional deficiency diseases.	2723	4460
804	Clinical studies of vitamin deficiencies.	2830	4090, 1310
805	Evaluation by therapeutic testing of clinical signs commonly associated with nutritional deficiency diseases.	4040-C-4	
806	Human starvation and its consequences. Induced nutritional deficiencies and rehabilitation in man after experimental starvation.	2360	2090
807	Study of intestinal absorption in deficiency diseases.	4420	4460
808	Respiration of heart muscle in various nutritional deficiencies.	1440	
<u>Protein and Amino Acid</u>			
809	Effects of various dietary deficiencies, such as protein, choline, potassium, and/or essential amino acid deficiencies, on the blood and tissue proteins of dogs and rats. Effect of methionine and protein hydrolyzates on blood and tissue of deficient animals.	1970	
810	The effect of protein deficiency on the growth and development of oral structures in the albino rat. Effect of single amino acid deficiency to be studied.	2230	4040-C-3
811	Amino acid deficiency in man and animals.	1700	2850
812	Ocular changes resulting from amino acid and protein deficiencies in the rat.	1300	2090
813	Variations in levels of amino acids in patients with various diseases and physiologic deficiencies.	1610	
<u>Vitamin Deficiencies</u>			
814	Development of methods for diagnosing vitamin deficiency diseases.	741	2850
815	The displacement concept, (i.e.) the design of displacement compounds and the determination of the nature of the nutritional deficiency they produce.	2560	
816	Studies on pathological and biochemical changes produced by vitamin deficiencies. Identification and study of effects of new vitamins. Relation of vitamin deficiencies to resistance to infections. Effect of specific nutrients on bacterial metabolism.	4040-C	
817	Investigations into the physiologic and morphologic changes associated with experimental vitamin deficiency.	1440, 1580-G	
818	Effect of various vitamin deficiencies on the transmission of impulses by the vagus and other nerves.	1440	
<u>Vitamin A</u>			
819	Etiologic significance in the relation of vitamin A to certain skin diseases. The absorption of vitamin A in those skin diseases which are considered to be manifestations of dysvitaminosis A. Keratosis Follicularis, Ichthyosis, and Keratosis Pilaris.	1440, 1580-W	
820	The effect of vitamin A deficiency on histological structure of developing bone.	3560	

PHYSIOLOGY
DEFICIENCIES

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
821	The effect of vitamin A deficiency on bone development in albino rats.	3560	
822	The effect of vitamin A, vitamin C, riboflavin and niacin therapy upon clinical signs caused by a deficiency of the respective vitamins.	4126	
<u>B Complex</u>			
823	Blood levels in normal adults on a restricted dietary intake of B-Complex vitamins and tryptophane.	4010-B	
824	Nutritional deficiencies of the B-Complex vitamins. Partial replacement by amino acids.	1010	2090
<u>Thiamine</u>			
825	Vitamin B ₁ deficiency in the mammalian organism.	3995	4460
826	Special techniques for the preparation of palatable low thiamine diets.	1660	
827	Effect of thiamine deficiency in normal and alloxan diabetic rats as studied under pair-feeding conditions.	1160	1530
828	Effect of deficiencies of thiamine, riboflavin, or pyridoxine, on conversion of protein to glucose.	1580-O	
<u>Riboflavin</u>			
829	Effect of riboflavin deficiency on the organs of the albino rat. Cytological studies of brain, cord, sciatic nerve, tibialis anterior, gastrocnemius, skin, liver, pancreas, pituitary, thyroid, parathyroid, adrenal, gonads, teeth and femur.	2010	
830	Cataract riboflavin deficiency.	3825	2090
831	Studies of riboflavin deficiency.	1580-L	4040-C
832	Chemical methods of detecting possible vitamin B ₂ deficiencies.	1070	2850
833	Riboflavin deficiency in anoxic anoxia. Riboflavin deficient animals are unable to respond to anoxia by raising their carbohydrate content. Injection of riboflavin restores this capacity. Similarly injection of cortical extract is effective.	600-C	
<u>Niacin</u>			
834	Niacin deficiency in children.	2770	4460
835	Relation of niacin and other B vitamin deficiencies to oral diseases.	600	2850
836	The relationship between the nicotinic acid content of milk and its anti-pellagra activities.	4490	2530
837	The role of the stomach in the pathogenesis of pellagra.	1010	
<u>Pantothenic Acid</u>			
838	Pantothenic acid deficiency and Achromotrichia induced by Sulfapyridine and some carcinogenic chemicals (black and albino rats).	2230	2850
839	Relationship of pantothenic acid deficiency in mice to the syndrome of "burning feet."	790	4460
840	Vitamins and hair; study of the relationship between vitamin deficiencies and loss of hair or of hair color.	741	1530

PHYSIOLOGY
DEFICIENCIES

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Biotin</u>			
841	Investigations on biotin deficiency, pantothenic acid deficiency, and the relationship of these members of the vitamin B complex to the other parts of the complex and to protein level in the diet. Oral mucosa in rats affected by deficiencies.	600-A 790	1530
842	Investigation of the nature of the ascending paralysis produced in dogs on a B-complex deficient diet and responding to biotin therapy.	1010	2850
843	Symptoms of deficiency disease. To study the lesser known deficiencies in man, biotin, folic acid, pantothenic acid, pyridoxine, etc., in an effort to define their clinical syndromes.	4010-B	
<u>Choline</u>			
844	Choline deficiency: Effects in mature albino rats.	3560	
845	A study of fatty livers and choline deficiency in the guinea pig. Physiological results with particular attention to hepatic and renal damage.	1010	2850
846	Relationship of estrogens to renal lipids of rats on choline deficient diets.	780-A	
847	Choline metabolism assay and deficiencies in relation to metabolism of other B vitamins, methyl linolate and sulfur-containing amino acids. Choline content of foods. Tissue lesions associated with prolonged sub-optimal choline nutrition.	30	4020
<u>Folic Acid</u>			
848	Clinical investigations of nutritional diseases. Effect of folic acid, niacin, riboflavin, and iron on glossitis. Effect of vitamin A on follicular keratosis and similar skin lesions. Metabolic studies of tryptophane and niacin. Blood lactate-pyruvate relationship in various physiological and pathological states.	3950	4460
849	Pteroylglutamic acid clearance in normal adults. To study lesser known deficiencies in man, in effort to define their clinical syndromes.	4010-B	
<u>Ascorbic Acid</u>			
850	Effects of ascorbic acid deficiency on the connective tissue components of the guinea pig.	4390	
851	Carbohydrate metabolism in the scorbutic guinea pig.	4320	
852	Action of various collagen stimulating substances (male and female sex hormones, dilantin, thyroid hormones) in animals on a vitamin C deficient diet.	790	
<u>Vitamin E</u>			
853	The nature and significance of a pigment associated with vitamin E deficiency.	3340	2850
854	Study of the hearts of litters of vitamin E-deficient female rats to determine if lesions similar to those described in rabbits occur.	2010	
855	Studies on the hearts of vitamin E-deficient rabbits.	2010	
856	Studies on the hearts of vitamin E-deficient guinea pigs. Cytological and electrocardiographic.	2010	1530

PHYSIOLOGY

DEFICIENCIES

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>

857	Vitamin E. (a) Effect of vitamin E deprivation in the monkey. (b) Vitamin E content of Puerto Rican foods.	3210-C	

Vitamin P

858	Effect of vitamin P or similar citrus fruit products on various diseases.	570	

Minerals

859	Vitamin and mineral deficiencies, and their effect on the bone development of children.	1580-G	2850
860	Phosphorous metabolism in choline and manganese deficiency using radioactive phosphorous.	1440	
861	Studies of magnesium deficiency. Blood cell findings.	4540	
862	Potassium and thiamin deficiencies in dogs.	1010	4040-C
863	Goiter by iodine deficient diet of foods raised by hydroponics; proof that goiter is due to faulty nutrition.	1410	

PATHOLOGY

864	Nutrition in medicine.	4120	
865	Effects of disease on nutrition and utilization of nutriment.	1580-U	

Abortion

866	Value of vitamin E and of progesterone in the prevention of recurring abortion in the human.	1580-U	1530

Addison's Disease

867	Study of Addison's disease.	1440	2090

Alcoholism

868	Study of vitamin-hormone interrelationships in alcoholism.	2770	2660

Allergy

869	Nature of benadryl activity.	2730, 1580-N	2980
870	An investigation of the allergens of agricultural products.	4020-A	
871	Allergy problems with milk.	2540	
872	Study of the syntheses of compounds of possible value as histamin antagonists.	3960	4090
873	Allergenic properties of gland-free cottonseed flour and cottonseed pigment glands.	4020-H	

Anaphylactic Shock

874	Study of relation of nutrition to susceptibility of mice to anaphylactic shock.	3620	2660

Anemia

875	Nutritional anemia in man. Macrocytic anemia and the vitamin B complex.	3950	2850
876	Studies of folic acid in the treatment of macrocytic anemias and on its physiologic relationship to the anti-pernicious anemia factor in liver. Folic acid treatment of pernicious anemia.	4330	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
877	Absorption of iron compounds in anemia. Radioactive iron in pregnant woman.	4125	2850
878	Studies of the relation of certain commercial synthetic milk products used widely in infant feeding to the pathogenesis of infantile megaloblastic anemia.	2360	
879	Effectiveness and mechanism of action of folic acid in pernicious anemia.	4330	4040-C
880	Intravenous protein administration for correction of hypoprotein anemia.	1260, 1580-P	4050-A
881	Nutritional factors in experimental anemias. (a) Capacity of folic acid in the free and in the conjugate form to prevent. (b) Role of folic acid in the microcytosis of iron-deficiency anemias.	2170	
882	The possible value of whole liver alone or in combination with iron in the treatment of microcytic anemias.	4125	2130, 4122
<u>Bone Fractures</u>			
883	Influence of dietary factors on the healing of bone fractures.	600	2850
884	Strontium as an adjuvant in repair of osteoporosis and in fracture healing.	850-A	
<u>Burns</u>			
885	Testosterone propionate to prevent or decrease excretion of excess nitrogen following burning in the rat. Effect of this on rate of healing of laparotomy in rats.	1610	
886	Human burns and human traumatic shock. (Nutritional status).	1440	2090
887	Nitrogen balance studies in juvenile burn cases during recovery and grafting.	1660	
<u>Cardiac Disease</u>			
888	A study of cardiac effects of thyroid preparations.	3620	1435
889	A study of the correlation between level of thiamine nutrition and organic heart disease in man.	1010	
890	Vitamin E - A study of its role in man, particularly in persons with cardiac disease.	1990	
891	Fat and cholesterol metabolism in cardiac cases.	3890-A	
<u>Celiac Syndrome</u>			
892	Vitamin A absorption and intestinal enzymes in celiac syndrome.	1580-FF	
893	Study on water-solubilized fat soluble vitamins in celiac disease in infants.	4080	
894	Studies on absorption of various food constituents from gastrointestinal tract in the celiac syndrome and in chronic cystic pancreatitis under varying conditions.	2360	
895	Lipid tolerance in celiac disease and cystic fibrosis of the pancreas.	1610	
896	Studies of celiac disease and the celiac syndrome.	790-A	
897	Chronic nutritional failure - the celiac syndrome. Emphasis on the type associated with cystic fibrosis of the pancreas. Also absorption of emulsified fats and their parenteral injection.	1440	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Colic</u>			
898	Physiology of the gastro-intestinal tract in babies with "colic."	1610	
899	Effect of atropine and atropine-like substances on colic of infancy.	1580-FF	
<u>Colitis</u>			
900	Investigation of the nutritional relationships to the causes of ulcerative colitis in human patients.	1870	1870
<u>Cancer and Tumors</u>			
901	Nutritional factors in cancer.	3890-A	
902	Studies on nutrition with relation to cancer.	4080	
903	Relation of nutrition to cancer in experimental animals.	30	
904	Cancer biochemistry.	2920	
905	Animal cancer prevention. The influence of high sugar and varying protein diets on liver cancer as induced by such dyes as butter yellow.	3890	3750
906	Relation of nutrition to susceptibility to cancer in laboratory animals.	4490	4020
907	Dietary induction of neoplasms.	30	2850
908	Incidence of spontaneous breast cancer in mice fed different diets.	4540	90
909	Influence of caloric restriction on cancer formation.	2180	90
910	Relation of high and low protein and caloric diets and specific amino acid deficiencies and excesses to the incidence of induced cancer in rats.	4350	4040-C-2
911	An attempt to produce gastric cancer in Roffo rats by feeding heated fat.	1610	4040-C
912	The metabolism of steroids and its relation to carcinogenesis.	4120	4040-C-2
913	Relation of choline and other dietary factors to the production of cancer with carcinogens.	30	4020
914	Effect of carcinogens on the amino acid pattern of animal tissues.	1910	
915	Relation of nutrition to cancer in experimental animals. Relation of other dietary factors to choline deficiency. Effect of species, growth, aging and heredity, and dietary deficiency to induced cancer.	30	90
916	Relation of labile methyl groups to formation of neoplasms in rats on a choline deficient diet.	3340	4040-C
917	Induction of cancer in rats by use of certain carcinogens. Study of liver proteins of normal animal and after induction of marked hepatomas.	3700	
918	Liver function in relation to certain carcinogenic agents.	1580-BB	2850
919	Physiology of patients with cancer and experimental chemotherapy of cancer.	600-F	4040-C-2
920	A study of the growth of tissues in vitro with reference to cancerous tissue.	1700	
921	Chemical processes interfering with metabolism of normal and cancerous cells.	1700	4040-C
922	Plasma proteins and nitrogen metabolism in neoplastic diseases.	3340	90
923	The synthesis and degradation of protein in cancer tissue.	1440, 1580-W	90
924	Metabolic studies of patients with gastric cancer.	1580-BB	4040-C-2
925	Silent cancer of the stomach.	4010-B	
926	Chemical characterization of split protein products from the blood of cancer patients.	3620	4040-C-2

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
927	Studies in blood protease levels in cancer patients.	3620	90
928	Electrophoretic studies on the plasma from patients with multiple myeloma.	3620	2635
929	Role of folic acid in cancer.	1580-Z	4460
930	Mammary cancer in mice with special reference to the biological characteristics of the mammary tumor milk agent.	2360	90
931	Fractionation and chemical characterization of the mammary tumor milk agent in mice.	2360	90
932	Endocrine aspects of cancer.	1270	4040-C-2
933	Studies of endocrine imbalance in relation to neoplastic growth.	1675	4040-C-2
934	A study of hormonal imbalance in the control and causation of abnormal growth.	4540	4040-C-2
935	Dietary factors that affect tumor formation. Effect of protein and methionine on rat liver tumors induced by azo dyes and by Selenium. Relation of B ₂ retention and resistance to incidence of tumors. Amino acid content of blood and urine of rats developing liver tumors.	4490	90
936	Some factors involved in the formation and inhibition of hepatic neoplasms.	4490	90
937	Effect of nutritional factors on the incidence of hepatic tumors in mice and an attempt to evaluate the mechanism concerned.	1580-FF	90
938	The effects of dietary factors on the production of liver tumors in the rat by N, N-Dimethyl-p-Aminoazobenzene.	850-A	
939	The effect of diet on the development of liver tumors in rats fed the azo dye "butter yellow."	3355	740
940	Study of tumors as related to the vitamins.	1440, 1580-G	
941	Role of nutrition in origin and growth of tumors. Effects of various levels of vitamins and minerals.	1580-FF	4040-A
942	The effect of vitamin E on the growth and incidence of spontaneous and induced tumors in mice.	1260	4040-A

Dental and Oral Disorders

943	Nutritional status as a basis for dental health; optimum food intake. Effect of infections on metabolism and dental health; economic factors involved in obtaining optimum food value at minimum cost.	1390	
944	Animal studies with reference to; dental status under different nutritional regimes; correlation of dental condition with general physiological state.	1390	
945	Hematology in relation to dental disorders coordinated with nutritional status.	1390	
946	Role of salivary analysis as an objective diagnostic aid in determining the conditions to be set for nutritional status. Estimation of pH, Ca, Mg, P, cholesterol and protein.	1390	
947	Effects of diet composition on dental caries.	3760	
948	Bacteriological finding in relation to dental condition. Root canal involvement; gingival conditions; streptococci vs. lactobacillus in the caries process; relation to nutritional status.	1390	
949	Diet and dental caries.	220	4020
950	Dietary control of dental caries.	1660	3750
951	Sodium fluoride topical applications.	3945	3750
952	Caries producing factors.	1440	3750
953	Nutritional phase of dental caries control.	1660	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
954	A study of growth, dental caries and diet. To determine any correlation between stature and dental condition, and between diet factors that promote good growth and those that influence dental caries.	1480	4020
955	Relation of nutrition to dental caries in experimental animals.	4490	4020
956	Fluorine analysis and relation to dental and general health. 1. Analysis. 2. Therapy, a. local, b. systemic. 3. Relation to nutrition.	1390	
957	Fluorine-work to be done on the beneficial effects of fluorine on teeth and the optimum amount desirable in water.	260	4020
958	Hardness changes in tooth enamel and dentin as affected by fluorides.	1630	4040-A
959	Dietary and other factors concerned in mouth and tooth deterioration. Studies on various species of animals to evaluate protection by oxalates of foods against acid erosion of enamel and against "caries" produced by feeding cotton rats and hamsters diets rich in sugar.	850	4050-A
960	Development of methods to arrest or prevent progress of dental caries by use of germ-free animals (albino rats) for separation and analyses of nutritional and bacterial factors as etiologic agents in dental caries.	710	4050-A
961	To investigate cause and prevention of dental caries. Acid organism growth and saliva pH concentrate.	4010-D	
962	The role of milk in the prevention of dental caries (experimental animals).	4490	2530
963	Lowering of incidence of dental caries through addition of specific compounds to chewing gum.	4510	
964	Effect of certain foods--milk, potatoes, a breakfast food --on production of dental caries in the white rat.	2280	1755
965	Nutritional problems involving dental medicine--particularly the production of dental caries in the cotton rat.	1440	
966	Relationships between nutrition and dental caries in primates.	1440	2850
967	Relation of food and nutrition to dental caries. The degradation of carbohydrates by the enzyme systems of aciduric mouth organism.	2830	
968	Relation of food and nutrition to dental caries. The effect of diet on the local conditions of the oral cavity.	2830	
969	Dental Research. Bacteriological and biochemical aspects of dental caries, with special emphasis on possible importance of proteolytic bacteria in the causation of caries.	3340	4010-D
970	The effect of oxalates and foods containing on the development of dental caries in the hamster.	780-A	
971	The study of the surface pattern of teeth under various dietary conditions as revealed by electron microscopy.	1610	
972	Degenerative diseases.	2195	3750
<u>Dermatitis</u>			
973	Relation of B vitamins, fats, and amino acids, cystine, methionine, glycine, gelatine, or arginine, to growth, and of fat supplements and unsaturated fats for prevention of nutritional dermatosis in rat.	30	4020
974	Investigations on the use of water-solubilized fat-soluble vitamins in dermatitis.	1580-X	4080

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
975	Fat metabolism in relation to human nutrition; the value of lard in the treatment of eczema.	3890-A	2590
976	Studies on nutrition and vitamin deficiencies with relation to psoriasis.	2770, 1580-B	2590
977	Relationship between psoriasis vulgaris and vitamin A and its precursor carotene.	1440	2090

Diabetes

978	Clinical and experimental research on diabetes, especially in the young.	741	2850
979	A study by use of liver biopsy of the glycogen content of the liver in diabetes and hepatic dysfunction.	1990	
980	Relationship of specific nutrients to intermediary metabolism, especially in the diabetic.	1580-Z	2850
981	Nutrition as it is related to growth and development in diabetic children and children with renal disease or anomalies.	4330	
982	Basic research studies in nutrition and health. The effect of diabetes on nutritional requirements. The effect of nutritional deficiencies on heart muscle. The experimental production of arteriosclerosis.	1440	2850
983	Metabolism of vitamin A and carotene in diabetic patients.	2770	
984	Studies on vitamin B complex deficiencies in relation to diabetes.	4080	
985	Alteration in fat metabolism of diabetic rats following high levels of niacin.	1660	
986	Alloxan diabetes in the rat and vitamin requirements.	1440	
987	The effect of experimental diabetes (alloxan) on the utilization of carotene.	3620	
988	Effect of hypervitaminosis B ₁ on alloxan diabetes.	1660	130
989	Riboflavin in alloxan diabetes. Better survival with excess riboflavin; deficiency increases susceptibility.	600-A	
990	Effect of high fat diets on alloxan diabetes (this includes chemical as well as microscopic studies).	1650	
991	The role of inorganic phosphate in carbohydrate metabolism in the acidotic rat (alloxan diabetes).	4350	
992	Studies of diabetes mellitus.	790-A	
993	Studies on control of diabetes mellitus, comparison of close and loose control.	1660	
994	The degenerative complications of diabetes mellitus. Study on dogs to be continued 10 years with high fat-low carbohydrate and low fat-high carbohydrate diets. Frequent laboratory and clinical tests.	710	4040-C
995	Enzymatic approach to the study of diabetes mellitus.	790-A	2090
996	Study of the relationship to carotene and vitamin A metabolism in patients with diabetes mellitus.	2770	
997	The influence of ovarian activity upon glucose tolerance in normal persons and in diabetes mellitus.	2730, 1580-N	2725

Diarrhea

998	Nutritional requirements in infantile diarrhea. Metabolism studies indicate feeding more successful than starvation.	2770	2090
999	Studies on the mineral losses in the diarrheal stool.	1660	
1000	Acute nutritional disturbances, principally of water and mineral metabolism and development of a method of complete parenteral feeding. The proper management of several cases of infantile diarrhea and methods of intravenous administration of fat studied.	4330	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1001	Parenteral fluid therapy in children. Requirements for and therapeutic use of parenteral fluids to repair disturbances of the electrolytes which occur in acute diarrheal disease and various types of metabolic diseases.	1440	
<u>Dystrophic</u>			
1002	Biotin content in normal and dystrophic hamsters and guinea pigs.	1660	
1003	The effects of the inositol and creatinine metabolism in pseudo-hypertrophic muscular dystrophy.	1660	
1004	Use of alpha tocopherol in its relation to muscular dystrophy.	2680-A	
1005	Nutrition and metabolism in diseases of the muscles.	850-A	
1006	The use of diet, tocopherol and tocopherol derivatives in the treatment of muscular dystrophy.	3620	4040-C
1007	Studies on the role of tocopherol in relation to muscular dystrophy. Effect on creatine excretion.	3620	
1008	Study of physiology of vitamin E, in muscular disorders.	850-A	
1009	The role of vitamin E in muscular dystrophy. Abnormalities in protein metabolism.	1660	
1010	The role of vitamin E in muscular dystrophy. Energy relationships in vitamin E deficiency.	1660	
<u>Furunculosis</u>			
1011	To determine value of sulpha and other drugs in treating furunculosis; determine optimum dosage and methods of treatment.	4030-A	4030
<u>Gastro Intestinal</u>			
1012	Polyoxyalkylene sorbitan esters for relief of various gastro intestinal disorders and the increase in assimilability of foods and vitamins by their use.	1580-W	330
<u>Geriatrics</u>			
1013	Studies on the effects of vitamin supplementation in the diets of geriatrics.	4080	
1014	Effect of glutamic acid administration on performance in elderly subjects. Psychological performance.	1580-A	4040-CO1
<u>Hydrocephalus</u>			
1015	Relation of nutrition to hydrocephalus in infant rats. Nutrients required during reproductive cycle by rat and by hamster.	2390	4040-C
<u>Hypoproteinemia</u>			
1016	Endogenous malnutrition. Hypoproteinemia due to internal diseases, especially of the alimentary tract as opposed to hypoproteinemia of exogenous origin or due to protein loss.	1580-FF	
1017	Nitrogen balance studies in patients with idiopathic hypoproteinemia with particular reference to minimal protein requirement for the maintenance of N equilibrium and a comparison of utilization of dietary protein and synthetic amino acids.	1440, 1580-D	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1018	Studies on the free amino acid pattern of the blood and urine in child suffering from idiopathic, non-albuminuric hypoproteinemia and edema. Effects of varying the dietary intake of separate amino acids on serum protein regeneration and the electrophoretic pattern.	2360	
<u>Infection and Immunity</u>			
1019	Nutrition and infection. The influence of diets on resistance to amebiasis, schistosomiasis, coccidiosis.	2260-A	
1020	The study of dietary factors involved in immune body formation.	3120	
1021	Infections and related disorders. The hematological and bacteriological aspects of chronic infections of all types resistant to chromotherapy. Chronic suppurative osteomyelitis, hemolytic staphylococcus aureus, clostridia and pseudomonas aeruginosa.	4010-B	
1022	The effect of diet on mycotic infections.	3820	
1023	Nutrition and malarial infection. Effect of vitamin deficiencies by plasmodium lophurae.	1440	2090
1024	Relationship between the metabolism of quinine and its efficacy in the treatment of malaria and the nutritional status of the individual.	2800	
1025	An investigation of the relationship of diet to pneumonia susceptibility.	4370	
1026	Nutrition deficiency as etiological factor in icterus accompanying pneumonia in Negro. Effect of different members of vitamin B complex in protecting liver against effect of pneumococci, of artificially induced pneumonia.	2230	
1027	A study of the relation of nutritive level to antibody formation in experimental animals.	3200	
1028	The effect of the nutritional state on the susceptibility of animals to infectious diseases.	3510	
1029	Effect of nutritional deficiencies (protein, choline, caloric) upon the incidence, course and prognosis of specific infectious diseases (tuberculosis, salmonella enteritis and infectious hepatitis). Urinary test for detecting choline and methyl group deficiency.	1440	4040-C
1030	The relation of vitamin deficiency to susceptibility of monkeys to infection.	270	2850
1031	Effect of amino acids and related compounds on viral resistance.	1010, 3830	2090
1032	Nutritional studies on rodents infected with schistosome worms.	810	
<u>Injury</u>			
1033	Injury. Relation between blood clotting and the mast cells in injury to guinea pigs. Survival time in relation to injury. Evaluation of hemorrhage, bullet wounds with hemorrhage, cold; first aid and definitive treatment.	4010-B	
<u>Leprosy</u>			
1034	Attempts directed at the cultivation of rat and human leprosy.	1440	4503

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Leukemia</u>			
1035	The role of folic acid in leukemia.	4420	2660
1036	Vitamin C determination in leukemia and related conditions including neoplasms in infants and children.	1610	
<u>Liver Disease</u>			
1037	Cirrhosis of liver.	600	3750
1038	Adjustment of the organism to the diet. Gluconeogenesis by the kidney especially in hepatic cirrhosis.	4120	2090
1039	The clinical value of adjuvant lipotropic therapy in hepatic cirrhosis.	1010	
1040	The part played by the liver in nutritional diseases and in-organic diseases.	2320	
1041	A metabolic study of hepatic diseases and conditions in which the liver is involved.	1300	4040-C
1042	Effect of feeding pyridine derivatives to young rats on a high protein diet. Influence of coramine on the young rat. Influence of choline and methionine on the effect of pyridine on the liver of the rat.	1980-A	
1043	Metabolic diseases, particularly of the liver.	850	
1044	Pathological physiology of the liver, metabolism of individual amino acids.	600, 1580-LL	4050-A
1045	The relation of impairment of liver function and plasma protein synthesis.	1440	3140
1046	Liver regeneration studies in rats as related to quality and quantity of protein intake.	280	
1047	Effectiveness of vitamin K in combating hypoprothrombinemia in animals with experimental liver injury.	1660	
1048	Hepatic and gastrointestinal systems. Effects on chronic liver disease of prolonged treatment with human albumin administered intravenously. Observations on cirrhotic patients receiving 50 grams of albumin daily. Plasma albumin and urinary ascorbic acid, riboflavin and niacin increase during therapy.	4010-B	
1049	Effects of injection of human plasma on the recovery of patients with hepatitis.	1610	4010-B
1050	Factors involving ascites in patients with cirrhosis of the liver. Dietary treatment, its effect on survival. Water balance disturbance. Effect of intravenous liver extract. Water balance disturbance in rats on high fat diet.	2770	
1051	Vitamin A, carotene and fat in cirrhosis and fatty infiltration of the liver.	2770	2850
1052	The regeneration of liver in the rat following partial hepatectomy with reference to the influence of various diets.	3050	
1053	Experimental hepatic injury (necrosis, cirrhosis, hepatoma) with special reference to dietary and endocrine factors. Role of vitamin E and of the sex hormones is being investigated.	3050, 1580-DD	
1054	Nutritional studies to indicate the value of various types of diet with or without specific supplements in relation to repair processes in degenerative liver disease.	1440, 1580-W	
1055	The effect of methionine and of intravenous liver extract on the rate of phospholipid turnover as measured by radioactive phosphorous in patients with liver disease.	1440, 1580-D	
<u>Menstrual Disorders</u>			
1056	Relationship of the amino acids to menstrual disorders and deficiency spermatogenic states.	2920	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Milk Fever</u>			
1057	Nutritional aspects of milk fever.	2870	
<u>Nephrosis</u>			
1058	The use of human albumin in the treatment of nephrosis and of cirrhosis with ascites.	1440, 1580-D	
1059	Protein-sparing action of urea in patients with nephrosis and other types of protein depletion.	4540	
1060	Sulphur and nitrogen metabolism in patients with lipoid nephrosis with variations in dietary content of sulphur-containing amino acids.	2360	
1061	Effect of intravenous administration of salt-poor human serum albumin to children with nephrosis; the relation to diuresis and to increase in blood albumin.	1560	
1062	Special liquid form diet of mineral and amino acid composition for treatment of nephrotic syndrome. Well tolerated by children.	2220	
1063	Effect of administration of rutin and vitamin C on albuminuria in chronic nephritis.	1440, 1580-D	
1064	The relation of the diet to the tissue phospholipids; dietary factors which present nephrotoxic action of D1-serine.	710	
<u>Nervous disorders</u>			
1065	Glutamic acid, intermediary metabolism, and role in physiologic studies of mammalian central nervous system.	2210	
1066	Effects of administration of glutamic acid in schizophrenia.	3890	
1067	Influence of vitamin administration in various psychiatric disturbances.	3890	
1068	Use of glutamic acid in diseases of the nervous system, particularly in epilepsy.	790	4460
1069	Biochemical mechanism underlying the beneficial effect observed after administration of glutamic acid to epileptic patients and mental defectives.	2750	
1070	Influence of various dietary factors in epilepsy.	3890	
1071	Control of convulsive phenomena in epilepsy by special diets. (1) mode of action of ketogenic diet on electrical activity of brain. (2) effects of wide variation in electrolyte and water contents of diet on electroencephalogram of epileptic and of normal subjects.	2360	
<u>Obesity</u>			
1072	Appraisal of human obesity. New methods under systematic study to gauge their reliability and general utility in estimating actual fat content of the body.	2360	
<u>Paralysis</u>			
1073	A progressive paralysis induced in dogs by means of a nutrition deficiency, reversible temporarily by synthetic biotin but more permanently by means of potassium chloride. Potassium deficiency believed cause of syndrome.	1010	
1074	Relationship of diet to occurrence of paralytic attacks in familial periodic paralysis with particular reference to the significance of the ratio of carbohydrate to potassium content.	2360	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Polycythemia</u>			
1075	Studies of pathologic physiology of polycythemia.	600-F	4040-C
1076	The effects of cysteine, methionine, histidine, and choline on the production of cobalt polycythemia.	4350	
<u>Poliomyelitis</u>			
1077	Poliomyelitis susceptibility of scorbutic monkeys.	790-A	570
1078	The relation of diet in the monkey to poliomyelitis.	4490	4020
1079	The influence of dietary factors and, the nutritional status of the animal on experimental poliomyelitis. B ₁ deficiency tested.	1580-DD	2570
1080	Nutritional status of children contracting poliomyelitis as compared with their siblings and classmates who escape the infection.	2360	
1081	Nutritional management of acute and convalescent poliomyelitis patients.	2220	
<u>Rheumatic Fever</u>			
1082	Diet as a factor in rheumatic fever. Study of food histories of 2600 patients.	780-A, 1580-K	
1083	The relationship of recurrence of rheumatic fever to environmental factors (nutrition).	1660	
1084	Relation of various globulin fractions of the blood to immunity, particularly in rheumatic fever.	1660	
1085	Dietary relationship to rheumatic fever susceptibility and diet in treatment.	600-F	570
1086	Relation of nutrition to cellular metabolism, with special reference to rheumatic fever.	790	2850
<u>Rickets</u>			
1087	Studies on refractory rickets.	790-A	
<u>Rickettsial Diseases</u>			
1088	Alteration of body function in rickettsial diseases.	4270	2090
<u>Sprue</u>			
1089	Sprue.	1010	2090
1090	Folic acid in the treatment of sprue.	3210-C	
1091	Biochemical studies of sprue patients. (a) ascorbic acid levels in blood. (b) vitamin A levels and absorption tests.	3210-C	
<u>Starvation</u>			
1092	Human starvation and subsequent nutritional rehabilitation.	2360	
<u>Steatorrhea</u>			
1093	A comparison of the effect of casein and casein hydrolysate on the absorption of nitrogen in patients with steatorrhea.	1440, 1580-D	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Surgical Cases</u>			
1094	The use of dry products of milk in preoperative and postoperative patients.	1580-Z	120
1095	Nutritional disturbances in shock due to surgery.	3950	
1096	Rate of recovery of patients convalescing from surgical procedures as affected by (1) modification of percent of calories derived from protein. (2) maintenance calories and excessive calories. (3) Dietary supplements. (4) Ambulation combined with dietary modifications.	1610	4050
1097	Nutritional factors in gastrectomized animal. (1) Liver preparations. (2) Iron preparations. (3) Hydrolysate preparations. (4) Relation of certain reducing agents-ascorbic acid, etc. to iron metabolism.	2170	
1098	Nutritional requirement and nutritional problems relating to absorption after subtotal gastrectomy. Detailed metabolic studies. Fixed intake of food and addition of various types of medication to alter absorption of food from small bowel.	1440, 1580-W	
1099	Absorption following various anastomotic operations on the gastro-intestinal tract and in diseases such as sprue, pancreatic fibrosis, etc.	1440, 1580-W	
1100	The utilization of vitamins in various disease conditions, involving metabolic abnormalities, liver disease, intercurrent infection, gastro-intestinal disease and postoperative conditions.	1440, 1580-W	
<u>Thyroid Disorders</u>			
1101	Effect of vitamin D on tooth development and eruption in hypothyroid animals and in normal animals on a vitamin D deficient diet.	790	
1102	Studies on the influence of the vitamin B complex intake on the growth rate, body nitrogen cholesterol, neutral fat and calcium in hyperthyroid rats.	2220	
1103	Role of diet in the production of experimental goiter.	2170	
1104	A clinical comparison of the effectiveness of 6-n-propylthiouracil and 2-thiouracil as antithyrotic agents. Thyrotoxicosis and treatment with anti-thyroid compounds.	2730, 1580-N	
<u>Toxicity</u>			
1105	Grant for toxicity studies.	4350	1380
1106	A new form of food poisoning where vetch and related products were consumed as emergency foods.	2290	2850
1107	Attempt to identify factors in singletary peas causing experimental lathyrism in rats.	1980-A	
1108	Factors influencing the toxicity of crotalaria spectabilis; ensiling; fertilizer treatment; season; location; assay methods for monocrotonolactone.	1150	
1109	Further studies of the toxic principles of the tung nut.	1980	
1110	Nature of toxic factor in linseed meal. Deficiency in lysine after destruction of toxic factor.	600-B	
1111	Physiological properties of cottonseed pigments and cottonseed pigment glands as determined by acute oral toxicity tests.	3800	4020-H
1112	Physiological properties of gossypol and other pigments of cottonseed when administered to rats.	790-A	4020-H

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1113	Toxic effects of latex from some species used in chewing gum. Tests by intravenous injections in rabbits.	3590	
1114	Mechanism of actions of ingested substances contaminating food and water. For purpose of offensive use of toxic agents and prevention or treatment of poisoning from such agents.	4010-A	
1115	Toxic effects produced by chemical warfare agents in food and water. Decontamination and tests on safeness of decontaminated food and water.	4010-A	
1116	Improvement of the nutritional status of patients to increase their tolerance to chemotherapeutic agents.	2830	2850
1117	Nutrition and its relation to detoxication and conjugation reactions. Relation of nutritional factor to ability of animal body to perform detoxication and conjugation.	790	
1118	Determination of toxicity and mechanism of action of insecticides, and work on nutrition of insects for purpose of study and control.	4010-A	
1119	Nervous System. Study of epilepsy caused by white flour bleached by agene process. Epilepsy produced by dietary means when dogs eat diet containing wheat flour bleached with agene. Wheat flour free of fat and starch show no loss in toxicity. Casein when bleached same way becomes convulsive.	4010-B	
1120	Report of canine epilepsy caused by bleached (agenized) flour. 1. Experimental method. 2. Role of amino acids. 3. White bread and epilepsy in animals.	4010-B	
1121	Canine epilepsy-study of ataxia and convulsions induced in dogs by feeding protein treated with nitrogen trichloride.	1610	
1122	Biological evaluation of a food chemical with animals.	1940	
1123	Animal feeding studies, to obtain data on the nontoxicity of fatty acid esters, used as stabilizers in foods; metabolism and fat in the body.	2100	330
1124	Animal experiments for the evaluation of toxicity of new materials such as emulsifying agents in edible food.	2400	
1125	To determine the clinical acceptability of caprylate and mandelate as stabilizers of human serum albumin dispensed in aqueous solution free of sodium chloride.	3700	
1126	Toxicity studies on promising antioxidants.	710	180
1127	Toxicity of propyl gallate, a possible useful oxidant in food industry.	4350	
1128	Toxicity studies on BTC, Tetrosan, Isothan Q-15 (Quaternary Ammonium Compounds).	3580	
1129	Toxicology of quaternary ammonium compounds.	2280	
1130	Toxicity of rodenticides.	4010-A	
1131	Research measuring harmful effects of and deterioration of drugs or other preparations.	4040-B	
1132	Relation of nutrition to metal poisoning. Effect of high and low protein, amino acids and B vitamins.	790-A	2090
1133	The effects of foods and food acids on aluminum and stainless steel.	780	

Tuberculosis

1134	Relationship of nutrition and resistance to tuberculosis.	1580-DD	3050-A, 4500
1135	The relationship of nutrition to the course of tuberculosis.	1580-O	

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1136	Relationship of nutrition and tuberculosis. Survey of population indicates the importance of certain vitamins in the diet, particularly A and C, but suggests also a relation between breakdown with tuberculosis and general nutrition.	3050-A	2090
1137	A study of the effect of improving the nutritional status of tuberculous contacts on the incidence of tuberculosis among them.	2310	
1138	Study of vitamin C and ("vitamin P") in metabolism of tuberculosis patients.	1455, 3050-A	570
1139	Determination of the relation of tubercle bacillus carbohydrates to immunity and disease in tuberculosis.	3700	2650
<u>Ulcer</u>			
1140	Efficacy of protein hydrolysates in the treatment of gastric ulcer.	1670	
1141	Comparison of therapeutic results in peptic ulcer treated with antacids, ulcer diet and anti-spasmodics with and without vitamin C.	2230	2130
1142	Protein utilization and comparative value of various protein foods in the diet of patients with gastro-intestinal disease including peptic ulcer, duodenal ulcer and chronic non-specific ulcerative colitis.	710	1110
1143	Mechanism of physiological function of vitamin E. Stomach ulcer prevention and cure.	980	
<u>Undulant Fever</u>			
1144	Brucellosis - undulant fever.	710	
<u>Urinary Disease</u>			
1145	The calcium content of the diet in relation to urinary calculi.	960	
1146	Metabolic factors in renal stone formation.	850-A	
<u>Vascular and Cardio Vascular Disease</u>			
1147	Nutritional status and degenerative diseases of the vascular system.	1440	
1148	Fundamental vascular problems dealing with capillary fragility and or permeability.	3620	570
1149	Relationship of diet and certain diseases to arterial disease. Renal insufficiency, liver damage, alloxan diabetes, hypothyroidism.	1980-A	
1150	Hepatorenal factors in circulatory homeostasis.	850-A	
1151	Relationship of diet and renal insufficiency to arterial disease. Lesions experimentally produced in dogs - caused by a "lipid factor" - can be prevented or retarded by Vitamin E and cholesterol.	2800, 1980-A	2090
1152	Atherosclerosis: the effect of various diets in the hardening of the arteries in various animals, including the chick, the dog, the rat and the human.	1580-FF	
1153	Studies on the physiology of lipocalc and fat metabolism and their relation to arteriosclerosis in diabetes.	710	
1154	Experimental cholesterol arteriosclerosis. Cholesterol feeding of rodents; affect of heated and oxidized cholesterol. Analysis of histological reactions.	3435	2090

PHYSIOLOGY

PATHOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1155	Studies on the relationship of cholesterol metabolism to atherosclerosis. 1. Comparison of rabbit, rat, guinea pig and hamster. 2. Cholesterol metabolism using deuterium; Enzymatic control, effect of tocopherol, effect of thyroid activity.	3620	1905
1156	Influence of the nutritional state of the body-temperature blood pressure relationship.	1580-FF	
1157	Studies of the effect of nutrition in the prevention of hypertension. Especially interested in the part protein plays in this disease.	40	
1158	Nutritional requirements of hypertensive rats. The studies are being carried on by the self-selective technique to determine what inorganic salts will be taken by hypertensive rats and which will be rejected.	1440	
1159	Effect of low protein diets on the clinical course of acute and chronic nephritis and hypertension.	1440, 1580-D	
1160	Effect of sodium upon cardiovascular diseases. Sodium metabolism in hypertension on a large group of hypertensive cases chiefly Negroes.	40	
1161	Relation of dietary, metabolic and mechanical factors to atherosclerotic lesions in the rat.	4010-B	
1162	Dietary factors in arterial hypertension, including the effects of salt, protein and sugar.	1580-FF	
1163	A study of the relationship between dietary protein intake with and without choline deficiency, and experimental renal hypertension.	1010	
1164	Dietary history and habits and the state of the cardiovascular system in man. Problems of the genesis of arteriosclerosis and hypertension.	2360	
1165	A study of the use of a diet of rice and fruit in the management of cardiovascular hypertensive disease.	1010	
1166	Influence of dietary factors in the treatment and control of hypertension. Importance of salt intake, carbohydrate intake, and other factors.	4040-C-1	
1167	Relation of sodium metabolism to hypertension. Studies with humans, dogs, and rats.	3650	2090
1168	Study of possible role of "vitamin P"-like materials in hypertension and blood dyscrasias.	1580-F	570
1169	Study of possible relationship of hydrochloric acid vs. citric acid in etiology of renal hypertension.	3433	570

NUTRITION SURVEYS

Food Consumption

1170	Nutritional analysis of the U. S. per capita food supply, 1909 to present.	4020-D 4020-K	
1171	Nutritional analysis of urban diets since 1942.	4020-D	
1172	Evaluation of methods of studying family food consumption.	4020-D	
1173	Family food consumption in the southern region in certain types of farming areas. Family food consumption in typical cotton communities of Arkansas.	270	
1174	Food consumption among the families of farmer-owner and tenant operators in the tobacco growing areas of South Carolina.	750	
1175	Improving the food economy of negro farm families in Missouri through a standard food preservation pattern.	1930	
1176	A food survey to help veterans with families to get the maximum goods service from their \$90.00 allotment.	3640	
1177	Effect of waste factors on dietary values based on a year's study of Navy operation.	4340	

PHYSIOLOGY

NUTRITION SURVEYS

Number		Laboratories	Supporting Organization
1178	Nutritionally adequate food budgets; developing and pricing of plans for family food consumption.	4020-D	
1179	Investigation of the nutritional value of inexpensive combination of available foods.	4020-D	
1180	Relative economy of various foods in an adequate diet in New York state.	850	4020
1181	Dietary studies.	600-F	1800
1182	Food consumption and dietary adequacy among farm families, 1936-37, and 1945.	2870, 1300, 4020-D	
1183	Food consumption of open country families in the cotton farming areas of Mississippi.	2380	4020-D
1184	Market research survey conducted on a consumer house to house basis in the city of Philadelphia.	3050	1210
1185	Improving the diets of low income families in South Carolina, food habits and attitudes.	750	4020
1186	Minimum adequate food budget study applicable to the Providence metropolitan area.	3190	
Nutritive Status			
1187	Adaptation of micro biochemical tests to field work and particularly for health department use; laboratory tests include determination of hemoglobin, hematocrit, plasma protein, vitamin A, carotene, vitamin C, phosphatase, and blood sugar (capillary).		4040-C-4
1188	Application of microchemical techniques in the development of a method for the evaluation of nutritive status of population groups.	3200	
1189	Development of microchemical methods for evaluating nutritional status.	3200	2850
1190	To improve micro methods for evaluating nutritional status.	1610	2850
1191	Techniques for nutrition surveys of large populations.	4010-B	
1192	Methodology of collecting and processing diet records to assess nutritional status.		4040-C-4
1193	Nutritional assessment of population groups; development of food budget and dietaries at various levels of adequacy for population groups classified according to income, occupation, residence, etc.	1440	
1194	Studies on nutritional status.	3320	4020-K
1195	Nutritional status of population groups in selected areas of the West.	260	4020-I
1196	To determine the effect on status of the institutional diet and also somatic factors affecting their mental condition using a large group of patients at the Napa State Mental Hospital just after being admitted and a similar group which has been in residence for several years.	600-A	
1197	Chicago-Cook County health survey.		4040-C
1198	Survey of diet and nutritional status from birth to adult years.	780-A	2850
1199	Nutritional status of the rural population of Colorado.	770	
1200	Total family expenditures, cost of food, adequacy of diets, and the physical and dental status of children of various groups of people in Hawaii.	1480	
1201	Nutrition of various population groups in Hawaii with respect to thiamine.	1480	4020
1202	Nutrition survey; relationship between diet and nutritional status in Maine.	2050	4020
1203	Survey of Nutrition among Navajo Indians.	3650	

PHYSIOLOGY

NUTRITION SURVEYS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1204	Nutritional survey in the Bonne Bay area of Newfoundland		4460, 1580
1205	Nutritional status of population groups in New Mexico.	2720	
1206	Nutritional status of industrial workers and their families.	3370	
1207	Causes of lowered hemoglobin levels among population groups.	3200	
1208	Pennsylvania mass studies in human nutrition.	3040	
1209	Basic needs of Puerto Rican families.	3210-A	
1210	Nutritional comparison of college girls who appear to be in optimal nutritional status versus those who appear to be in a suboptimal condition.	2680	4020
1211	Determination of nutritional status of population groups by clinical examination, laboratory tests, dietary records, and therapeutic response.		4040-C-4
1212	Nutrition status of population groups.	4110	4020
1213	Survey of nutritional status in Newfoundland.	1580-D	2090
1214	Nutritional investigation of certain eye conditions prevalent among natives of Alaska; also a study of nutritional status of population in villages selected for study, and investigation of food habits, food supply, and cost.	3840, 270-A	4040-C
1215	Human nutritional status studies in West Virginia.	4400	
1216	Nutritional status of populated groups in selected areas of Oregon.	2910	
1217	Study of malnutrition in a specific area, in order to define problems for a Public Health educational program.	4125	2850
1218	Use of milk in Detroit's hospitals.	4350	
1219	Medical nutritional aspects of troops allowed free choice of any quantity of any item in a packaged ration.	4010-B	
1220	Nutritional value of army subsistence when fed at adequate and inadequate caloric intakes.	600-A	4020
1221	Cooperative regional research on nutritional status of pregnant women in the northeast.	2120	
1222	Nutritional status of low-income group of ambulatory patients and the response to specific therapy over extended periods of time.	2770	4480
1223	Nutritional contents of Japanese prisoner of war diets.	2110	4050

Nutritive Status - Children

1224	Health status of twenty-five Nursery School Children. Purpose of study - to show the relation of diet, to personality, attitude, and activities of children two to six years.	3640	
1225	Nutritional status studies of mothers, infants and children as determined by analyses of food, blood and urine.	730	
1226	The analysis of minerals and vitamins in the diets consumed by a small group of pre-school age children, Ca, P, Fe, Cu, Vit A, carotene, ascorbic acid, B vitamin.	2820	
1227	Dietary patterns of Chicago children, discussed and comparisons made of the relative adequacy of their diets as compared with diets of other American Families.	2190	
1228	Height and weight of rural children in South Carolina and the relation of these measurements to the character of the family food supply.	750	4020
1229	Diet histories of Vermont children.	4126	
1230	A study of food habits among Negro Students as related to their nutritional status. (Washington Elementary School, Lincoln High School, and Lincoln University.) Missouri.	1930	

PHYSIOLOGY
NUTRITION SURVEYS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1231	Study of nutritional status of Vermont Children.	4126	2660
1232	Requirements of a school feeding program: schools in rural communities.	4020-D	
1233	Study of the effect of the school lunch program on the nutritional status of a group of ninth grade girls.	2100	
1234	Food consumption of elementary school children and their families.	4020-D, 4040-C	
1235	Appraisal of nutritional effects of a school lunch program. Based on physical and dental examinations, individual diet records, blood analysis and food consumption of the families.	4020-D, 4040-C	
1236	Comparison of meat and legumes in a controlled feeding study--their effect on the nutritional status of institutional children.	3040	2590
1237	Survey of nutritional deficiencies in school children.	3950	4460
1238	Nutritional status studies of school children; in progress in 3 elementary schools.	40	
1239	Survey of nutritional status of school children in connection with skim milk in school lunch.	3950	2850, 4460
1240	Improving the health of school children through improved nutrition practices.	40	
1241	Study of vitamin levels (A, thiamin, riboflavin and niacin) in children of the Child Research Council. A longitudinal study.	780-A	
1242	Plasma ascorbic acid, plasma protein and hemoglobin values of high school girls.	1980	
1243	A comparison of the physical development of Spanish-American and Anglo-American Children by means of the Wetzel' Grid method for evaluating physical fitness.	260	
1244	Improvement of the eating habits of the children in the Crippled Childrens' Hospital.	2890	

FARM ANIMALS

Breeding

1245	Breeding experiments with dairy cattle, 1918-1947.	600-A	
1246	Progeny performance studies with beef cattle.	4530	
1247	Breeding of hothouse lambs.	3040	
1248	Record of performance in sheep as a measure and basis for comparing types, crossbreeds, and breeding methods.	2280	
1249	Studies with corriedale and columbia sheep.	4530	
1250	Breeding methods for the production of uniform broiler stock.	3040	4020
1251	Length of incubation period in poultry as related to characteristics of progenies.	2050	
1252	Production of medium weight horses through breeding and feeding.	2280	
1253	Diseases, parasites, nutrition, endocrines, and genetics of foxes and mink.	4490	

Feeding Requirement - Cattle

1254	Use of a climatic laboratory to measure the influence of environment temperature, humidity, air movement, and far infra-red radiations on metabolism and milk production.	2390	
1255	Certain animal diseases of nutritional origin with special attention to vitamin requirements of dairy calves and brood sow rations; role of sulfa drugs in the early nutrition of the calf.	4490	4020, 2260

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1256	Nutritional requirements of dairy calves.	2360	
1257	Nutrients required for growth and lactation of young calves; grains, feeds, milk, and thiouracil in calf feeding experiments.	2390	
1258	Milk potentials of pasture and hay in the summer feeding of milking cows.	3370	
1259	Milk potentials of a roughage program in the winter feeding of dairy cattle.	3370	
1260	Digestibility of pasture herbage by grazing and barn fed lactating dairy animals.	3370	
1261	Digestibility of rations for ruminants as affected by proportions of nutrients.	3040	
1262	Influence of winter rations and gain, prior to and during pasturing, on growth and fattening of calves.	3220	
1263	Factors influencing the digestion of roughage fed to beef cattle with reference to utilization of ground corn cobs.	2870	
1264	Chemical study of blood and excreta of dairy animals.	2280	
1265	Digestibility of agave pulp.	3370	
1266	The nutritive value of grass silage, preserved with different levels of molasses, as the sole roughage, measured by growth of dairy heifers.	3370	
1267	Simple vs. complex protein supplements (including urea) for fattening cattle.	2440	
1268	Effect of quality of hay on cows, yearlings and calves; length of milk feeding period for calves; and value of grain fed to milk cows during period of first four months of lactation.	4530	
1269	Influence of excellent and poor rations on semen production and quality, and blood composition and growth of dairy bulls.	3370	
1270	The amino acid nutrition of farm animals.	850	1190
1271	A study of various fats and oils in the nutrition of dairy calves.	2360	2530, 1010
1272	Physiological effects of mineral oil products in feeds.	2440	
1273	The utilization of lactose by the dairy calf fed skim milk or modified milk diets.	3850	
1274	The role of certain vitamins in the nutrition of calves.	2280	
1275	Vitamin A nutrition of beef cattle in Colorado.	770	
1276	Vitamin A and D studies of dairy calves from birth to one year of age.	3040	4020
1277	Vitamin A requirements of young calves for normal growth and health under practical conditions.	4020-C	
1278	Vitamin A in relation to the management of a beef cattle breeding herd under western North Dakota farm and ranch conditions.	2810	
1279	Requirements of young calves for certain of the B complex vitamins.	4020-C	
1280	Effect of vitamin E supplementation on health and reproduction performance of dairy cows.	980	
1281	Vitamin E in the nutrition and reproduction of dairy cattle.	2360	2850
1282	Unrecognized vitamins required by herbivora. (1) Relation of nutrition and age to development of abnormal amounts of mineral (Ca Phosphate) in soft tissues of body. (2) Adequacy of synthetic diets for growth of guinea pig. (3) Nutrition requirements of guinea pig for reproduction.	2390	
1283	Mineral metabolism and mineral requirements of animals.	4490	3828, 4040
1284	The interrelationship of mineral elements in the nutrition of dairy cattle.	2280	

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1285	Phosphorous: metabolism studies; feed value of pastures given different fertilizer treatments and response of cattle on such pastures; interrelationships with other minerals; forms of phosphate best suited for animal nutrition; role of phosphates in mineral metabolism.	1150	
1286	Relation and/or interrelation of calcium, phosphorous, vitamin D and season to reproductive performance in dairy cattle.	4320	
1287	Mineral metabolism in animals. Project covers calcium and phosphorous relationships; iodine metabolism in cattle and sheep; mineral deficiencies on range lands; relations of the sulphur compound, glutathione, to size inheritance.	600-A	
1288	Defluorinated superphosphate; feeding trials with cattle and poultry.	1150	
1289	Studies with radioactive isotopes of phosphorous; assimilation, excretion and function of phosphorous in the dairy cow relative to its secretion in milk; interrelationships with other elements; soil-plant animal cycle.	1150	
1290	Steer feeding investigations, influence of phosphorous in rations for fattening cattle.	1590	4020
1291	Copper as an essential feed supplement; methods of analysis, dairy requirements; storage in the animal body; function and interrelationships with other minerals and vitamins; blood studies.	1150	
1292	Studies with radioactive isotopes of copper; assimilation, excretion and function of copper in animal; interrelationships with other elements; analytical methods.	1150	
1293	Studies of the trace mineral elements in the nutrition of the dairy cow.	3370	1920
1294	Trace mineral elements in the nutrition of cattle.	2360	
1295	Cobalt; methods of analysis; location of deficient areas; blood studies; mineral mixtures.	1150	
1296	Studies of radioactive isotopes of cobalt; assimilation and excretion; relation to amino acid metabolism, blood cell formation, and rumen function; transfer from dam to fetus; function in cattle, swine, rabbits, and rats.	1150 2280	
1297	The requirement and functions of cobalt in the rations of livestock.	850	
<u>Feeding in Reproduction and Lactation</u>			
1298	Effect of the time interval between stimulation for the let down of milk and actual attachment of milking machines upon the milk and milk fat production of dairy cattle.	3040	4020
1299	Effect of certain dietary and environmental factors upon reproduction in dairy cattle.	3040	4020
1300	Relation of nutrition to reproduction in the cow and bull.	770	
1301	The physiology and biochemistry of lactation in cattle.	4490	
1302	Rearing calves with limited amounts of milk or milk products after the colostrum feeding period.	4020-C	
1303	Factors affecting the carotene, vitamin A, ascorbic acid, riboflavin and thiamin content of the colostrum of dairy cows.	2870	
1304	Effects of certain prepartum feeding and managerial practices on the physiopathology of the dairy cow and her offspring.	1740	
1305	The nutritive value of feeds as substitutes for milk or milk products in calf feeding.	4020-C	

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1306	Value of a home grown ration consisting of alfalfa or alfalfa-brome hay and ground corn for milk production over a long period of time.	2280	
1307	Transfer of vitamin A from mother to young in dairy animals.	2870	
1308	Nutrition of the newborn dairy calf. Effect of diet of the newborn calf on the blood and tissue proteins.	2870	
<u>Feeding Requirements - Horses</u>			
1309	The B vitamin requirements of horses. Riboflavin and pantothenic acid apparently synthesized in intestinal tract.	3850	
1310	Cardiorespiratory responses of mules and horses to various levels of muscular exercise with the ultimate object of developing a yardstick of endurance and muscular work capacity.	2390	
1311	Spectrophotometric determination of estrogens in urine of pregnant mares; biological method of pregnancy diagnosis in mares.	2280	
<u>Feeding & Requirements - Sheep</u>			
1312	Lamb feeding investigations.	1590	
1313	Fundamental food requirements of herbivora, with special reference to mortality of lambs on fattening rations.	2280	
1314	Colorado grains and roughages in lamb feeding.	770	
1315	Dehydrated alfalfa, dehydrated beet leaves and other concentrates in rations for fattening lambs.	770	
1316	Relationship of physical balance and energy value in sheep rations.	1740	
1317	Nutrient requirements of sheep. Relationship of trace elements to utilization of carotene.	2810	
1318	Phosphorus requirement of ewes for reproduction and lactation.	1590	4020
1319	Influence of nutritional and endocrine factors in pregnancy and lactation of ewes and on lamb growth.	3220	
1320	Effect of kind and amount of protein in the ration of the pregnant ewe and her lamb.	2810	
1321	The effect of dietary fat on utilization of the energy and protein rations by sheep.	3040	4020
1322	Study of abnormal skeletal growth in Ancon sheep.	810	90
<u>Feeding & Requirements - Swine</u>			
1323	To determine the most economical species of plant crops for utilization as hog pastures.	3370	
1324	Protein supplements with corn for feeding hogs.	770	
1325	Controlled tryptophane deficient protein hydrolyzates and subsequent supplementation in diets of swine.	1910	
1326	Feeding value of distillers by-products in fattening for swine.	3370	
1327	Riboflavin supplement in a fattening ration for swine and its effect on the carcass.	3370	
1328	Nutritive value of cull peas for fattening hogs.	1590	
1329	Effect of condiments, as nux vomica and quassia, on food utilization of swine.	1510	
1330	Nutritive requirements of the hog.	2360-A	
1331	Nutritive requirements of growing and fattening swine.	3040	4020
1332	Nutritional needs of pigs and the analysis of food stuffs used for feeding purposes.	3540	

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1333	Protein requirements of pigs on forage.	3040	4020
1334	Amino acid requirements of growing swine.	3220	
1335	Vitamin requirements of the pig for growth.	4320	
1336	Effect of environment of vitamin requirements of swine poultry.	1610	
1337	Vitamins required by swine, for growth of pigs, feeding brood sows.	2390	
1338	Influence of vitamins A and B on growth and prevention of disease in suckling pigs.	2280	
1339	Factors of the vitamin-B complex concerned in the nutrition of the pig; special reference to riboflavin.	2870	
1340	Minimum requirements of the factors in the vitamin B complex as related to growth and metabolism in the pig.	600	
1341	Niacin supplements for swine rations.	2440	
1342	Nutritional importance of folic acid, para-amino-benzoic acid, and other B-complex vitamins for the pig.	4320	2850
1343	Baby pig feeding.	2800	120
1344	The availability of phosphorus in certain phosphorus supplements used in swine rations.	1740	
<u>Endocrines in Feeding</u>			
1345	Study of use of hormones in agricultural production.	2390	680
1346	Endocrine relations in farm animals.	4490	4020
1347	Fundamental research on the mode of synthesis of thyroxine-like materials and the use of iodinated proteins in the feeding of farm animals.	680	
1348	Effect of feeding thiouracil or other thyroid inhibitors on the fattening of young dairy calves.	2680	
1349	Effect of thiouracil on growth and fattening of yearling steers.	3220	
1350	Effects of continuous feeding of thyroprotein to dairy cattle.	1590	4020
1351	Feeding thyroprotein to dairy cattle.	4400	
1352	Feeding several vitamins and hormones with various basic feeds at different levels of nutrition to determine influence of vitamins and hormones on rate of gain and quality of carcass in beef cattle and feeder lambs.	260	
1353	Endocrinology of milk secretion, influence of various endocrine glands on growth of mammary gland, secretion of lactogenic hormone, and maintenance of lactation. Influence of male hormone, and role of adrenal gland (cows, rats, mice). Thyroxine secretion in lactating rats.	2390	
1354	Quantitative study of precursors of constituents of milk, and energy requirements of milk secretion; influence of presence and absence of hormone of thyroid gland on precursors of constituents of milk in blood and rate of blood flow; site of losses of hormones in oral administration to ruminants, and methods of prevention.	2390	
1355	Studies in milk secretion; methods of stimulating growth of cows udder and initiation and maintenance of milk secretion by means of oral administration of suitable hormones.	2390	
1356	Diethylstilbesterol and its function in non-breeding cattle, milk production, skeletal changes, and heat stimulation.	1150	
1357	Effect of feeding thiouracil on rates of gain and weight of thyroid gland of swine.	3850	
1358	Effect of thyroprotein and thiouracil on growth and fattening of swine.	3220	

PHYSIOLOGY

FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1359	Effect of thyroid stimulants and depressants on growth and fattening of swine.	4400	
1360	Effect of thiouracil and protamone on rate of growth, body form, and chemical composition of the gains in weight of pigs.	2390	
1361	Relation of thyroid status to growth, fattening, and efficiency of food utilization in swine.	2280	
1362	Influence of iodo-casein on growth rate of pigs after weaning up to marketable weight.	3370	
1363	Physiological effects of thiouracil on sheep.	3220	
1364	Influence of thiouracil and propylthiouracil on growth and fattening of lambs.	3220	
1365	Effect of hormone treatments, (thyroprotein, thiouracil, estrogens) on growth, fattening, egg production, and food requirements of poultry.	2280	
1366	A new synthetic estrogen and its value in fattening of poultry.	1020-A	
1367	Effect of estrogenic hormones on the fleshing of cockerels.	4430	
1368	Thyroactive iodoproteins in poultry nutrition in Florida; poultry growth studies.	1150	
1369	Use of estrogens in fattening of poultry.	2060	

Farm Animal Diseases - Cattle

1370	Reproductive disorders of cattle.	2280	
1371	Sub-acute nutritional deficiencies in farm animals.	3370	
1372	Investigation of anascara in fattening beef cattle caused by a deficiency of vitamin A.	4020-B	
1373	Anemia in calves.	4020-B	
1374	Development of improved methods of diagnosing and controlling Bang's disease.	4490	
1375	Role of calcium and manganese in reducing or eliminating negative calcium balance of early lactation in the milk cow.	3370	
1376	A rachitic condition shown by heavily fed cattle receiving adequate calcium, phosphorous, and vitamin D.	770	
1377	Studies on role of magnesium and other inorganic elements in etiology of "grass tetany" in range cattle.	3850	
1378	Studies on grass tetany.	2440	
1379	Molybdenum: interrelationships with other minerals toxicity; treatment; analyses.	1150	
1380	Toxic effect of excess molybdenum and its relation to copper metabolism and hemoglobin formation in cattle and sheep.	600-A	
1381	Determination of toxicity of silage to which DDT has been added.	3390	4485, 595
1382	Lathyrism in relation to the use of Lathyrus hirsutus for livestock.	30	
1382	The toxicity of DDT to farm animals and poultry and its accumulation in products consumed by man.	4110	
1384	Nephritis in food producing animals, (and the horse), with special reference to the dairy cow.	2280	
1385	Partition of fecal lipids by lactating dairy cows as influenced by certain mineral supplementation.	3370	
1386	Biochemical study of factors associated with toxic complications of pregnancy and fetal abnormalities.	3340	2260, 2635.
1387	Abnormal bleeding in farm livestock.	2390	2090
1388	Hormones controlling the initiation and maintenance of lactation; a study of reproductive disorders in livestock, especially cattle.	2280	

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Diseases of Sheep</u>			
1389	Stiff lamb disease and related conditions that develop in sheep flocks.	2280	
1390	To determine the basic dietary causes of urinary calculi formation in sheep traceable to use of sorghum feeds and means of prevention.	4020-B	
1391	Overeating (enterotoxemia) of feedlot lambs.	770	
<u>Diseases of Swine</u>			
1392	Role of nutrition in correcting digestive disturbances in pigs.	4490	2160
1393	Study of anemia in suckling pigs.	2810	
1394	Nutritional relationships in swine diseases, with reference to necrotic enteritis.	2280	
1395	Relationship between infectious enteritis (salmonella choleraesuis infection) and nicotinic acid deficiency (swine pellagra) in swine.	2870	
1396	Effect of deficiency of nicotinic acid on incidence of necrotic enteritis in young pigs; to determine required amounts of supplemental nicotinic acid that must be added to natural diets for prevention or cure.	4020-B	
1397	Nutritional and other factors causing death losses in new-born pigs.	3220	
<u>Requirements and Diseases of Poultry</u>			
1398	Nutritive deficiency diseases of poultry.	3040	
1399	Control measures for fowl paralysis.	2280	
1400	Diagnostic methods and value of immunization in Newcastle disease.	3040	4020-K
1401	Methods of feeding chicks and pullets.	4400	
1402	A study of different baby chick rations, with special reference to the amount and quality of proteins, minerals and vitamins.	2280	
1403	Nutritional factors affecting the deposition of pigment in growing chicks.	2050	
1404	The value of cereal grass and other green leafy plants in the nutrition of chickens.	850	680
1405	Studies on the utilization of various mixed poultry feeds by poultry.	2680	
1406	Supplementation of diet composed of plant feed stuffs to improve hatchability of hen's eggs.	2050	
1407	Nutritional factors affecting the production and hatchability of hen's eggs.	2870	
1408	Comparative nutrition studies in the duck.	1440	
1409	Special studies in turkey and duck nutrition.	850	
1410	Nutrition value of certain feedstuffs for growing chicks and poults. a) Utilization of proteins for growing poults. b) Effect of heat on growth-promoting value of feedstuffs and rations used for growing chicks.	2680	
1411	Nutritive value of plant protein feeds in growing, laying and breeding rations for chickens.	3040	
1412	Protein supplements in poultry rations.	1590	4020
1413	Study of mung bean and other special proteins for poultry feeding. Essential amino acid requirements of poultry and nutritional properties of mung bean and other nutrients which offer possibility for poultry feeding.	3960	3800

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1414	Gland-free cottonseed meal as a protein supplement for chickens and cottonseed pigment glands; their effect on the growth of chicks and the hatchability of eggs.	4020-B-H	
1415	Studies on soy beans. Effect on the pancreas of chicks of soy beans, raw and heated with and without methionine.	600-A	
1416	Relative value of soybean oil meal and torula yeast as a protein supplement for laying and breeding hens.	4320	
1417	Free-choice method of feeding soybean oil meal to chickens and turkeys. Pelleted versus unpelleted mash for laying hens. Factors involved in hatching chicken and turkey eggs at high elevation.	4530	
1418	The requirements of poultry for protein and amino acids.	850	
1419	The amino acid requirements of turkey poults. Lysine, arginine, glycine requirements determined; tryptophane, cystine, and methionine studies.	600-B	
1420	Requirements of laying hens. Study of several amino acids and of their need during periods of egg production.	600-A	
1421	Protein concentrates as amino acid sources. A number of protein concentrates have been studied as sole source of amino acids for the chicks.	600-A	
1422	Utilization by chicks of methionine in proteins.	2810	
1423	Amino acid requirements and metabolism of the chicken. Requirements of the growing chick; quantitative requirements of the essential amino acids. Study of threonine.	600-A	2850
1424	Amino acid requirements of poultry and distribution of amino acids in poultry feeds. Requirement of tryptophane, the availability of d-tryptophane for the chick and the amounts of certain amino acids in poultry feeds.	3850	
1425	The special value of certain animal products in the nutrition of the growing chick.	2870	
1426	Choline requirement of poultry and the distribution of choline in feeds.	3850	
1427	The vitamin requirements of poults compared with those of chicks. Pantothenic acid, riboflavin and pyridoxine and interrelationships studied.	600-B	
1428	Nutritive requirements of poultry with special reference to vitamin and mineral requirements and effect of various water-soluble vitamins on hatchability of the egg. Manganese, choline, biotin in perosis. Effect of high vitamin D on egg production and hatchability. Use of milk residues, fish liver residues, distiller's solubles and grain butyl solubles as vitamin sources.	4490	4020, 455, 4290
1429	Research on poultry nutrition, with emphasis on vitamins and other essential constituents.	4480	
1430	Quantitative requirements of the rat and the chick for several vitamins. (bioassays)	2260-A	
1431	Vitamin A requirement in the fowl.	450	
1432	Vitamin A: Comparative metabolism and efficiency of vitamin A and carotene in the fowl.	450	
1433	The role of carotinoid pigments and related compounds in poultry nutrition. Influence of vitamin A and synthetic riboflavin in rations for growing chicks and breeding poultry.	1740	
1434	Nutritive requirements of turkeys for hatchability, with special reference to members of the vitamin B complex.	3040	4020, 1365
1435	The requirements of poultry for the members of the B group of vitamins.	850	

PHYSIOLOGY
FARM ANIMALS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1436	Pantothenic acid requirements of poultry.	850	
1437	Folic acid requirements of poultry.	850	
1438	Hatchability studies incidental to determination of requirements of riboflavin and pantothenic acid for development of embryo and assay of these in egg. Folic acid requirements.	600-A	
1439	Nutritional requirements of poultry. 1) Amount of pteroylglutamic acid required for normal growth and normal blood picture. 2) Amount of the critical amino acids required for normal growth. 3) Possible requirements of unrecognized vitamins required by birds for a normal life cycle.	2390	
1440	The folic acid requirement of turkeys, and the role of the factor in the nutrition of the species.	3370	
1441	The interrelationship of riboflavin, niacin, biotin, pantothenic acid, pyridoxine and folic acid in turkey poult nutrition and the influence of interrelationships on the turkey poults' requirements for these vitamins.	4320	
1442	Pteroylglutamic acid (folic acid) in nutrition of turkeys and chickens and the effect of diet ingested on the amounts of microbiologically available vitamin in the blood.	3850	
1443	Diseases of young turkeys.	3040	
1444	Nutritional requirements of turkeys. Vitamin D and vitamin A.	810	
1445	The vitamin D requirement of the turkey.	4123	
1446	Identification of new nutritional factors required by chicks.	100	
1447	A study of unidentified factors required for reproduction in poultry.	4320	
1448	Growth factors necessary for chickens.	100-A	
1449	Studies of calcium supplements and of trace mineral elements in the nutrition of the chicken.	3370	1920
1450	Mineral requirements of poultry.	850	
1451	Mineral mixtures in the rations of poultry and livestock.	2860	
1452	Elements which are generally recognized as necessary in general poultry nutrition.	1510	
1453	Phosphorous in poultry nutrition.	810	4020
1454	Fluorine: effect in poultry nutrition.	1150	
1455	Biological functions of certain minor constituents in avian nutrition.	2280	
1456	Propagation and nutrition of game birds.	3040	4020, 4030-A

PLANTS

Genetic Studies for Improved Yield and Quality

1457	Spectrographic analysis in plant growth and development.	4020-E	
1458	Horticultural, genetical, agronomic, and plant physiological research.	1460	3110
1459	Trial garden.	610	
1460	Garden crops for northern Maine.	2050	
1461	Study of biochemistry of frost resistance in plants.	2360	1190
1462	Mechanism of photosynthesis.	710	
1463	Production of vegetable crop plants under total artificial light.	3220	
1464	Experiments on conversion of sugars into pigments in plants. Investigations on flowering of certain cereals.	1440	
1465	Utilization of sucrose by plants.	590	3750
1466	Occurrence of serologically reacting materials in sugars and other foods of plant origin.	850-A	

PHYSIOLOGY

PLANTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1467	Evaluation and development of herbicides and growth regulators.	2670	
1468	Development and application of methods of enzyme and protein chemistry to study of plant growth and development.	590	1190
1469	Relation of metabolic factors to growth and differentiation in roots using tomato, carrot, and sunflower.	1630	
1470	Factors affecting flow of Maple sap.	3040	
1471	Breeding and cultural investigations with garden crops.	2050	
1472	Production of varieties better adapted to localized environmental conditions and processing, - corn, radish, broccoli, cabbage, carrot, lettuce, and pepper.	320	
1473	Improvement of vegetable crops grown in Wisconsin.	4490	
1474	Factors affecting yield and quality of vegetable canning and freezing crops in Idaho.	1590	
1475	Factors influencing yield and quality in production and processing of vegetables and fruits.	2100	
1476	Breeding brussel sprouts and other crucifers.	2280	
1477	Variety testing and breeding of sugar beets.	4100	
1478	Sugar beets; breeding, agronomic studies, and production of seed from inbred, hybrid, and commercial strains.	2280	
1479	Breeding, selection and evaluation of new carrot varieties; carrot production.	610	
1480	Breeding sweet corn for North Dakota.	2810	
1481	Corn breeding with reference to influence of environmental factors in expression of hereditary factors.	3040	4020
1482	Breeding of sweet corn for canning.	2370	
1483	Breeding and testing of corn, popcorn, wheat, barley, oats, rye, beans, and potato.	2280	4020
1484	Crossing breeds of United States and South African corn.	1630	
1485	Development of superior strains of hybrid field and sweet corn at Madison and Spooner.	4490	4020
1486	Development of early sweet corn hybrids.	2050	
1487	Improvement of field corn for Maine.	2050	
1488	Cultural studies with field beans.	2080	
1489	Varietal and genetic studies of field beans.	1590	
1490	Black bean production.	610	
1491	Production of varieties for better quality; stringless snap beans, and lima beans (<i>Phaseolus lunatus</i>) having green skins and cotyledons.	320	
1492	Breeding of field and canning peas.	4490	
1493	Production of varieties better adapted to new cultural practices or new processing methods; pea varieties (<i>Pisum Sativum</i>) better suited to preservation by quick freezing.	320	
1494	Breeding peas for canning.	2370	
1495	Miscellaneous vegetable trials; evaluation of varieties of peas, lima beans, sweet potatoes, corn, and carrots.	610	
1496	Varieties of soybeans.	3040	
1497	Soybean breeding, field and edible varieties.	4490	
1498	Study of adaptation and other characteristics of various soybean varieties.	2280	
1499	Okra investigation.	610	
1500	Maintenance and improvement of stock okra seed.	610	
1501	Cause and control of loss of viability of okra seeds.	610	
1502	Development of new okra varieties through breeding and selection. Evaluation of okra hybrids.	610	
1503	Hybrid onions.	610	
1504	Development and study of onion varieties for storage and dehydration.	1590	

PHYSIOLOGY

PLANTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1505	Production of parsley, sweet basil, and other herbs.	610	
1506	Potato production.	610	
1507	Effect of environment, variety and treatment on quality of potato tubers.	1590	
1508	Potato and tomato breeding for North Dakota.	2810	
1509	Factors affecting date of maturity and tuber set of potatoes.	2050	
1510	Methods of killing potato tops as a preliminary step in early harvest.	2050	
1511	Potato quality studies.	1590	4020
1512	Sweet potato production.	610	
1513	Breeding, selection, and evaluation of new rutabaga varieties.	610	
1514	Development of new tomato varieties through breeding and selection.	610	
1515	Development and evaluation of varieties characterized by a jointless pedicel, - tomato.	610	
1516	Maintenance and improvement of stock tomato seed of Rutgers and Garden State.	610	
1517	Development of new tomato varieties with more favorable acid-solids ratios for use in California and Garden State.	610	
1518	Breeding and selection of new tomato varieties with low-acid-solids ratios.	610	
1519	Breeding and selecting to improve characters affecting yield and quality in tomato.	3220	
1520	Crop research, variety, and breeding studies for yield, color, disease, resistance and other desirable characteristics of tomatoes and cucumbers.	4190	
1521	Fruit breeding. Improvement in color, flavor, sugar content, and yield of apricots, plums, peaches, nectarines, sweet cherries, pears, and apples.	600-A	
1522	Variety testing of fruits and vegetables.	1590	4020
1523	Agriculture research dealing with development of improved varieties and yields on fruits and vegetables for use in baby foods.	1310	
1524	Investigation and evaluation of suitability of different varieties of fruits and vegetables which might be used in preparation of foods in infant feeding. Work covers nutritional studies, flavor, color, insect and disease resistance.	390	
1525	Breeding new varieties of apples.	2050	
1526	New apples for Wisconsin.	4490	
1527	Breeding to improve quality of fruit of tomatoes, peaches, and citrus fruits.	600-D	
1528	New variety trials -- figs.	600-A	4020, 560
1529	Pruning studies -- figs.	600-A	4020, 560
1530	Caprification (introduction of pollinating insects) methods and rates of figs.	600-A	4020, 560
1531	Physiology of splitting of fruit -- fig.	600-A	4020, 560
1532	Causes of granulation of Valencia orange fruits.	600-D	
1533	Breeding studies on peaches and blueberries.	2280	
1534	Varieties and seedlings of plums best adapted to Wisconsin conditions.	4490	
1535	Breeding investigations with small fruits.	2050	
1536	Increasing plant stand in blueberry fields.	2050	
1537	The nutrition of the low-bush blueberry.	2050	
1538	Breeding and selection of vinifera grapes more suitable to California conditions and utilization.	600-A	
1539	Strawberry and small fruit variety tests.	4490	
1540	Methods of improving the small fruit industry, particularly strawberries, of Wisconsin.	4490	

PHYSIOLOGY

PLANTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1541	Investigations of cultural problems of the olive.	600-A	
1542	Growing of edible nuts in Pennsylvania.	3040	
1543	Almond breeding; to secure new varieties with better flavor, higher oil content, heavier and better yields.	600-A	4020
1544	Mint plant growth and yield studies.	4510	
1545	Peppermint plant hybridization studies.	4510	
1546	Grain variety test.	2050	
1547	Investigations on barley varieties.	4490	2070
1548	Improvement of soft red winter wheat in Missouri; to breed new varieties and strains for higher yield and better milling quality; and to test the flours of these new varieties for adaptiveness to culinary uses.	2390	
1549	Hybridization and selection of pedigreed lines for cereals, root rot and stem rust resistance in heat.	1590	4020
1550	Laboratory studies on quality evaluation and improvement of Kansas wheat.	1740	
1551	Study of adaptation of important types, varieties, and regional strains of alfalfa.	2280	
1552	Alfalfa and sweet clover breeding, and a study of the causes of sweet clover toxicity.	4490	4020
1553	Plant spacing.	1900	
1554	Plant pathology.	3320	2260
1555	Plant disease survey of Pennsylvania.	3040	
1556	Plant rusts.	3040	
1557	Evaluation and development of new fungicides.	2670	
1558	Effect of chemotherapy of plants to prevent disease and of chemical treatment of soil to destroy pests, on the palatability and nutritive value of vegetable crops.	810	
1559	Study of spore germination in the powdery mildews.	1630	
1560	Seed disinfection.	2060	
1561	Control of market diseases and respiration studies of fresh fruits and vegetables.	1160	
1562	Studies on resistance to disease of onions, tomatoes, cherries, celery, potatoes, and stone fruits.	2280	
1563	Decay and deterioration of citrus fruits.	600-D	
1564	Plant pathology relating to citrus, date, avocado, peach, and vegetable diseases.	600-D	
1565	Control of molds in figs both in the orchards and during handling prior to delivery to the packing plants, by use of dusts, sprays, and fumigants.	600	560, 4020
1566	Weather studies, - temperature and relative humidity, - as related to mold and insect development in fig orchards.	600	560, 4020
1567	Prevention of Fusarium infections introduced by Blastophaga during caprification.	600	560, 4020
1568	Review of research on development of improved variety of cucumber seed, rust-resistant and more productive for pickling industry.	2790	2610
1569	Production of varieties of peas, beans, cucumbers, tomatoes, that are resistant to certain diseases.	320	
1570	Control of downy mildew on lima beans.	610	
1571	Control of the pepper etch and ringspot disease.	610	
1572	Breeding, selection, and evaluation of new varieties of peppers resistant to tobacco mosaic.	610	
1573	Breeding disease-resistant varieties of potatoes.	3040	4020
1574	Improvement of quality and disease resistance of potato by breeding. Causes of potato blackening upon boiling.	4490	4020
1575	Breeding and selection of new tomato varieties resistant to diseases.	610	
1576	Control of diseases (anthracnose) of tomato plants by means of fungicides.	610	

PHYSIOLOGY

PLANTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organizations</u>
1577	Development and evaluation of varieties of tomatoes that are resistant to fruit cracking.	610	
1578	Bacterial, virus, and other diseases of truck crops in Idaho.	1590	4020

CHEMISTRY

CHEMISTRY
ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>General</u>			
1	Synthesis of organic compounds.	1750	4090
2	Organic chemistry.	2360	2260
3	Research on fundamental chemical problems related to biology.	1650	4090
<u>Proteins</u>			
4	Studies on proteins.	2300	840
5	Protein investigations (agricultural biochemistry).	2360	4020
6	Development of methods for hydrolysis of proteins.	3800	
7	Sources of proteins; investigating methods of hydrolysis.	3450	
8	Sources of proteins; analytical procedures for protein hydrolysates.	3450	
9	Studies on the biuret method for the determination of protein. 1) Biuret reaction of proteins in the presence of ethylene glycol. 2) Biuret reaction; the measurement of amount of copper bound.	3620	
10	Amino acid composition of proteins.	790	4050-A
11	Preparation and evaluation of amino acids by chemical and biological tests.	2400	
12	Whey protein studies.	2540	
13	Seasonal variations in whey.	2540	
14	Fractionation of casein proteins.	2540	
15	Changes which take place in protein when treated with nitrous acid. Product of this reaction has been used extensively in nutrition studies since it is devoid of the essential amino acid lysine.	2290	
16	Preparation, synthesis, and study of biochemical properties of derivatives of nucleic acids and their homologues.	780	4040-C
17	Chemistry and metabolism of nucleic acids and related compounds.	1580-II	4040-C
18	Isolation of, and large scale preparation methods for, nucleic acids and their hydrolysis products.	3460	
19	Chemical and biological properties of nucleic acids and nucleoproteins.	790-A	4040-C
20	Synthesis of peptides by transacylation.	4020-C	
21	Investigation of peptide synthesis.	600-C	3140
22	Study of the properties of collagen.	1240	
23	Chemical reactions of proteins due to the hydroxyamino and sulphur-containing amino acid constituents in them and especially as influenced by the phosphate group in such phosphoproteins as casein and vitellin.	4020-C	
24	Attempts at isolation of two or more labile components of tryptic digest of casein which appears to be essential for the production of high yields of tetanus toxin.	1440	
25	Preparation of adenosine triphosphate by phosphorylation of adenosine.	3460	
26	Determination of glucosamine in proteins. To apply the periodate method to the determination of glucosamine in protein hydrolysates.	4020-C	
27	Analysis of the thyroid proteins.	2770	2090, 2635
28	Fractionation of the liver proteins.	3700	90
29	The chemistry of the tubercle bacillus, and a catalogue of its chemical derivatives.	4540	2650
30	The chemistry of tuberculin. Purified protein derivative (of tuberculin) contains three proteins distinguished by physicochemical and immunological methods.	3050	2650

CHEMISTRY

ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Amino acids</u>			
31	Amino acid determinations.	2980	
32	Amino acids.	2740	
33	Physical properties of amino acids.	3120	
34	Gasometric ninhydrin procedure for determining total free amino acids in protein.	3800	
35	Amino acid assay methods.	2540	
36	Rapid methods for determination of amino acids.	3240	
37	Development of method for determination of specific amino acids.	3800	
38	Method for determining free and combined glutamic acid in human blood plasma and serum.	2750 790-A	4460
39	Determination of the extent to which various materials absorb amino acids.	3800	
40	Separation of mixtures of amino acids by means of chromatographic adsorption.	4540	2850
41	Synthesis and purification of amino acids.	3730	
42	Synthesis of amino acids. Production of racemic and optically active amino acids.	2260	
43	Synthetic methods for essential amino acids, especially glutamic acid and leucine.	3470	
44	Microanalysis of amino acids and proteins in the form of isotopic derivatives.	2770	90
45	Production of food products from distillers' dried solubles. Amino acid crystals for incorporation into pharmaceutical preparations.	3480	
46	Preparation of crystalline amino acid forms from distillery by-products, particularly distillers' dried solubles. Products for use in pharmaceutical products and for enrichment of food in leucine and isoleucine.	3480	
47	Formation of the amino acid lanthionine as an artifact in proteins.	4020-C	
48	Study of amino acids, fats and sugars by infra-red methods.	3380	
49	The complex ions of amino acids.	600-B	4020
50	Investigations of the chemical and nutritive properties of new sulfur containing amino acids significant in nutrition and metabolism, their growth promoting values, ability to replace cystine and methionine in diet. Amount of methionine in commonly used foods.	4020-B	
51	Study of the reaction products of amino acids and sugars and isolation and identification of reaction products.	1240	
<u>Fats and fatty acids</u>			
52	Studies on fats and lipids.	2360	4020
53	Quantitative methods for determination of lipids.	3120	
54	Physical properties of fats and fatty acids.	3120	
55	Aluminum tri-stearate as a cold test inhibitor.	3940	
56	Physical and chemical properties of fats in relation to their composition, structure, and utilization.	3040	4020
57	Pilot plant hydrogenation studies on fats and oils. Effect of hydrogenation on the physical properties of natural fats and oils.	3120	
58	Refining and fractionation of fatty oils.	700, 1760	
59	Identification and characterization of sterols (activatable and non-activatable) from certain natural sources.	1020-A	
60	Fractionation of vegetable oils.	2110	
61	Flavor of vegetable oils	1940	

CHEMISTRY

ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
62	Fractionation of vegetable oils, particularly soybean oil, to separate fraction having higher saturation, for processing into edible products.	4020-G	
63	Structure of limonin.	3120	
64	Chemical structure and composition of glycerides in natural fats and oils.	3120	
65	Organic derivatives of glyceridic oils.	410	
66	Temperature-pressure-solubility relationships of the glyceride components of fats and oils.	3120	
67	Chromatographic adsorption analysis of fatty acids and carbohydrates.	4540	2850
68	Studies of structure of isomeric unsaturated fatty acids in natural fats and oils.	3120	
69	Chemical rearrangement by simultaneous ester interchange and crystallization (vegetable oils).	3940	
70	Studies of structure of phosphatides in natural fats and oils.	3120	
71	Course and mechanism of fat oxidation.	2360-A	
72	Oxidation of fats and oils by ultraviolet light, bacteriological, chemical, and infra-red methods.	3380	
73	Development and application of the "age test" (vegetable oils).	3940	
74	Fat anti-foaming studies.	3630	
75	Chemical composition and structure of fats in relation to their value for cake making.	2360	
76	Plastic range of shortenings, hydrogenation and formulation effects (historical survey).	3940	
77	Chemistry of essential oils of California desert plants, some of which may be of importance as domestic sources of flavoring material.	590	
78	Constitution of fats that have been altered by catalytic means.	2830	

Carbohydrates

79	Researches in carbohydrate chemistry. Studies on carbohydrate chemistry.	4490	4020
80	Chemical evaluation of nutritive value of carbohydrates.	850	
81	Carbohydrate chemistry. Amino acids and vitamins in nutrition.	2911	
82	Methods of analysis and theoretical papers on sugars.	500	
83	Physical properties of sugar.	3120	3750
84	Analysis of sugars and sugar products, as the determination of sucrose, dextrose, levulose, maltose, lactose, moisture, ash, color, and turbidity.	2760	
85	Flavor, work on the sugars to determine if possible any relation between relative sweetness and the physical characteristics of the different sugars; isolation of the flavor elements in coffee and orange oil.	2110	
86	Chromatographic adsorption (sugar).	2870	3750
87	Devising new or improved methods of refining sugar.	4440	
88	Polysaccharides in sugar.	850	3750
89	Synthesis of sucrose.	600	3750
90	Fundamental chemistry of sucrose.	2110	3750
91	Sucrose crystallization rates.	4530	3750
92	Oxidations of sucrose.	3220	3750
93	Dextrose; rearrangement and degradation. Research on the chemical transformations of dextrose, including such derivatives as saccharic acid and calcium d-arabinate.	4020-G	
94	Glucose derivative from sugar.	4120	3750

CHEMISTRY

ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
95	Polymerizable sugar derivatives.	4020-F	3750
96	Cataloging sugar derivatives.	3750	
97	Lactose studies.	2540	
98	Improvements in the process of lactose production by crystallization.	4520	
99	Application of the molybdenum blue reaction to the determination of glucose in the presence of (a) sucrose and (b) maltose.	1600	
100	A colorimetric method for the accurate determination of minute quantities of glucose, using the molybdenum blue reaction.	1600	
101	Levulose extraction methods.	780	3750
102	Reaction of pentose.	500	
103	Sorbitol and other sugar alcohol products	2470	
104	Studies on malt and maltose syrups.	2960	
105	Chemical and physico-chemical studies on flavone-glucosides.	1910	
106	Studies on Schardinger dextrans and other molecular structural studies.	830	4040-C
107	Studies on starch.	1590	4020
108	Organic synthesis of starch by organisms; methylation studies.	600-A	430
109	Chromatographic separation of branching products of the molecule (starch).	2870	830
110	Anomalous linkage in starch. Studies involve splitting of branches of amylopectin fraction of starch by enzymic means and organic evaluation of several crystalline products which have been broken off the branches.	4020-G	830
111	Size and shape of the starch molecule by the use of the ultracentrifuge and other physical means of measurement.	790	830
112	Fundamental studies on starch retrogradation.	840	
113	A study of the starch molecule and its derivatives.	1240	
114	Structure of corn and cornstarch. Studies comprise oxidation procedures, genetic studies, and involve the protein and oil in corn as well as starch.	1650	830
115	Optical behavior of starch, physical studies on molecular structure with the use of X-ray diffraction methods and the electron microscope.	2110	830
116	Starch granule formation, properties and composition. Research of properties of starch paste and derived products. Investigations on the coacervation of starch paste and the production of starch sponge.	4020-G	
117	Potato starch and its derivatives. Tapioca starch and products.	1170	
118	Gelatinization characteristics of starches using the following methods; (a) light transmission (b) viscosity (c) swelling power of water absorption (d) solubility - chemical and physical characteristics of the solubles and the insoluble residues (e) changes visible by microscope.	2680	4040
119	Thermophylic free starches.	3020	
<u>Minerals</u>			
120	Study of the crystallizing habits of sodium chloride.	1240	

CHEMISTRY

ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Vitamin - general</u>			
121	Vitamin assay.	2120	4020
122	Vitamin assay methods.	3040	
123	Development and improvement of vitamin assay methods.	3730	
124	Vitamin assay methods.	2540	
125	Development and modification of vitamin analytical methods and their application.	850	4020
126	Chemical studies on methods for determining certain of the vitamins as they occur in foods.	2700	
127	Development of procedures for the determination of vitamins, amino acids, etc., by physico-chemical or chemical methods.	1910	
128	Synthesis of compounds related to vitamins and other metabolites.	4490	
129	Testing analogs of known vitamins.	1530	
130	Isolation and purification of naturally occurring vitamins, structure studies, and synthesis. Synthetic procedures for manufacture of thiamine hydrochloride, riboflavin, ascorbic acid, niacin and niacinamide, pyridoxine, calcium pantothenate, biotin; α -tocopherol; vitamin K ₁ , and memadione.	2260	
<u>Vitamin A and carotene</u>			
131	The chemistry and physiology of fat-soluble vitamins.	2780	
132	The absorption of fat-soluble vitamins from aqueous solutions.	4080	
133	Colorimetric determinations of vitamins A and D.	1670	1580-E
134	Methods of estimating Vitamin A and determining its stability in various products.	470	
135	Chemistry of Vitamin A	980	
136	Isolation and identification of Vitamin A ₂ .	980	
137	Chemical studies relating to the synthesis of Vitamin A.	2870	4090
138	Stabilization, extraction, purification, and degradation of Vitamin A in foods and pharmaceuticals.	1670	
139	Synthetic methods for Vitamin A.	3470	
140	Synthesis of Vitamin A.	4490	4020
141	Synthesis of a very active Vitamin A compound.	2920	
142	Development of a chemical method for estimation of carotene and Vitamin A in mixed feeds and foods. (1) application of total Vitamin A value of human and animal food mixtures; (2) effects of various factors on efficiency of absorption and metabolism of carotene and of Vitamin A in the animal organism.	3850	4020
143	Vitamin A bioassays. Collaboration in studies of the comparative extinction coefficients and bioassay of a series of six different fish liver oil samples furnished by an association of producers of vitamin oils on the west coast.	3620	
144	Spectrographic methods of estimating vitamin A and Provitamin A.	3040	2850
145	Biological and spectrophotometric evaluation of various species of fish liver oils for Vitamin A for subsequent correlation of these values with official standards in the United States and Great Britain.	1910	
146	Development of a spectrophotometric method for Vitamin A assay.	3800	
147	Synthesis of labeled Vitamins A and E containing radio-carbon or other isotopes.	980	
148	The extraction of preformed Vitamin A.	470	

CHEMISTRY
ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
149	Methods of purification from natural sources. Vitamin A.	450	
150	The absorption of Vitamin A and carotene from mineral oil containing various percentages of glycerides.	1700	
151	Effect of two isomers upon the determination of beta-carotene.	260	
152	Echinenone as a Vitamin A precursor. Echinenone prepared from ovaries of seaurchin and studies on comparative activity in relation to beta-carotene.	3620	
<u>Vitamin B complex</u>			
153	Applied assay methods for the water soluble vitamins.	3890	
154	Improvement and development of assay methods for B Vitamins.	2910	2850
155	A study of methods of assaying the Vitamin B content of foodstuffs, to investigate new dietary factors present in food materials.	4490	
<u>Thiamine</u>			
156	Study of thiamine assay methods. To increase the accuracy and practicability of thiamine assays on food, feeding stuffs and biological fluids.	2700	4020
157	Vitamin B ₁ analogs.	3155	3750
<u>Riboflavin</u>			
158	Critical evaluation of chemical and biological methods for riboflavin.	4320	
159	The production and purification of riboflavin.	800	
160	Synthesis of compounds structurally related to riboflavin.	3340	
161	A new derivative of riboflavin which is characterized by a high solubility in water.	1080	
<u>Niacin</u>			
162	A study of a microbiological method for determining nicotinic acid in food.	3800	
163	Development of a method of analysis for niacin in meats.	3800	
<u>Pyridoxine</u>			
164	Development of a method of analysis for pyridoxine in meat.	3800	
<u>Pantothenic acid</u>			
165	Methods for determination of the pantothenic acid content of foods and feeds.	3800	
<u>Biotin</u>			
166	Method for determination of the biotin content of foods.	3800	
167	Characterization of compounds containing bound biotin and other vitamins.	4490	2850
168	Further studies on oxybiotin.	3120	4460
<u>Inositol</u>			
169 ¹	Production of calcium phytate, phytic acid and inositol.	3680	

CHEMISTRY
ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
170	Projects on certain phases of inositol and its derivatives having a bearing on the structure of streptadine.	3170	
<u>Newer B complex factors</u>			
171	The isolation, chemistry and function of the newer members of the Vitamin B complex.	850	2850
172	Concentration of new vitamins.	3355	2850
173	Research on folic acid.	270-A	1860
174	Oxidative degradation of Vitamin Bc (Pteroylglutamic acid).	2980	
175	Synthesis of new compounds with folic acid activity and antagonism.	3630	
176	Purifications of folic acid from liver.	400	
177	Isolation and characterization of Vitamin Bc from liver and yeast. Occurrence of a acid-labile chick antianemia factor in liver.	2980	
178	Separation of vitamin concentrates from liver.	400	
179	Potential laboratory methods for evaluation of the anti-pernicious anemia activity of liver extract.	4122	
180	Antianemic substances of liver.	40-A	4460
181	Method for determination of folic acid content of foods.	3800	
182	The isolation, identification, and functions of the unknown components of the Vitamin B complex.	850	
<u>Vitamin C</u>			
183	Comparative study of chemical and biological methods of determining ascorbic acid.	4020-D	
184	(a) Determination of diketogulonic acid, dehydroascorbic acid and ascorbic acid in presence of each other. (b) Analysis of processed foods to determine occurrence and significance of diketogulonic acid and dehydroascorbic acid.	1260	
185	A study of certain carbohydrate type compounds related to Vitamin C.	1260	2850
<u>Vitamin D</u>			
186	A new Method for the Quantitative Determination of Vitamin D.	4123	
187	Improved syntheses of 7-dehydrocholesterol.	1020-A	
188	Vitamin D assays in animals.	3570	
189	Studies on ergosterol and Vitamin D2.	3690	
<u>Vitamin E</u>			
190	Development of quantitative analytical methods for the individual tocopherols.	980	
191	Isolation and characterization of all natural-occurring tocopherols (Vitamin E).	980	
<u>Vitamin P</u>			
192	Fundamental study of "Vitamin P" compounds.	3475	570
193	Project having to do with the reinvestigation of the structure of citrinin.	3170	
194	Study of Vitamin P and related compounds by chemical and biological tests.	3620	1530

CHEMISTRY
ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Unidentified factors</u>			
195	Investigation of the unidentified nutritional factors.	4090	
196	Methods of testing various foods and feeds for the unidentified nutrients of milk, milk products and liver extracts.	4020-C	
197	Animal and chemical studies of nutrients of unknown chemical composition.	3510	
198	Growth factors in yeast and yeast hydrolysates. The identification and evaluation of certain growth factors contained in yeast and its hydrolysates.	230	
199	A study of the chemical and biological properties of some unidentified growth factors found in distillers' dried solubles.	3220	
200	Isolation and identification of two unknown factors necessary for growth of the animal microorganism, Tetrahymena. Factors concentrated from various natural sources, and chemical identity of each.	220	
201	Crystallization and identification of unknown growth factor(s) in distillers' dried solubles.	3220	3480
202	Nature of the anti-gizzard-erosion factor. Whey used as source material. Factor absorbed on charcoal.	600-B	
203	The occurrence and isolation of the pneumonia factor.	4370	
204	Pyrimidine synthesis with especial reference to pyrimidines having hematopoietic properties.	3460	
205	Studies on the biochemistry of lactobacillus casei factor and related substances.	270	4460
<u>Carbohydrate splitting</u>			
206	Enzyme studies.	3020	
207	Enzymic synthesis; glucose-1-phosphate synthesis Enzymolysis studies and purification of carbohydrate splitting enzymes.	4330	830
208	Enzymolysis studies and purification of carbohydrate splitting enzymes.	790	830
209	Action of the amylolytic enzymes on the various native starches and on treated starches, photomicrographic as well as chemical studies.	2680	
210	Effect of ascorbic acid on the amylolytic enzymes of malt and barley.	1600	
211	Enzymes and carbohydrates. Chemical and physical characteristics of anylolytic; proteolytic, and other enzymes; physical properties of starches as related to dry food mixes.	3690	
212	Purification of enzymes involved in carbohydrate metabolism.	710	
213	Enzyme action on starches.	2960	
214	Study of chemistry of the pectin molecule and its derivatives.	1240	
215	Role of pectin and other hydrolytic enzymes in fruit and vegetable products.	600-A	4020
216	Chemistry of pectin and pectin enzymes.	850	
217	Factors that induce jellying of pectin; object, to determine effect of individual and combined chemical and physical factors on jellying of pectin containing liquids.	950	4020
218	Use of pectic enzymes in wine making. Tests on use of commercial pectic enzymes added to fresh must and new wines. Effect of various factors such as pH, temperature, and alcohol content.	600-A	

CHEMISTRY

ANALYSIS, SYNTHESIS, ASSAYS, STANDARDS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
219	Biochemical properties of various pectic enzymes, particularly those from different species of molds. Nature of products of enzyme hydrolysis of pectin, pH, and temperature relationships.	600-A	
220	Galacturonic acid.	3750	

Proteolytic

221	Study of characterization and mode of action of proteolytic enzymes with special emphasis on intracellular proteinases.	1010	4040-C
222	Studies on proteolytic enzymes from various sources and rates of enzymatic hydrolysis on specialized materials.	1910	
223	Removal of proteolytic enzymes from mold extract by selective adsorption.	1740	
224	Enzymatic activity studies. Research related to the enzyme activities of various lipases and proteases for possible incorporation of such materials in food and pharmaceutical preparations.	1670	
225	Peptic-tryptic digestion of rennet-custards in vitro.	1580-J	

General

226	Enzymes with more than one catalytic function.	790	4460
227	Studies on inhibition of enzyme systems.	2830	
228	Purification, biochemical properties, and industrial significance of various oxidizing enzymes other than those of olives and frozen pack products.	600-A	
229	Properties and distribution of oxalacetic carboxylases.	710	2090
230	Nature of the enzyme mechanism involved in (a) conjugation of phenols and (b) inactivation of estrogens.	1680	4040-C
231	Study of little known protein constituents of common plants. To discover new enzymes and new properties of known enzymes in plant materials; especially the utilization of lipoproteins, and their reaction with fats.	4020-I	
232	Effect of high pressure on enzymes of agricultural products.	4020-I	

Hormones

233	Use of growth-regulating substances in the control of plant development.	710	
234	Isolation of cholecystokinin.	1610	4040-C
235	Concentration of enterocrinin, a hormone which excites the glands of the small intestine.	3340	
236	New synthetic methods for steroid hormones.	3470	
237	Producing certain hormones, progesterone, testosterone, and other products derived from sterols.	1330	
238	Studies on thyroid function. Synthesis of thyroxine analogues and a study of their biological activity.	3620	1910
239	Study of methods of measuring the potency of thyroid gland preparations. Chemical measurements of organic iodine content and biological measurements of the effect of administered thyroid substances.	2080	2635
240	Effect of insulin on metabolic reactions in vitro.	3050	4040-C

FOOD COMPOSITION AND NUTRITIVE VALUE

General

241	Analytical methods.	1535	3750
242	Analyses of miscellaneous samples.	3040	
243	Analyses of special and miscellaneous foods.	610	4020
244	Assay methods for nutritional factors.	4090	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
245	Determination of analytical methods which can be used for control or quality purposes by the food industries. (Determination of water in milk.)	1060	
246	Research and development on methods of food analysis.	3690	
247	Research related to food standards.	4040-B	
248	Research related to court cases - failure to conform to standards or presence of harmful components as basis for legal action.	4040-B	
249	Development of special analytical methods required by a large food corporation.	1240	
250	Food analyses of miscellaneous human foods (and iodine studies).	3850	4020
251	Methods used in the examination of food, drug and cosmetic products.	4040-B	
252	Inspection of foods and drugs (including biological assay of Vitamin D milk).	810	4020
253	Development of micro methods for direct application to food products.	3120-A	1490
254	Projects on yeast, meat, vitamins and foodstuff, including their analyses.	3380	
255	Food composition values.	4020-D	4010-F
256	Nutritional studies of the Puerto Rican dietary.	3210-A	4020
257	Nutritional value of natural food materials.	2360	
258	The nutritive value of certain Arizona produced foods and their relationship to various factors. (Physiological availability, seasonal variations.)	260	4020
259	Nutritional value of Army Rations.	4490	4010-F
260	Study of chemical composition and vitamin content of Army rations.	780	
261	The composition of Central American foods.	2110	
262	Study of nutritive value of foodstuffs in Hawaii by means of chemical analysis and biological experiments.	1480	
263	Evaluation of nutritional qualities of company products.	1490	
264	Compilation and evaluation of data on nutritive value of food as brought into the kitchen.	4020-D	
265	Chemical analyses. To determine directly the chemical composition and the nutritive value of foods as commonly served in school meals.	4020-D	
266	Laboratory and pilot plant investigations - applied research, comparison of quality between regionally grown products (Tennessee valley) and those of like commodities from other sections.	3970-B	
267	Evaluation of foods with regard to vitamin, protein, and amino acid content, by chemical, microbiological and biological assays with experimental animals.	3980	
268	Quantitative determination of amino acids in food proteins.	4020-D	
269	Vitamin content of important plant foods.	4540	2850
270	Vitamin survey of tropical foods. (a) riboflavin (b) thiamin (c) niacin (d) ascorbic acid (e) total folic acid (free and complexes).	3210-C	
271	Vitamin assay of some Arctic foods.	270-A	
272	Vitamin assays, both biological and biophysical, formulations, bacteriological investigations, tests for purity, sterility, toxicity, and nutritive value.	4070	
273	Vitamin content of foods in relation to human nutrition. Determination of the vitamin content in foods. Vitamin content of wheat and flour, their nutritive value.	1740	
274	Vitamin B content of foods, particularly the major sources of the B complex. (Determinations for B ₁ , B ₂ , and niacin. Microbiological and chemical methods.)	1150	4020

CHEMISTRY
FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
275	Analysis of foods for ascorbic acid and other nutrients. (1) reasons for variability in retention of vitamins by different foods; and (2) sampling methods for foods, raw and cooked which will permit uniform basis for comparison.	3830	4020
276	Total, reduced and dehydro ascorbic acid of individual foods and of composite food samples.	2820	
277	Ascorbic acid supplied by foods as served in dining halls on University of Idaho campus.	1590	4020
278	Vitamin E in laboratory diets.	980	
279	Analyses of foods commonly consumed by humans, for Vitamin E potency.	980	
<u>Infant foods</u>			
280	Estimation of available iron as related to total iron content of several infant foods.	3120-A	
<u>Dairy products</u>			
281	Testing dairy products.	3040	
282	Analysis of dairy products.	2280	
283	Variation in the fat test between 15-day composite milk samples and the average test of daily fresh milk samples.	2050	
284	Development of laboratory methods for testing dairy products.	2540	
285	Analysis of dairy products. Methods including the application of the Hillig lactic acid method to ice cream.	2100	
286	The bio-chemical composition and nutritive value of dairy products.	2910	
287	Evaluation of quick tests for the quality of milk.	1590	
288	Comparison of suggested methods for fat analysis of buttermilk, skim-milk, and whey.	1590	
289	Studies of cholesterol distribution in dairy products. Factors affecting reliability of methods for estimation of cholesterol in presence of large amounts of fatty acids of varying molecular weights and degrees of saturation.	600-A	
290	The simultaneous determination of lactose and sucrose in dairy products by a picric acid reduction technique.	3040	
291	Analysis of the calcium content of dairy products produced in the Seattle area. Samples of fresh milk, cottage cheese, ice cream, and evaporated milk used.	4340	
292	Composition of milk.	1610, 3180	
293	The factors influencing the composition and market qualities of milk and cream.	2360	
294	Seasonal variations of milk production in Maine.	2050	
295	Study of the solids--non-fat content of milk from cows of the Idaho Agricultural Experimental Station; Holstein and Jersey herds.	1590	4020
296	Studies of milk. Protein structure, physical properties, measurements.	1160	
297	Curd tension test and curd number test applied to market homogenized milk in Philadelphia. Definition of a soft curd milk.	1580-J	
298	The chemistry of milk as a colloidal system.	2360	
299	A study of the physical and chemical properties of milk proteins using new methods of protein separation and fractionation.	4490	
300	Isolation of whey constituents.	3520	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
301	Development and improvement of the chemical or physico-chemical methods for assaying the Vitamin A and carotene potency of milk, butterfat, and other biological materials.	4020-C	
302	A study of the Vitamin A and carotene content of milk and butter.	1980	4020
303	Riboflavin content of evaporated milk determined by the Bourquin-Sherman method.	3220	
304	The niacin value of milk.	4490	101
305	The ascorbic acid and riboflavin content of market milk.	2870	
306	Tocopherols (Vitamin E) in milk; their chemical determination and occurrence in human milk.	980	
307	Analyses of the inorganic constituents of milk and milk products in order to establish range and average values.	4520	
308	A study to determine the best method for analyzing milk for iron content. Comparison of Elvehjem's new method and Stugarts method for analysis of new milk.	850	4020
309	Determination of solids in milk and causes for their variation.	3040	
310	The effect of diseases in the cow and goat on milk.	2280	
311	Milk fat studies.	2540	
312	The loss of fat in churning sweet cream, and methods of control.	2360	
313	Standardization of composition and quality of North Dakota butter.	2810	
314	The Vitamin A potency of creamery butter in Indiana.	3220	
315	Carotene content of butter.	2420	4020
316	The carotene and Vitamin A content of market butters and cheese.	4490	2850
317	Factors influencing the market qualities of butter.	2360	
318	Cheese analysis study.	4490	2510
319	A rapid direct-distillation method for determining the volatile fatty acids of cheese.	850	2510
320	The cooking qualities of cheese as related to insoluble protein.	710	
321	Nicotinic acid, pantothenic acid, biotin and pyridoxin content of cheese. Vitamin determinations will be made by the microbiological and biological methods.	2680	4020
322	The nutritive and food values of cottage cheese. This research covers the moisture, protein, mineral, calcium, phosphorous and vitamin content of cottage cheese.	600-A	
323	Farm dairy cheese.	2050	
324	The nutritive value and physiological effects of ice cream.	2360	1647, 2530
<u>Fats and oils</u>			
325	Determination of fat in foods.	2830	
326	Analysis of mixed diets and individual foods for fat content.	2360	
327	Studies on the composition of animal fats.	710	180
328	Nutritive value of butterfat, other oils and fats.	4490	101, 2530
329	Changes in physical state and structure of milk fat as they affect the properties of milk and milk products.	2280	
330	Inherent nutritive value of milk fat and growth promoting value of various fractions. Efforts made to determine constituents responsible for superior growth-promoting value of one fraction.	600	
331	Unhardened soybean oil in margarine.	3940	
332	Various lecithins in margarine manufacture.	3940	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
333	Studies on Vitamin A; a new Floridin method satisfactory for estimation of Vitamin A in margarines, butter, eggs, milk, and poultry feed.	3620	2485
334	A.O.A.C. vs. Mojonnier vs. Toluene vs. Hot Plate Method for determining moisture content in margarine.	3940	
335	Weight change in margarine on age.	3940	
336	Hexane-extracted cottonseed oil.	3940	
337	Soybean oil studies.	2300	
338	Cottonseed oil vs. soybean oil salad oil.	3940	
339	Flavor stability of soybean oil.	2120	
340	Quality characteristics of tri-chlor-ethylene extracted soybean oil.	3940	
341	Analysis of the composition of orange oil.	2110	
342	Chemical and nutritional studies of unusual tropical oils. (a) avocado (b) sour soap seed (c) tropical almond (d) anacaguíta seed (e) grapefruit seed (f) papaya seed and (g) molinillo seed.	3210-C	
343	Determination of the tocopherol content of some food plant by-products and vegetable oils.	2110	
344	Physical and chemical characteristics and composition of cocoa butter.	1810	
345	Nutrient value of edible fats and oils.	410	
346	Studies on the nutritive value of edible fats and shortening including individual animal fats, hydrogenated shortening, butter, and margarine.	290	
347	Characteristics of some shortening in relation to their culinary value.	1650	4020
348	Cloud point-penetration relationships on shortenings. Combination congeal-cloud point consistency control test. Improved shortening by extreme picking.	3940	
<u>Meat, poultry, fish</u>			
349	Meat investigations. Chemical and physical properties of meat and their relationship to palatability tests.	1740	
350	Study of histological characteristics in relation to the tenderness of different muscles of the beef carcass.	4020-B	
351	Chemical, physical, and histological characteristics of connective tissues of beef. Changes in beef muscle as related to palatability with aging, freezing, mechanical treatment, cooking and pressure canning. Chemical tests include the quantity of collagen, elastin and fat, pH, soluble non-protein nitrogen, and phosphorous partition.	1650	4020, 130
352	Meat investigations. (a) factors influencing the Vitamin B complex content of meat. (b) thiamine, riboflavin, niacin, and pantothenic acid in meat.	1740	4020
353	Sodium and potassium content of meats.	3365	850-A
354	Factors influencing the value of pork as a source of thiamine, riboflavin, and nicotinic acid for the human diet.	3040	4020
355	Investigation of riboflavin of livers of animals that store fat easily and the amount of depot fat in such animals (geese). (Riboflavin, total lipids, and phospholipin content of whole goose, except feathers, wattles, entrails, and liver.)	1770	4020
356	Study of amino acid distribution of protein from dried extracted liver (pork).	4122	
357	Pteroylglutamic acid content of meat.	270-A	2590
358	Pteroylglutamic acid content of tissues of chickens, major part in conjugated form.	100	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
359	Isolation and identification of the organic compound or compounds in meat and meat products which cause an improvement in reproduction, lactation, and growth in the white rat.	3370	
360	Studies on muscle, hemoglobin, and meat pigments.	290	
361	Determination of functions of vitamins in tissues. Determination of conditions and techniques essential to measure O ₂ - CO ₂ respiration in edible meat cuts.	3800	
362	Preparation and nutritive value of wild game of Colorado.	770	4020
363	Studies on vitamin and amino acid content of foods, proteins and fats of a large meat packing business.	290	
364	Nutritive value of fish from Michigan waters.	280	
365	Nutritive value of fish protein.	4123	
366	Preparation and fractionation of amino acids from fish protein; a new fractionating technique for amino acids.	450	
367	Seafood investigations	2910	4020
	1. Commercial vitamin assay services.		
	2. Investigations of Vitamin A content of fish livers and viscera.		
	3. Miscellaneous service project.		
368	Vitamin A content of fish liver oils.	4540	4050-A
369	Study of the nature of unidentified nutritive factor or factors present in fish solubles.	2870	
370	Study of the chemical and physiological properties of an unidentified growth factor or factors in condensed fish solubles.	3320	4020
<u>Eggs</u>			
371	Factors affecting the cooking and nutritional quality of eggs.	770	
372	Isolation and characterization of phosphoprotein from egg yolk.	4020-A-I	
<u>Animal versus vegetable protein</u>			
373	Compilation and evaluation of data on the protein quality and amino acid content of foods.	4020-D	
374	Amino acid composition of natural foodstuffs. Colorimetric and microbiological methods. Sulfur containing amino acids (cystine and methionine) Use of egg proteins and casein.	1270	
375	The essential amino acid content of human foods and animal feeds in relation to the nutritive value of their proteins. To determine the essential amino acid content of muscle meat and meat products as meat scrap and availability of the amino acids to animal organism. The essential amino acid content of human foods and animal feeds in relation to the nutritive value of their proteins.	3370	
376	The value of synthetic dl-lysine and dl-methionine in foods and feeds.	1020-A	
377	Nutritive value of proteins of feeds and animal products.	1610	
378	Studies on amino acid composition of meat. Development and testing of new microbiological methods for determining amino acids in foodstuffs.	3850	180
379	Vitamin and amino acid content of meat and meat products.	4490	2590
380	Amino acid composition of fresh beef muscle. Dicarboxylic amino acid content of beef muscle protein.	2885	
381	Amino acid composition of fresh and cooked cuts of meat.	710	180

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
382	Estimation of some of the amino acids in the flesh of chickens.	4020-B	
383	Determination of total hydroxy-amino acid content of proteins including phosphoproteins, especially in milk and feed proteins.	4020-C	
384	Nutritional evaluation of milk proteins.	2540	
385	Amino acid composition and comparative biological value of proteins of cow's milk, milk products, and human milk; non-protein nitrogen fraction.	2730	
386	Proteins from milk whey. Chemical and nutritional properties of casein and globulin fractions, especially B-lacto-globulin, from whey. Isolation of albumin from whey in a relatively homogeneous form.	3660-A	
387	Amino acid threonine content of proteins, especially milk and feed proteins.	4020-C	
388	Determination of the amino acid serine content of proteins, especially milk and feed proteins.	4020-C	
389	Evaluation of animal and vegetable protein feeds with respect to chemical composition and feeding value. Determination of essential amino acids in food materials used for human or animal consumption; availability of amino acids in foodstuffs; nutritive significance of unknown factors in protein materials.	3850	
390	Essential amino acid composition of twenty varieties of soybeans.	3850	
391	Utilization of certain factors or properties of soybeans.	1950	4020
392	Chemical studies of soybeans and castorbeans.	2885	
393	Nutrient value of soybeans.	4540	
394	Nature and properties of soy flour proteins.	2360	
395	Nutritive value of the protein of varieties of vegetables and cereals.	3370	
396	Nutritive value of proteins of beans. To determine nutritive quality of proteins in regard to abundance and relative proportion of essential amino acids and biological value.	1590	
397	Nutritive value of varieties of cowpeas grown in South.	2790	
398	Nutritive value and utilization of peas and pea products (1) Comparison of biological value of protein in pea products vs. protein of animal origin (2) Effect of various cooking procedures (3) New uses for (4) Sprouting of peas, utilization and Vitamin C content of sprouts.	4320	
399	Biochemistry of dried peas. The value of peas in nutrition by feeding to small animals. Determinations will be made of the proteins, carbohydrates and lipids.	4320	
400	Amino acids in cereal proteins.	1250	1010F
401	Protein structure of corn.	1160	
402	Nutritive value of protein in corn.	1100	
403	Protein qualities of wheat, corn and oats, and of breakfast cereals prepared therefrom as related to protein requirements of young adults (human).	1250	
404	Supplementary relationships between the protein of bread and those of various individual and/or mixed food items of animal origin.	1250	

Fruits and vegetables

405	The nutritive value of Colorado fruits and vegetables.	770

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
406	The development of an objective method, one which uses a chemical determination of volatile reducing substances, in determining quality of fresh and processed fruits and vegetables.	2827	3970
407	Variations in composition and nutritive value of foods grown in South. Iron content of field corn; effect of environment, curing and storage on carotene and ascorbic acid content of sweet potatoes; effect of size, date of harvest, variety, storage and planting on the vitamin content of lima beans; nutritive value of varieties of cowpeas grown in the South.	1300	4020
408	Mineral composition of vegetables grown in representative regions of Texas and relation of variations in mineral content to probable nutritive value. Four varieties of turnip greens grown in one location. Yields of water, protein, calcium, phosphorus, and iron are being compared.	3850	
409	Survey of vitamin content of fruits and vegetables.	2995	2850
410	Determination of ascorbic acid content of less common foods, fruits and products, relishes and spreads, by further adaptation of colorimetric method of Roe and Kuether for ascorbic acid, compared with values from other methods.	4340	
411	Ascorbic acid content of fruits, vegetables, and diets served at Texas State College for Women.	3860	
412	Determination of Vitamin C and calcium values of certain Ohio grown foods (collards, tomatoes, and strawberries) immediately after harvesting and at varying intervals thereafter, and after cooking, holding, canning and freezing; methods favorable for conservation of these nutrients.	2870	4020
413	Study of the Vitamin C, thiamine and carotene content of fruits and vegetables in Louisiana.	1980	4020
414	Hydrolysis of proteins and the amino acid content of vegetables and fruits.	260	4460
415	Study of respiratory enzymes and volatile products in fruit.	2910	
416	The Vitamin C, Vitamin B, Vitamin A content of fruit varieties: to ascertain those with highest vitamin content, the relation of fruit maturity to vitamin content and effect of methods of handling and storage on vitamin content.	4020-E	
417	Nutritive value of apple products.	2120	4020
418	Nutritional value of apples. To determine in edible parts of apple (1) thiamine, riboflavin, pyridoxin, inositol, pantothenic acid, para-aminobenzoic acid, and biotin (2) (chemically) the amount of thiamine and Vitamin C.	4400	4020
419	Marketing qualities, freezing qualities, consumer preference, and vitamin content of blueberries.	810	
420	Biochemical studies of certain fruits with special reference to their composition and quality, work on avocado and some citrus fruits.	600-C	
421	Isolation, identification and characterization of the carbohydrate constituents (other than pectic substances) of citrus fruits.	4020-A-I	
422	Study of the distinctive nutritional properties of citrus fruits, particularly the mineral factors, the sugars and proteins, and the riboflavin, niacin, inositol and citrin.	1140	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
423	Organic acids in peaches. (1) Individual organic acids in representative peach varieties. (2) Changes in concentrations of various organic acids as peaches ripen. (3) Determination of amounts of sugars associated with organic acids in peaches at various stages of maturity, and the effects of constituents on the edible quality of the fruit.	3370	
424	Carotene and ascorbic acid values of peaches, apricots, and nectarines and the suitability of these fruits for freezing; also the suitability of different varieties of peaches for freezing in a home freezer.	2720	4020
425	Analytical constants, proteolytic activity and suitable methods of drying papaya.	4520	
426	Vitamin C in strawberries.	4320	
427	The development and testing of objective methods for the determination of the maturity and for quality of raw materials and frozen vegetables.	850	4020
428	Amino acid content of vegetables.	1700	2850
429	The vitamin content of low cost vegetables.	2840	2850
430	Nutritive value of Nebraska food products. (a) potatoes, (b) tomatoes, (c) carrots (ascorbic acid content).	2680	4020
431	Fractionation and purification of lipids in vegetables.	600-A	
432	Vitamin B ₂ content of Chinese cabbage.	780	
433	Nutritive value of collards - effect of nitrogen level, variety, maturity of leaves, cooking and storage on Vitamins B ₁ , B ₂ , C and carotene content, and the effect of these factors, except storage, on mineral content.	2380	4020
434	Investigation and development of objective tests for the estimation of quality in frozen lima beans, corn, and peas.	4020-A-I	
435	Factors influencing the Vitamin C content of garden vegetables.	2050	4020
436	An investigation of the nutritive properties of mushrooms as human food.	2120	
437	Ascorbic acid content in mustard greens.	1980	4020
438	Ascorbic acid in okra.	1980	4020
439	Study of calcium content of okra.	810	
440	The vitamin content and cooking quality of potatoes.	4490	4020
441	Study of oxidative enzymes in white and sweet potatoes.	2930	4010-F
442	Study of the culinary quality of Minnesota potatoes.	2360	4020
443	Potatoes, New York State; culinary quality, iron content, and thiamine content.	850	4020
444	Vitamin content and cooking quality of potatoes (niacin content and cooking quality).	4490	4020
445	Nature and content of provitamin A pigments in tomatoes.	3220	2850
446	Nature and content of ascorbic acid in tomatoes.	3220	2850
447	Tomato acidity.	610	
448	New food accessory present in tomato juice.	850	4460
<u>Legumes and nuts</u>			
449	Nutritive value of soybean oil meal.	4490	3680
450	Isolation and removal of the toxic principle in tung meal.	3620	
451	Nicotinic acid content of legumes usually included in southern dietary. Biological activity of the "precursor" of nicotinic acid found present in this class of foods.	30	
452	The Alaska field pea as a source of thiamine, riboflavin, and nicotinic acid, also protein, calcium and phosphorous.	1590	4020
453	Riboflavin content of soybeans and cowpeas.	2800	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
454	Nutritive value of varieties of cowpeas grown in the South. To compare variations of cowpeas in vitamins, iron, carbohydrate and other nutrients under different environmental conditions.	2380	4020
455	Isolation of an adenine-pentose-phosphate from soybeans.	500	
456	Peanut proteins and their amino acids.	1300	4020
457	Physical and chemical methods for characterizing peanut butter.	1290	
458	Factors affecting the composition of peanuts and peanut butter.	4180	
459	Microbiological assay of certain vitamins in peanuts and peanut products.	3630	
460	Nutritive value for chicks of cottonseed products as affected by methods of processing and content of pigments.	4020-A-H	
461	Physiological and nutritional properties of cottonseed pigments, cottonseed pigment glands, and gland-free cottonseed flour.	4020-H	4010-F

Grains products and feeds

462	A study of oxidases in barley, wheat, and other plant materials.	2930	
463	The amylases of the cereal grains.	2680	
464	To determine the comparative nutritive value of the proteins of the more important cereal grains such as wheat, corn, oats, rye and barley.	4020-D	
465	Survey of vitamin content of corn, grain, sorghum, wheat, oats, barley and rye.	4020-G	
466	Thiamin analysis and stability in cereal products.	1180	2850
467	The chemical, physical and nutritional properties of corn proteins.	3220	
468	Protein and vitamin values of various portions of corn.	1660	
469	Thiamin content of corn meal products.	3860	
470	Oats, composition of.	3240	
471	Isolation of an adenine-pentose-phosphate from oats.	500	
472	Physiologic energy value of rice, both polished and unmilled.	1660	
473	The nutritive value of rice and its by-products.	270	4020
474	Factors influencing the quality of wheat.	1740	
475	The development of starch during the growth of the wheat kernel.	2680	
476	The changes in the amylases during the growth of the wheat kernel.	2680	
477	The structure of the wheat kernel in relation to variety, hygroscopicity and composition.	1740	
478	Wheat flour and starches.	4320	
479	Investigations of vitamins and trace elements in wheat and wheat products.	1250	
480	Determination of inorganic composition of the different parts of the wheat kernel and its relation to milling procedures and to nutritive values (principally spectro-chemical techniques).	2870	4020-E
481	Nutritive value of Kansas wheat and wheat grasses with special reference to mineral composition.	1740	4020
482	Enzymes of wheat and flour and their relation to baking characteristics. Methods gasometric and colorimetric for estimation of diastase, catalase, cytase in wheat products. Action of proteolytic enzymes on wheat flour protein under varying conditions.	2680	4020
483	The nature of wheat flour protein alteration due to maturing by natural and chemical means.	1740	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
484	Investigations on the supplementary relationships of bread and/or flour in combination with various other basic foods as nourishment for the support of various physiological processes (growth, reproduction, etc).	1250	
* 485	Studies of the nutritive qualities of the average American diet as these relate to nutrients represented in flour-converted products.	1250	
486	Determination of pentosans in wheat and flour in relation to mineral matter.	1740	
487	Role of the starch and protein fractions in determining quality characteristics of flour as a basis for developing simple tests for characterizing the quality of wheat varieties.	2870	4020-E
488	An investigation into the non-starch, non-protein constituents of wheat flour.	1240	
489	The influence of some factors affecting the biochemical and physical properties of wheat.	1740	
490	Preparation and characterization of the proteins of wheat gluten.	4020-A-I	
491	Biochemical studies of various amino acids found in wheat proteins.	1250	
492	Development of sample methods for evaluating small samples of different varieties and classes of wheat.	1740	
493	Studies of flour and baking quality factors by methods involving fractionations and recombinations of protein, starch, and other flour components. Fundamental studies of baking properties of flour. (1) Amylases (2) cereal proteins (3) cereal starches.	2680	4020
* 494	Determination of the capacity of wheat flours to absorb water as a means of estimating quality characteristics. To determine the relation of the hydration capacity of flours to the quality characteristics of bakery products made from them.	2870	4020-E
495	The strength of wheat flour. (1) Effect of flour and dough constituents on flour strength. (2) Role of enzymes in flour strength. (3) Physical properties of flour and dough in their relation to flour strengths. (4) Inheritance of flour strength and properties related.	2360	4020
496	To determine the effects on colloidal properties of dough produced by substances which constitute the protein structure, or by various salts or substances which, when added, after the gluten characteristics.	1740	4020
497	Fat determination in flour and prepared mixes in relation to performance value.	2360	4010-F
498	Breads of various types as sources of the unrecognized nutritional factor.	2390	120
499	The biochemistry or milling, baking, and macaroni manufacture; wheat and flour constituents in relation to biochemistry; properties of cereals foods. Dough ingredients other than wheat products.	2360	4020
500	Nutritive value of yeast and baking products.	3690	
501	Development of methods for determining extraneous matter in raw materials and baked goods.	2490	
502	Study of the physiological development of grasses as related to the nutritional value.	2280	680
503	Determination of Vitamins A and C in plantain.	1660	
504	The carotene content of Timothy hays and conditions which affect it.	4020-C	
505	The anti-rachitic value of alfalfa harvested by different methods.	4020-C	
506	The carotene content of alfalfa hays and conditions which affect it.	4020-C	

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
507	The carotene content of pasturage and conditions which affect it.	4020-C	
508	Pasture grass evaluation: mineral content of pasture grasses.	1150	
509	Mineral and vitamin content of pasture plants.	2790	
510	Pasture grass evaluation; amino acid analyses. Complete analyses.	1150	
511	Maine-grown grasses and legumes as sources of Vitamin A (carotene) for poultry and other farm animals.	2050	
512	Investigation of fundamental nutritional properties in leafy, green, forage materials. To divide nutritional components of forage crops in single fractions, and to study effects of fractions on growth of chicks. Object, to improve nutritional quality of dehydrated green forages.	680	
513	Research in the feeding of poultry, dairy cows and other farm animals. Conducting assays of Vitamin D of hays and other roughage.	1040	
514	A study of the energy value of home-grown roughages.	2280	
515	Fundamental nutrition studies of sorghum roughages and grains. A study of digestibility of sorghum silage.	1740	
516	The carotene content of silage and conditions which affect it.	4020-C	
517	Stabilization of carotene in dried forages.	3270	
518	Immature grasses and legume silage for chickens.	4400	
519	Nutritional quality of mixed feeds and feed ingredients by bio-assays and chemical analysis.	240	
520	Development of analytical methods for amino acids and vitamins in feedstuffs.	3270	
521	Analyses of livestock feeds for Vitamin E potency.	980	
<u>Sugars and sweets</u>			
522	Sugar derivatives in food products.	2100-A	3750
523	Sugar uses and distribution.	3750	
524	Value of cane juice and levulose.	1456	3750
525	Determination of vitamin and protein content of sugar cane juices.	1340	
526	Ash constituents, i.e., iron, copper, calcium, phosphates, etc., in cane syrups and molasses.	3020	
527	Vitamin content of sugar products.	4540	3750
528	Investigations of the clinical importance of fat-soluble vitamins contained in sugar cane.	1870	
529	Special studies on the nutritional value of corn and corn sugars.	1700	
530	Vitamin content of honey.	4490	150
531	Maple sugar.	530	
532	Maple syrup investigations.	2280	
533	Molasses.	4120	3750
534	Kojic acid formation from carbohydrates, especially as applied to blackstrap molasses and commercial syrups.	3390	
535	Lactic acid from molasses.	435	3750
536	Unfermentable molasses constituents.	2760	3750
537	Nature of the unfermentable reducing substances in cane molasses.	500	
538	Non-sugar constituents of molasses.	2870	3750
539	Nutritional value of confections.	3040	2520, 3750
<u>Miscellaneous</u>			
540	Study of the fundamental nature of coffee.	2300	1155

CHEMISTRY

FOOD COMPOSITION AND NUTRITIVE VALUE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
541	Instant (soluble) coffee; identification of, and synthetic approach to elements constituting coffee flavor and aroma.	140	
542	Study of the composition of coffee with particular reference to constituents having a bearing on flavor.	1240	
543	Determination of caffeine in coffee and allied products by sublimation methods.	1750	
544	Determination of total caffeine in coffee by solvent methods. Indications that solvents which might be expected to break up caffeine complexes give higher yields than those obtained by the Powers Chestnut method.	1750	
545	Development of new chemical derivatives of caffeine.	1240	
546	Chemical composition of chocolate.	1810	
547	Study of composition of the cocoa bean with particular reference to substances related to cocoa color and flavor.	1240	
548	Determination of the mixture of sugars in cacao products.	1500	
549	Study of composition of natural fruit flavors, volatile coffee flavors, volatile cocoa flavors, etc.	1240	
550	Chemistry of flavors; pineapple, onion, and wine grapes.	590	4475
551	Synthesis of flavoring material.	1940	
552	Studies on chemical flavor constituents of foods.	3690	
553	Development of color in grapes, its extraction, its retention and stability in wines, and its chemical composition.	600	
554	Composition and constitution of yellow pigments of juice sacs and their behaviour during processing and storage of orange juice.	600	
555	Gum arabic.	500	
556	Fundamental study of physical and chemical characteristics of chewing gum base ingredients.	4510	
557	Instrumentation studies in connection with objective evaluation of chewing gum.	4510	
558	Spice analysis.	1380	
559	Spice seasonings.	1380	
560	Spice extracts.	1380	

COMPOSITION OF FOOD AS AFFECTED BY

Soil treatment

561	Effect of soil fertility level on the nutritive value of human foods and animal feeds.	3850	4020
562	The effect of fertilization of the land on the growth and physical condition of farm people.	4180	3970
563	Increasing yield and quality of various vegetables, farm products, and grapes by improving the physical structure of the soil and applying the various needed fertilizer elements.	2430	
564	Investigation of physical properties of soils and their relation to food and feed crops.	3870	
565	Investigations with essential trace elements on food and feed crops.	3870	
566	Influence of soils and fertilizers on the nutritive value of foods and feeds.	3040	
567	Trace mineral elements in poultry nutrition and their distribution in natural limestone and in feedstuffs.	1920	
568	Quantities of phosphorous which can be supplied by feeds grown on soils fertilized in different ways, and the availability to animals of the phosphorous furnished in this way.	3830	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
569	A survey of the iodine in water, soil, and crops in Indiana.	3220	
570	The inter-relationship between the composition of the soil and plants and the nutrition of man and animals in Utah.	4110	
571	Nutrition of vegetables and their dietary value as influenced by soil treatment.	2390	
572	Effects of wide variations in soil and weather on the growth and nutritive values of vegetables.	2790, 2800	
573	To determine effects and interrelations of variations in soil types and properties and in meteorological factors on growth and chemical composition of vegetables grown under Texas conditions. Nutritive value of vegetables for use in human diet to be determined.	3850	
574	Effect of such variables as soil, cultural methods, root-stock varieties, climate, etc., on the composition and nutritional values of our tropical American fruits and vegetables.	2270	
575	Fertilization of sugar beets, canning crops and potatoes.	4490	1648, 4485
576	Nutritive value of collards. Effect of nitrogen level, variety, maturity of leaves, cooking, and storage on vitamin content, and effects of these factors, except storage on mineral content.	2790, 2800	
577	Exploratory studies on the effect of different levels of nitrogen in soils on the nutritive value of corn.	3220	
578	Effect of various fertilizer practices on the pH of the pimento peppers.	1300	
579	A study of the factors influencing the culinary and market quality of potatoes.	2280	
580	A study of the factors affecting chemical composition and culinary quality of potato tubers.	850	
581	Study of the effect of fertilizer containing different materials on the yield, canning quality and nutritive value of tomatoes.	2280	
582	Effect of different potash carriers and magnesium on the yield, set of fruit, prevention of defoliation and shape of fruit of cucumbers, tomatoes, sugar beets and other crops.	2280	
583	Potassium needs of the apple and peach.	3040	195, 4020
584	Studies on the effect of soil qualities on the nutritional value of forage crops.	680	
585	Improvement of wheat, oats, and barley. Subproject: wheat, oats, and barley fertilization in rotation involving application of heavy rates of high analyses fertilizers to hybrid corn.	3040	4020
586	Vitamin B complex content of grains and forage crops as they are affected by the kind and amount of fertilizer applied to the soil.	2870	
587	A study of the relationship between the potassium supply of Michigan soil types and the growth of alfalfa and other legumes.	2280	
588	Effect of fertilization on the nutritional quality of forage.	2790, 2800	
<u>Diet of animal</u>			
589	Soil-crop-cow-milk cycle to determine the role of soil fertility in the health and milk production of cows and the nutritive value of the milk.	2280	2530
590	Quantitative study of the nutrients of cow's milk under specific or known dietary conditions.	850	2850
591	Preservation of roughages in form of hay or silage. Effect of dried and preserved fodder on nutritive value of milk. Nutritive value of dried and ensiled forages for growth, fattening, and milk production.	4490	4020

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
592	Nutritive value of milk produced by cows reared on feed from depleted and high fertility land.	2280	1110
593	Nutritive value of Arizona milk related to seasonal variation and feeding practice. To determine the effect of certain feeding practices on the amount of fat, Vitamin A, carotene, B ₂ , and other vitamins in milk.	260	4020
594	To analyse milk from all sections of Florida to determine the effect of feed, soil types, climatic conditions, breed of cows, and other factors on composition of milk, especially as related to vitamins, minerals, and in as far as possible, minor elements.	1150	4020
595	Factors affecting the composition and quality of milk. Variation of milk and butter constituents as related to the history, care, and environments of the cow.	1740	
596	Dietary conditions affecting the efficiency of the utilization of carotene as a source of the Vitamin A in the production of milk and butterfat.	4020-C	
597	Effect of a high Vitamin A intake on the Vitamin A content of human milk.	3620	2850
598	Relation of diet to Vitamin A potency of milk and butterfat.	4020-C	
599	Effect of supplementing practical dairy rations with iodinated casein and its influence on various physiological processes with special reference to milk and milk fat production.	3040	4020
600	Effect of Vitamin E supplementation of dairy cows; qualitative and quantitative changes in milk protein.	980	
601	Effect of Vitamin E supplementation of dairy cows; Vitamin E potency of colostrum and of milk.	980	
602	Effect of Vitamin E supplementation of dairy cows; increased production of milk fat.	980	
603	Determination of the source, in the cow, of the unidentified nutrients of milk and the relation of the diet to the potency of milk in these factors.	4020-C	
604	Determination of the occurrence in food and feeds of the unidentified nutrients found in milk, milk products, and liver extracts.	4020-C	
605	Study of possible nutritional differences between summer and winter butters, with special reference to their content of vaccenic acid.	2870	
606	Survey of effect of season and other factors on the Vitamin A activity of butter in California; includes studies on methods of standardizing Vitamin A activity.	600	
607	Relation of feed to the quality of beef; palatability and nutritive value of beef finished for market.	2420	
608	Quality and palatability of beef produced by yearling steers fattened on good pasture alone, in comparison with beef produced by grain feeding, with and without pasture.	850	
609	Quality of frozen beef as affected by rations, rate of freezing, and period of storage.	850	
610	Quality, palatability, and nutritive value of meats and other animal products related to composition of Montana soils and the plant materials grown on the soils. Quality and vitamin content of eggs as influenced by breed, different feed combinations and rate of egg production.	2420	
611	Effect of rations made up largely of single grains on the growth and quality of meat produced by swine.	2280	

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
612	Effects of nutrition of animal and of chilling, freezing, and storage during canning and cooking of meat products on nutritive properties of meat (pork) with special reference to the supplementary value of meat proteins for those of vegetable origin.	4020-B	
613	Thiamine, riboflavin, and nicotinic acid content of pork from garbage-fed hogs in Hawaii, using thiochrome method, fluorimetric method, and colorimetric method based on Konig reaction, respectively; estimate vitamin intake by analysis of vitamin content of garbage fed.	1480	4020
614	Influence of ration and storage in freezer lockers on the nicotinic acid potency of pork.	2810	
615	Comparative feeding value of corn, wheat, oats, and barley combinations for palatability and nutritive value of broilers and turkeys finished for market; specific muscle samples from carcasses to be analyzed for B1, B2, pyridoxine, pantothenic acid, and for the ten essential amino acids.	2420	4020
616	Study of vitamin content of poultry meat as influenced by nutritional and processing factors.	600-A	3160
617	Study of storage of xanthophyll by poultry receiving known amounts of same.	2860	
618	Effect of ingestion of different levels of water soluble vitamins on the storage of these vitamins in the tissues of the fowl.	4020-B	
619	Effect of feed of hens on protein quality of their eggs.	4020-B, 4020-D	
620	Study of blood and meat spots in eggs. Search for the nutritional factor in bluegrass range which reduces the percentage of blood spot eggs.	1610	1640, 3160
621	Effect of gland-free cottonseed flour in the diet of laying hens on the development of egg-yolk discoloration during storage of eggs.	30	4020-H

Genetics - animal

622	Possible relationships of nutrition and genetics.	4320	120
623	The effect of breed, individuality, stage of lactation, etc., on the Vitamin A potency of milk and butterfat.	4020-C	
624	Cholesterol in milk and cream. Cholesterol content of separated butterfat and milk from cows of different breeds and at different times of the year.	2360	
625	A breeding project to improve White Rocks for general farm use. To produce a strain of chickens to meet popular demand for breed not only for efficient egg machine but superior table fowl.	1740	1640
626	Breeding for superior meat quality, Barred Plymouth Rocks.	2050	
627	Quality and vitamin content of eggs as influenced by breed, different feed combinations and rate of egg production.	2420	

Plant genetics

628	Evaluation studies of fruit and vegetable varieties.	1900	
629	Breeding for improved commercial fruit and vegetable varieties.	1900	
630	Selection of varieties of fruits and vegetables particularly high in nutritive value.	850	4020
631	Effect of varietal differences on the mineral and vitamin values and the effect of storage on the vitamin values of rutabagas.	2360	4020

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
632	Selection of peach varieties particularly high in ascorbic acid and carotene and especially suitable for freezing preservation.	850	
633	Sustained research on chemical composition and freezing adaptability of berries, fruits and vegetables. (All varieties are not good freezing material.)	1210	
634	Varietal adaptability of fruits for freezing preservation.	850	4020
635	Varietal adaptation of fruits and vegetables for quick freezing preservation.	270	4020
636	Determination of varieties of Louisiana grown fruits and vegetables best suited for quick freeze preservation.	1980	4020
637	Adaptability of various peach and strawberry varieties in the Eastern Shore to freezing.	3525	
638	Comparison of suitability for freezing varieties of peaches, apricots, cherries, plums, nectarines and strawberries. Includes some data on composition and ascorbic acid content.	600-A	
639	To determine for freezing (1) suitable varieties of Wyoming peas, spinach, green beans, chard, corn and broccoli; (2) best stage of maturity and manipulative practice; effect of freezing on ascorbic acid values when fresh and after period of storage, and cooking.	4530	4020
640	Study of methods of handling and freezing of Florida grown vegetables (beans, sweet corn, broccoli, spinach, and peas, and study of constitution of the frozen products as related to variety, soil type, and cultural treatment.	1150	4020
641	Laboratory and plant investigations - applied research, varietal studies of small fruits as related to quality and changes during processing.	3970-B	
642	Study of properties of Colorado fruits and vegetables and other factors which affect the processing, preserving and culinary qualities of these products.	770	4020
643	Effect of variety and treatment on the palatability and nutritive value of frozen fruits and vegetables, and the performance of home freezing equipment.	4180	4020
644	Suitability of vegetable and fruit varieties for freezing, canning and dehydration.	2870	
645	Nutritional investigation of fresh fruits and vegetables for commercial canning purposes.	1900	
646	Adaptability for canning of freestone peach varieties grown in the Pacific N. W.	4320	4020-A
647	Varietal differences in the vitamin and mineral content of fruits and vegetables. (1) An improved strain of the perfection variety of pimento. (2) The ascorbic acid content of peppers.	1300	4020
648	Ascorbic acid content of vegetables as determined by variety and method processing.	2050	4020
649	Vitamins in vegetables as affected by variety, processing, freezing, and storage.	2810	4020
650	Determination of content of several vitamins as variety or strain characteristics, and relative stability, or loss, of vitamins among vegetable varieties during and after storage and processing by various methods.	4020-E	
651	Relation of strain, locality, and chemical composition to the cooking quality of Pinto type beans.	2720	4020
652	Comparative nutritive value of varieties of cowpeas. To study variations of cowpeas in vitamins, iron, carbohydrate, and other nutrients under different environmental conditions.	2890	4020

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
653	Effect of size, date of harvest, variety, storage, and date of planting on vitamin content of lima beans.	4180	4020
654	Determination of vitamin content of vegetable varieties and strains adapted to culture in the central Great Plains-Rocky Mountain regions; study of the factors affecting vitamin content.	4530	4020-E
655	Palatability of kale in relation to variety and cooking procedures.	810	
656	Ascorbic acid and thiamine content of four varieties of raw and cooked kale.	810	
657	Breeding for higher Vitamin C in cannery tomatoes. This is one factor being sought in a broad breeding program aimed especially at disease resistance.	600	
658	Sweet corn breeding; includes study of quality, especially niacin content.	600-D	
659	Development of maize hybrids carrying high concentrations of niacin.	3170	4460
660	Breeding of high-niacin white corn for use in pellagic areas.	790	4460
661	Chemical composition and nutritive value of corn as related to its genetic constitution.	3220	
662	Factors affecting niacin and pantothenic acid content of corn.	2870	
663	Investigations on thiamine and niacin content in corn varieties throughout the world.	1440	
664	Effect of genetic character on carbohydrates in mature maize endosperm; nicotinic acid content as correlated with sugar content.	600-D	
665	Michigan wheats and flours.	2280	
666	Investigations relating to differences in quality characteristics of North Dakota wheat varieties. The effect of plant hormones on variety differences on cereal starches and proteins.	2810	4020
667	Inherent protein properties due to wheat variety.	4020-I	2340
668	Study of the physical and chemical properties of flour proteins of wheat varieties as a basis for breeding wheats superior in baking properties.	2870	4020-E
669	Characterization of western wheat varieties relative to their uses in the milling and baking industry and research in methods of characterization and behavior of the various varieties.	4320	4020-E
670	The relation of bromate level and mixing time of bread doughs to the evaluation of new wheat varieties.	2870	4020-E
671	The relationship of variety of wheat and environment to the quantity of individual amino acids present as determined by microbiological assay.	1740	
672	Milling and baking quality of wheat varieties.	2360	
673	Study of influence of grape variety, wine quality, method of distillation and of ageing on the quality of brandy.	600	
674	Studies on varieties of peanuts and blends of peanuts aimed at improving the quality and flavor.	390	
<u>Environment and season</u>			
675	Influence of certain environmental conditions on egg quality.	3040	4020
676	Palatability and nutritive value of deer and antelope meat as affected by season.	600-A	
677	To determine seasonal changes in glycogen content and total solids of oysters.	4030-A	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
678	Study of the factors that affect the synthesis of certain vitamins in horticultural crops.	2910	
679	Compilation and evaluation of data on factors causing variability in the vitamin value of raw foods.	4020-D	
680	Influence of electromagnetic radiation on the ascorbic acid content of plants.	1740	
681	Effect of certain factors associated with location on vitamin and mineral content of plants.	600-A	4020
682	Influence of seasonal changes of the Vitamin A and C content of food plants in Puerto Rico.	3210-A	4020
683	Investigation of relationship between maturity, quality, and yield of commercial fruits and vegetables.	1900	
684	Factors affecting the ascorbic acid content of citrus products.	1140	
685	Biochemical study of the composition of citrus tissues in relation to different environmental conditions and various rootstocks.	600-D	
686	Relation of degree of maturity of grapes, particularly the balance of the various constituents to the quality of wine.	600	
687	Effect of size, date of harvest, variety, storage, and date of planting on the vitamin content of lima beans. To determine effect on Vitamin B ₁ , B ₂ , and C content of lima beans.	2380	4020
688	Factors influencing the Vitamin C content of garden vegetables.	2050	
689	Nutrient value of vegetables; content of nine nutrients in vegetables as influenced by climatic and cultural conditions, variety, and stage of maturity.	600	
690	Basic physiological studies on the quality of fresh vegetables as modified by various factors during harvesting, preparation for market and storage.	2100	
691	Comparative mineral composition and various environmental conditions.	750	4020
692	Factors in the destruction of carotene and ascorbic acid in kale; field frosting.	950	4020
693	Research to determine factors causing Scotch peas to become difficult to cook.	610	
694	Influence of environment on the culinary and nutritive properties of Wyoming potatoes.	4530	
695	Effect of maturity on the ascorbic acid of the russett Burbank potato.	1590	4020
696	Effect of environment, curing, and storage on the carotene and ascorbic acid content of several varieties of sweet potatoes.	1980	
697	To determine the relation of maturity to color, Vitamin C, lycopene, and B-carotene, and storage losses in cannery tomatoes.	3220	4020
698	Effect of location on vitamin content of turnip greens.	2380	
699	Effect of nitrogen level, moisture, and temperature on carbohydrate storage in turnip greens and its relationship to ascorbic acid and carotene content.	2380	4020
700	Influence of environmental conditions on the behavior and composition of cereal proteins.	3240	4010-F
701	Factors affecting rutin content of the buckwheat plant.	3040	
702	Effect of environment on the vitamin content especially thiamine, and nutrient value of wheat varieties.	850	4020-E
703	Study of influence of environmental factors on quality characteristics of wheat varieties and the principles which determine the relation of specific characteristics to utilization of flours.	1740	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
704	Effect of environment on inorganic components of wheat varieties and their relation to milling procedures and nutritive values (employing principally spectrochemical techniques).	2870	4020-E
705	Studies on effect of variety, environment, cultural, and fertilizer practices on the composition, thiamine content, and food value of rice.	270, 1980 3850, 600	4020-E
<u>Storage (a) browning</u>			
706	The browning reaction.	2830	4010-F
707	Fundamental nature of the "Browning Reaction."	2870	4010-F
708	Studies of the stability of foods from the standpoint of promotion and inhibition of reactions between carbohydrates and amino acids.	3120	4010-F
709	The browning reaction in sugar-amino acid systems.	850	4010-F
710	Amino-sugar systems as models for carbohydrate interaction.	840	
711	Studies of factors influencing the protein-sugar reaction.	4020-I	
712	The influence of environmental conditions on the formation, stability or behavior of furan compounds.	3240	4010-F
713	The role of hydroxymethylfurfural in browning.	840	4010-F
714	The browning reaction as a factor involved in the development of color and flavor in foods.	1240	4010-F
715	A study of some chemical factors involved in the browning of certain food constituents.	2280	4010-F
716	The cause and prevention of browning of ascorbic acid.	2110	
717	A study of the chemistry of the darkening of dried fruits. Extracts of darkened apricots separated into fractions by use of ion exchange and chromatograph procedures. Separated fractions studied chemically and spectroscopically.	600-A	4010-F
718	A study of the chemical reactions involved in the browning of dried milk powder.	2040	4010-F
719	Brown discoloration of dairy products.	4490	
720	The chemistry of browning of dry milk products.	120	4010-F
721	Cause and prevention of certain flavor defects in milk and dairy products.	3040	4020
722	Chemical changes in milk powder during manufacture and storage, and response of the taste mechanism to these changes.	2870	4010-F
723	The isolation of the compounds responsible for unpalatable dried whole milk.	1610	4010-F
724	The mechanism of deteriorative changes in milk products.	2360	4010-F
<u>Storage (b) oxidation of fats</u>			
725	Lipid deterioration in dairy products.	850	4010-F
726	Chemical changes in milk fat as related to the flavor of the milk. Lipase activity in milk, chemical changes in the milk fat resulting and specific fatty acids involved therefrom. Methods of obtaining fat from milk for analytical purposes.	2100	
727	A study of oxidative deterioration of milk fat.	1650	4010-F
728	Trace metal contamination and its effect on milk fat deterioration.	1830	4010-F
729	Determination of factors affecting copper catalysis.	3150	4010-F
730	Oxidative deterioration in edible oils.	3120	
731	Quality changes in stored crude oils in 1947.	3940	
732	Fundamental studies, both chemical and spectrophotometric, of the auto-oxidation of fats.	710	180

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
733	Causes and prevention of off-flavor development in fatty foods.	1630	4020
734	A critical survey and evaluation of the literature on fat deterioration.	3120	4010-F
735	Study of the causes and control of rancidity in food products containing small quantities of fat.	1240	
736	Flavors and their control in edible fats.	290	
737	Spectrophotometric studies of the oxidative destruction of fat soluble vitamins in rancidification of fats.	2360	2850
738	Factors affecting flavors of edible oils.	3870	
739	Fat autoxidation and the effects of inhibitors.	180	4010-F
740	Researches on the stability of fat and oils, especially in the retardation of rancidity.	890	
741	An experimental investigation of oxidative rancidity in fats.	3120	4010-F
742	Course and mechanism of the autoxidation of fats.	2360-A	4010-F
743	New and improved methods for controlling rancidity in manufacture of coconut fats; to produce more edible fats at lower costs.	4230	
744	Keeping qualities of oils as affected by catalysts and antioxidants.	3760	
745	Prevention of rancidity in foods.	3270	
746	Rancidity development, thiamine and riboflavin in pork preserved and cooked in various ways.	4320	4020
747	Rancidity during storage of foods containing high fat content, such as frozen poultry, peanut oil, mayonnaise and pecans.	1300	
748	Fat rancidity in eviscerated poultry.	1740	
749	Prevention of development of rancidity of the fat of frozen fish.	3930	
750	Studies of rancidity and oil separation - peanuts.	390	
751	Stability of variously produced types of soybean oil.	3940	
752	Development of satisfactory method of processing soybean oil to produce a product less subject to flavor reversion.	3800	
753	Research to improve flavor stability and keeping quality of edible soybean oil, using organoleptic evaluation to show variations in quality as the oil undergoes experimental pretreatment and refining processes.	4020-G	
754	Study of oil content of stored soybeans.	4020-G	
755	Potato chips. Study in plant and laboratory factors causing development of rancidity and relation of these factors to plant practice.	3590	
756	Cytological and histo-chemical studies of the lipids in vegetables and their role in deterioration.	600-B	4010-F
757	The keeping qualities of chocolate and chocolate products.	1810	
758	The nature of chocolate fat bloom.	1810	
759	Fats, chocolate bloom and rancidity.	1880	2520
760	Sweet chocolate bars and candies. Study of packaging and survey of plant conditions to improve shelf life and prevent off-flavor. Vitamin content and its stability.	3590	
761	Comparative stability of Vitamin A in margarine and butter.	3620	2485
762	A study of the cheesy and putrid defects of creamery butter.	3220	
763	The carotene and Vitamin A content of Ohio creamery butter as produced and following various periods of storage.	2870	

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
764	Biochemical changes of fats and proteins during ageing of cheese.	4490	
<u>Storage</u> (c) loss of nutritive value			
765	The action of food effluents on microbiological activity and biochemical changes in foods during storage and shipment. Apples, tomatoes, fresh beef, fresh eggs, processed cheese.	3370	
766	Differential oxidation of Vitamin A and the fatty constituents of foods, particularly milk powder.	3780	
767	Determination of the stability of Vitamin A during processing and storage of margarine.	3800	
768	The preservation of shell eggs.	2280	
769	A study of the factors influencing the quality and preservation of egg and egg products.	2280	
770	Changes in characteristics of eggs stored at 70°F., normal enzyme reactions. Retarding changes lengthens cooking use of eggs stored.	3890	
771	Storage of cured lamb meats. To develop methods that will prevent occurrence of a dry, hard condition as well as excessive mold growth and will result in retention of an acceptable flavor.	4020-B	
772	Methods of storing cured and smoked hams during the summer without refrigeration.	850	
773	The nutritive value related to the spoilage in condensed fish solubles.	4123	
774	A study of the decomposition of Vitamin A in fish liver oils and concentrates at various temperatures. The development of an equation for calculating such decomposition.	1700	
775	Vitamin assays. Effect of freezer storage of fish livers on stability of contained Vitamin A. Improvements in methods of determining Vitamin A and more efficient use of available sources of this vitamin. Vitamin A assays of seal liver oil.	4030-A	
776	Methods for determination of state of freshness of raw and canned fishery products. A new procedure based on the determination of volatile reducing substances.	600-G	
777	Enzymes studies. The role of enzymes in connection with spoilage of fish, a study of activity of cathepsin in relation to tissue breakdown. Attempt to isolate this enzyme from fish flesh and to test its activity.	4030-A	
778	The use of pH in the determination of oyster freshness.	4340	
779	Stability of certain vitamin factors in food products during storage.	3780	
780	Study on the effect of vitamin retention of holding raw canning stocks between harvesting and canning.	2280	2500
781	The stability of Vitamin A products.	470	
782	The storage of raw materials containing preformed Vitamin A.	470	
783	Nutritive value of processed fruits and vegetables as affected by storage and enzyme content. Factors responsible for vitamin destruction, abnormal color and flavor.	850	4020
784	To determine vitamin content of fruits and vegetables as affected by maturity and methods of handling, transportation and storage.	4020-E	
785	An investigation of the effect of storage temperature on vitamins in canned foods. Thiamine, carotene assays on all fruit and vegetable products. Niacin assays.	820	4010-F, 2500, 620

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
786	The factors responsible for vitamin destruction and abnormal color and flavor development in the production and storage of processed fruits and vegetables.	850	4020
787	Effect of storage temperatures on the edibility of canned foods.	3090	
788	The effect of storage at different temperatures on the vitamin content of canned fruits.	710	
789	Storage studies. Effect of time and temperature of storage on vitamin content of commercially canned fruits and fruit juices (stored 12 months).	710	2500
790	Lengthening of the storage life of fruits by removal of volatile materials produced by the stored products from the atmosphere of the refrigerated room.	850	3290
791	The stability of ascorbic acid in stored food samples.	2110	
792	Prevention of discoloration of cut fruits and vegetables.	3930	
793	Effect of fluctuating storage temperature: palatability and ascorbic acid retention in four frozen foods during preparation for service.	850	
794	Changes of dehydro and total ascorbic acid content of cantaloupes on standing.	3220	
795	Effect of ripening, storage and other methods of handling on Vitamin C in apples	1660	4020
796	Certain factors influencing keeping quality of apples and peaches in storage.	3320	
797	A study of the seasonal variations in the rate of transpiration of stored apple fruits.	3320	3290
798	Dried fruit storage.	560	4020, 3290
799	Factors affecting the darkening of dried fruits in storage.	600-A	
800	Effect of storage and different methods of cooking on the carotene and ascorbic acid content of carrots. Storage methods, commercial warehouse under varying conditions, household refrigerator, pit storage, field storage. Cooking methods include effect of salt, holding, warming over and pressure cooking.	2720	4020
801	Storage of corn.	3240	
802	Effect of storage temperature on the ascorbic acid and the dehydroascorbic acid values on the total and reducing sugar content of potatoes.	2360	4020
803	Retention of nutritive properties of food by refrigerations. Effect of storage temperature and the humidity on (a) Vitamin C content of white potato tubers and (b) sugar content of potato tubers.	2680	3290
804	Effects of environment, curing, and storage on the carotene and ascorbic content of several varieties of sweet potatoes.	2790	4020
805	Effects of environment, curing and storage on the carotene and ascorbic acid content of several varieties of sweet potatoes.	4190	4020
806	Curing and storage of sweet potatoes.	750	
807	Causes of internal breakdown in stored sweet potatoes.	750	
808	Effects of environment, curing, and storage on the carotene and ascorbic acid content of several varieties of sweet potatoes grown at various locations.	2885	4020
809	Reducing potato storage losses.	1590	
810	Potato storage studies.	2280	
811	Nutritive value, cooking qualities and consumer acceptance of processed rice before and after periods of storage in Hawaii.	1480	4020
812	Staling of bread.	3000	

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
813	Study of bread staling, with specific emphasis on effect of temperatures and other climatic conditions on bread staling during the ordinary commercial handling of bread by the baker, grocer, and housewife.	160	4020
814	Prevention of bread staling.	3220	4010-F
815	Physical and chemical changes in bread during storage, (a) browning in canned bread and (b) staling of bread.	2360	
816	Effect of certain ingredients as shortening-savers on keeping quality of bread.	3250	
817	Oxidative deterioration of baked goods.	3040	4010-F
818	White yeast-leavened bread. Study of factors affecting staling and comparative evaluation of staling.	3590	
819	The role of starch in bread staling.	2680	4010-F
820	The chemical and physical changes brought about in the starches by staling procedures, low temperature staling, and high temperature staling.	2680	
821	Changes in wheat flour protein due to fermentation, storage, heat, drying, etc. Sulfhydryl groups of wheat flour protein and the changes in the sulfhydryl due to storage, oxidation, and the conditions encountered in the various stages of the baking procedure.	2680	
822	Nature of the oxidative processes responsible for deterioration in feeds.	3270	
823	A study of carotene losses in silage.	2870	
824	Stability of carotene and stabilized Vitamin A in feed supplements.	2440	
825	Stability of Vitamin D ₂ and D ₃ in feeds and supplements.	2440	
826	Changes in the nutritive value of feeds on storage.	1610	
827	A study of the effect of method of storage of hay on its nutritive value for sheep and beef cattle.	4400	
828	To preserve agricultural products from ill effects of enzyme action during storage, facilitate ripening as a means of slowing down deterioration in storage, and modify the course of enzymic digestion of starch for higher yield of desired digestion products.	4020-I	
<u>Frozen storage</u>			
829	Effect of fluctuating storage temperature on the quality of stored frozen foods.	1650, 2360	4020-D
830	Effects of various storage temperatures between 0° F. and 25° F. on the quality of foods frozen at 0° F.	1230	
831	Effect on food quality of fluctuating temperatures in home freezers.	1230	
832	Determination of allowable storage times for perishable foods in domestic refrigerators.	1230	
833	Frozen precooked foods; their handling, microbiology, freezing, and refrigerated storage at different temperatures.	2110	3290
834	Preparation and storage of ready-to-eat frozen foods, raw batters and doughs.	2360	
835	Storage of frozen foods. Length of storage period in relation to (a) the product (b) packaging including study of meats and poultry (c) storage temperature including study of fluctuating temperature.	2360	
836	Frozen eggs; their handling, freezing, and refrigerated storage at different temperatures.	2870	3290
837	Factors affecting the initial quality and storage life of liquid and frozen egg products.	1650	4020
838	Studies related to the storage of meat in a frozen condition.	1740	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
839	Effect of different storage temperatures and different storage periods on the quality of frozen foods - meats.	2390	
840	Factors influencing the keeping quality and nutritional value of frozen meat.	1740	
841	Effect of different frozen storage temperature on certain characteristics of meat.	1740	4020
842	Factors influencing the quality of meat and processed meat products in freezer storage.	3040	
843	Changes in nutritive value of processed meat products during storage.	710	2850
844	Study on the role of enzymes in meat products, flavors and keeping qualities.	290	
845	Preparation and preservation factors in relation to the nutritive value and palatability of meat.	2360	
846	General research on retention of nutritive qualities of many food products, of a large meat packing house, during processing and storage.	4470	
847	Effects of different rates of freezing and periods of storage upon the vitamin contents of meat.	850	
848	Study of the flavor and tenderness of beef in relation to temperature and during freezer storage.	4020-B	
849	Mechanism responsible for changes in riboflavin, niacin, thiamine, and pantothenic acid contents of meat during chilling and storage.	3800	
850	Changes occurring in beef during cold storage between slaughter and consumption.	2280	
851	Behavior of beef as affected by exposure to, and protection from, air in freezer storage.	4020-B	
852	Determination of effects of storage time and temperature upon the quality of frozen table-ready-meats.	3800	
853	Determination of stability of vitamins in beef and pork muscle during storage in freezer at -10° F. and at +10° F. for long periods of time.	3800	
854	Behavior of pork as affected by exposure to, and protection from, air in freezer storage.	4020-B	
855	Study of significance of desiccation of pork in freezer storage.	4020-B	
856	Study of the relative development of rancidity in cured and uncured pork in freezer storage.	4020-B	
857	Behavior of pork in freezer storage as related to enzymatic activity.	4020-B	
858	Effect of frozen storage and subsequent cooking upon thiamine, riboflavin, and niacin content of lamb and pork loin.	1590	4020
859	Determination of effects of storage time and temperature upon the quality of frozen beef steaks, pork chops, and veal loaves.	3800	
860	Storage of pork.	750	
861	Quality of poultry after storage.	2280	4020
862	Factors influencing the quality of frozen roasters.	2870	
863	Palatability of poultry as affected by certain storage conditions.	2100	
864	Effect of different storage temperature and different storage periods on the quality of frozen foods - poultry.	2390	
865	Stability of gravies and sauces during freezing, storage, and heating.	2150	
866	Storage life of pre-cooked frozen food products.	2150	
867	Effects of freezing and storing on packaged fishery products.	4030-A	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
868	Study of the cause and prevention of undesirable changes in the quality of fresh and frozen gulf shrimp in refrigerated storage.	1980	3290
869	Optimal storage conditions in the household refrigerator for retention of palatability and of nutritive value of frozen fruits and vegetables.	1650	4020
870	Retention of vitamins and other nutrients during processing and storage of frozen fruits, berries, and vegetables.	850	4020
871	Effect of ripening, refrigerated storage, and methods of handling on vitamin content of Midwest varieties of apples.	1650	3290
872	Prevention of discoloration in frozen peaches, apples, and pears.	3090	
873	Preservation of color and flavor of apples and peaches in frozen pies.	1980	
874	Studies on the refrigerated storage of subtropical fruits, with particular reference to citrus and avocado fruits.	600-C	3290
875	Behavior of frozen pack juices and concentrates in refrigerated storage; role of enzymes in stability; Vitamin C changes during storage; comparison of various pre-treatments and containers; stability of various fruits.	600-A	4020, 3290
876	Effects of different storage temperatures and different storage periods upon the vitamin content of frozen foods. Ascorbic acid and carotene content of strawberries, apples, cherries, peaches, and meats.	2390	4020
877	Deteriorative changes in the pigments of vegetables during storage.	600-A	4010-F
878	Role of oxidative enzymes on storage life, odor, flavor, and color of frozen fruits and vegetables pretreated in various ways and packed in various manners. Study of the biochemical properties of the naturally occurring and purified enzymes.	600-A	
879	Effect of refrigeration on peanuts and peanut products.	1300	3290
<u>Canning</u>			
880	Determination of various factors affecting the vitamin content of representative types of canned foods by means of chemical, biological, and microbiological methods of assay.	3040	4020, 2500, 620
881	Retention of B Vitamins in home canned foods (meat, blackeye peas and peaches).	3850	
882	Factors affecting nutritional value of canned food. Effect of duration and temperature of blanching on proximate and mineral composition of certain vegetables.	2100	2500
883	Protein quality studies on meats: determination of the protein quality of canned meats.	3800	
884	Effects of regular plant processing upon the amino acid content of canned meats for babies and juniors.	3800	
885	Determination of amount of vitamins in the B-complex which are retained in meat after canning and after storage of the canned meat.	3850	4020
886	Investigations of d-Isoascorbic acid in canned and frozen foods.	2120	4020
887	Determination of the effects of canning operations on certain vitamins of the B-complex in meat.	3800	
888	Development of processes for canning, or otherwise preserving meat products in which flavor, texture and nutritive qualities are retained.	4470	

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
889	Canned chicken and canned turkey. Procedure for removing the meat from the bones in a raw state and then packing it into cans for later sterilization. Determination of difference in vitamin content of old style of packs and new.	3790	
890	Nutritional investigation of fruits and vegetables during the process of canning and in final canned products.	1900	
891	Survey of the nutritive value of home canned fruits and vegetables in New Hampshire.	2700	
892	Development of improved methods for processing home canned vegetables and fruits, and losses in vitamin content caused by canning and storage.	3850	
893	Processes used in the home preservation of fruits and vegetables (vegetables canned tested for C, B ₁ , B ₂ , immediately after canning and after 6-12 months storage period).	4320	4020
894	Effects of canning on the vitamin content of peaches.	750	4020-D
895	Changes in quality of certain canned vegetables as influenced by environmental conditions and handling methods between harvesting and processing.	2280	4020
896	Effect of commercial canning operations on ascorbic acid, thiamine, riboflavin, and niacin content of vegetables; effects of blanching on retention of ascorbic acid, thiamine and niacin in vegetables; vitamin assays on canned fish.	4490	2500
897	Cooking of market-purchased lima beans and spinach compared with canned product prepared for serving. Retention of ascorbic acid, thiamine, riboflavin, and carotene determined for each.	820	
898	Ascorbic acid content of raw, canned, and stored canned tomatoes.	810	
899	Determinations of rates of ascorbic acid destruction in tomato juice under varying concentrations of occluded air with temperature and in presence and absence of natural enzymes. Purpose - improvements of cannery practice to raise level of ascorbic acid in tomato juice.	820	
900	Factors causing the loss of ascorbic acid during the manufacture of tomato juice.	850	4020
901	Ascorbic acid value of commercially and home canned blackberries and tomatoes grown and canned in a certain area in Texas.	2890	
902	Retention of Vitamin C in canned citrus products. Determine losses of Vitamin C due to various processing operations and storage. Investigation of methods to improve Vitamin C retention.	3900	
903	Canned and dried foods. (1) Improved methods of preparation. (2) Prevention of discoloration. Examples: Dehydrated apples that reconstitute to fresh state. Canned eggs resembling fresh hard boiled eggs.	450	
904	To determine the cause of the fading of red color in fruit preserves and to develop a method of treatment whereby the disappearance of color can be prevented or retarded.	850	2630
905	Investigation of the ascorbic acid content of some extra foods such as orange marmalade made three different ways, tomato catsup, tomato preserves, and chili sauce.	2890	
906	The relative stability of thiamine chloride and other derivatives in canned bread.	2260	4010-F
907	The stability of various shortenings in canned bread.	1840	
908	Fundamental investigations on the stability of canned bread.	1840	4010-F

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Cooking</u>			
909	Conservation of nutritive value of foods.	2885	2850
910	Conservation of nutritive value of food. Effect of holding, storage, cooking, reheating and freezing on Vitamin C and riboflavin of Illinois, fruits and vegetables.	1610	4020
911	Compilation and evaluation of data on nutritive value of cooked and prepared foods.	4020-D	
912	Nutritional investigations of various food specialties, food adjuncts, and effects of different methods of cooking on nutritive quality.	1250	
913	Effect of quantity cooking procedures, using various types of institution cooking equipment on the nutritive value of certain foods.	850	
914	The effect of food preparation on its nutritive value and acceptability.	4010-E	4010-F
915	Development of cookery methods and receipes for retaining nutritive value and palatability of foods.	4310	
916	Home food preparation practices. Data on customary methods of preparing food for home consumption for use in estimating effect of storage, cooking, and serving of foods in appraising nutritive content of food consumed.	4020-D, 600-B, 2680, 3320	4020
917	Cookery of frozen foods.	940	
918	The cooking of frozen foods.	850	
919	Thiamine content of frozen and cooked vegetables.	2910	2850
920	Defrosting and cooking frozen meats.	1650	2590
921	Effect of method of handling frozen meat after removal from frozen storage on quality and palatability of cooked product. Effect of four methods of thawing - running water, refrigerator, room and warming oven on vitamin content. Percentage losses and palatability considered.	1740	4020, 3290
922	Vitamin retention in institutional and household cookery. Vitamin retention as affected by (1) cooking time and pressure (2) cooking time and amount of water (3) seasoning.	2790	4020
923	Study of losses of food nutrients in quantity cookery. (1) The loss of thiamine and ascorbic acid in food preparation.	2120	4020
924	High altitude cookery processes. Canning green snap beans at high altitudes, factors affecting quality.	4530	4020
925	The baking of flour mixtures at high altitudes.	770	
926	High altitude adjustments for cakes.	4530	4020
927	The stability of riboflavin and niacin in eggs during cooking.	4490	3160
928	The stability of riboflavin, B ₁ , and niacin of eggs as influenced by food preparation procedures.	4490	4020
929	Determination of losses of thiamine, riboflavin, nicotinic acid and pantothenic acid during cooking of meat in army messes.	3850	4020
930	Effect of different methods of cooking on the vitamin retention in variety meats.	710	
931	The retention of B Vitamins after stewing in various ways. Effect on retention of thiamine of cooking meat and potatoes together. Army camps.	3850	2590
932	Effects of cooking (time and temperature) on the rate of destruction of riboflavin, niacin, and pantothenic acid.	3800	
933	Investigation of the effect of cooking methods on the thiamine, riboflavin and nicotinic acid content of variety meats.	710	2590

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
934	New cookery methods used for cut-up turkeys.	1740	4020
935	Effect of method of preparation (fried, stewed, baked and canned) on the Vitamin A, thiamine, and niacin content of chicken. Analysis of tissue by rat growth method for Vitamin A. Fluorometric and microbiological methods for B Vitamins.	2390	4020
936	Effect of large quantity cooking on the vitamin and mineral content of vegetables.	710	2850
937	Losses of vitamins during household and quantity cooking and holding of certain vegetables.	850	4020
938	The comparison of old-fashioned with modern methods of cooking vegetables on their retention of nutrients.	4180	4020
939	Influence of cooking and holding on steam table on thiamine content of institutionally prepared vegetables.	1660	
940	Effect of quantity cookery procedures using various types of institution cooking equipment, on the nutritive value of certain foods - ascorbic acid.	850	4020
941	Ascorbic acid content of fresh and cooked cabbage. Cabbage of two varieties has been cooked in four serving lots. Retention of ascorbic acid after cooking in different proportions of water for different lengths of time has been determined.	3850	
942	Ascorbic acid content of fresh and cooked cowpeas. Cowpeas at different stages of maturity are used for cooking, and retention of ascorbic acid determined.	3850	
943	Loss of thiamine in cooking split peas and availability of iron in cooked split peas.	1590	
944	Ascorbic acid content of cowpeas, cabbage and turnip greens in the raw state as influenced by cooking procedures which stimulate practices in rural homes.	3850	4020
945	Food composition - ascorbic acid in rutabagas and potatoes prepared in various ways. Protein from soybeans.	1660	
946	Effect of various methods of cooking upon the calcium content of different varieties of green beans, cabbage, and carrots.	3220	
947	Study of changes in nutritive value and quality which take place in Minnesota fruits and vegetables during home cooking. Testing the quality of Minnesota fruits for culinary uses.	2360	4020
948	Effect of cooking, freezing and canning procedures on the vitamin content of Utah-grown fruits and vegetables.	4110	4020
949	Nutrient retention in products made from cornmeal.	3880	
950	Rice cookery and recipes for its use. Conservation of nutritive value. Methods of cooking rice which will yield a desirable product and avoid unnecessary washing, draining and rinsing and loss of valuable nutrients.	4020-D	
951	Improvement of foods in eating quality and nutritive value by methods applicable in home. (1) Thiamine retention in baking on non-yeast breads. (2) Effect of flash heat treatment of eggs on their cooking quality. (3) Methods of improving quality of home-rendered lard.	4490	
952	Role of ingredients and effect of variations in mixing and baking procedures on the quality and on the thiamine and riboflavin content of quick bread and baked goods not leavened with yeast.	850	4020
953	Role of ingredients and the effect of variations in the bread making procedure on the quality and on the thiamine and riboflavin content of yeast breads.	850	4020
954	Effects of cooking on the alkali number of starches and cereals.	1600	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
955	Reactions involved in the heating of sugars and nitrogen compounds in the manufacture of candy.	710	
956	Large quantity food service recipe testing.	4340	
957	The development of improved large scale cooking methods.	4010-E	
958	Development of suitable quantity recipes for using agricultural commodities and other desirable goods in school meals.	4020-L	
959	Recipes geared to war food supplies.	4020-D	
960	Frozen food cook book.	1200	
<u>Dehydrating</u>			
961	Oxidizing enzymes and other factors related to nutritive value of dehydrated foods.	790	2850
962	The effect of variations in the manufacturing process on the physical properties and their relationship to the keeping quality of powdered whole milk.	4320	
963	Factors affecting the ease of reconstitution of whole milk powder with special reference to protein stability.	4320	
964	A study of the chemical factors affecting the quality of dry milk solids for baking purposes.	4320	
965	The formation of surface layer of dehydrated milk.	960	
966	Studies in evaporated milk.	4490, 2830	640
967	Factors influencing the properties and market qualities of concentrated and dry milk products.	2360	
968	Amino acids in evaporated and powdered milk.	3060	
969	Effect of heat treatment of the value of non-fat milk solids as a supplement in bread making.	2360	
970	Chemical factors affecting the baking quality of non-fat dry milk solids.	4320	120
971	Factors that influence keeping quality of whole milk powder.	1610	
972	Isolation of the compounds responsible for unpalatable dried whole milk.	1610	
973	Tests of quality and use of defatted dry milk solids subjected to home storage conditions.	2280	
974	Effect of processing on nutritive value of the proteins in dried and evaporated milk. Biological value of milk proteins subjected to varying intensities of heat are being assayed by biological, microbiological, and chemical methods.	600-A	
975	The study of Vitamin A losses during manufacture of spray dried and sterilized milk products.	4520	
976	Foam properties of dry milks.	120	
977	Stability of ascorbic acid in milk products with special reference to effects of the presence of iron and copper, sterilization and spray drying.	4520	
978	The stability of fat and Vitamin A in powdered milk products in relation to oxygen vs. nitrogen packing.	4520	
979	Investigation of the changes in lipids, lipid-soluble constituents and lipid-protein complexes of eggs during dehydration and subsequent storage.	4020-I	
980	Effect of handling on the vitamin content of dehydrated eggs. Comparison of dehydrated and frozen liquid egg kept at three different temperatures.	2390	
981	Dehydration of cheddar cheese and its influence on flavor, reprocessing and keeping quality.	1590	
982	Vitamin content of dehydrated and stored meats.	4490	2850
983	Effects on the amino acid constituents of lean pork trimmings as produced by dehydration, long time autoclaving or long time boiling.	3800	

CHEMISTRY
COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
984	Home preservation of fruits and vegetables by dehydration. (Vitamin A content of fresh blanched, dehydrated and stored carrots and sweet corn; and Vitamin C content of fresh, dehydrated and stored peaches and snap beans.)	3830	4020
985	Nutritive value and quality of fruits and vegetables prepared by dehydration from the frozen state.	850	4020
986	Carotene and ascorbic acid content of vegetables preserved by drying.	30	2850
987	Conservation of nutritive values in dehydrated vegetables.	850	2850
988	Dehydration of vegetables. Deterioration of dried vegetables in storage.	600-A	
989	Effect of processing and storage upon nutritive factors in dehydrated vegetables.	850	2850
990	Conservation of nutritive value of foods: dried beans.	2280	
991	Histological and microchemical studies on fruits and vegetables during dehydration. Pigment degradation during storage of dehydrated carrots.	600-B	4020
992	Isolation and characterization of brown substances formed in dehydrated potatoes.	710	
993	Discoloration of white potatoes during dehydration.	3220	4010-F
994	Laboratory and field study of principles of temperature, humidity, and air velocity in respect to rates of drying and quality of prunes. Effect of pretreatments and after treatments on quality and storage life. Effect of variety, maturity, time of harvest, and locality where grown.	600-A	
995	Factors affecting quality of raisins. First phase, viticultural factors that influence yield and quality in raisins; second phase rate of drying, sulfur dioxide retention, color changes, keeping quality and culinary quality of raisins.	600-A	
996	The effect of different methods of dehydration and of different conditions of storage on the nutritional value of dehydrated alfalfa, as fed to chicks.	600-A	
997	Carotenoids in alfalfa. The preservation of carotene in alfalfa meal during dehydration and in meal made from dehydrated alfalfa.	710	
998	Preservation of the dehydrated green materials. Use of insert gases in maintaining the carotene and ascorbic acid content of dehydrated green forages.	680	
999	Methods of increasing the keeping quality of dry carotene concentrates.	2860	
1000	The effect of dry grinding on the chemical and nutritional properties of protein and polysaccharides.	1660	
1001	Pectic changes in dehydrated foods.	950	4010-F
1002	Pectic deterioration studies.	2910	4010-F
<u>Freezing</u>			
1003	Study of vitamin loss in frozen foods.	960	
1004	Frozen foods - effect of freezing temperature.	2280	4020
1005	Special tests with frozen cream.	1120	
1006	Factors influencing the composition and market qualities of frozen dairy products.	2360	
1007	Determination of the effectiveness of various chemical and physical pre-freezing treatments on the quality of frozen whole egg and frozen yolks and whites.	4020-I	
1008	To determine the tenderizing effect of freezing at a given temperature as influenced by the original composition of beef with special reference to fatness.	4020-C	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1009	Effect of various factors, including freezing and cooking procedures, on the nutritive value of lamb.	4110	4020
1010	Juiceness of lamb meat as affected by temperature of freezing.	4020-B	
1011	Effect of freezing and refrigerated storage on the quality of pre-cooked foods, meats.	1740	4020
1012	Causes and correction of frozen meat discoloration.	1200	
1013	Application of existing methods and development of new methods for determination of fundamental chemical and biological changes that affect the quality of poultry and poultry products during preparation, freezing, and frozen storage.	4020-I	
1014	Study of the effects of certain pre-treatments on the preservation of dressed poultry during quick freezing and storage.	3220	
1015	A study concerned with palatability and nutritive value of Texas food products as effected by freezing.	3860	
1016	Home freezing of fruits and vegetables; the effect on retention of nutritive value and palatability of using different methods and types of equipment in preparing the food for freezing, in thawing, and in cooking of the frozen product.	4020-D	
1017	Effect of freezing, canning and dehydration on the vitamin content of New Hampshire grown fruits and vegetables.	2700	4020
1018	Problems of comparative flavors of frozen fruits.	3700	
1019	Chemistry of flavor changes in frozen vegetables.	600-A	
1020	Investigation of pre-freezing treatment of freestone peaches, apricots, and other soft fruits in relation to quality in freezing preservation.	4320, 4020-I	4020
1021	A study of some factors affecting firmness of tissue structure, color, and palatability of frozen berries and vegetables and their effect on the ascorbic acid content of the products.	1770	
1022	Research on Vitamin C in frozen fruits and vegetables.	600-A	
1023	Factors affecting the quality and nutritive value of fruits and vegetables preserved by freezing; determination of ascorbic acid and palatability scores as indices of nutritive value and quality.	1740	
1024	Factors affecting the texture of certain frozen vegetables.	2280	
1025	Studies of the physical and chemical characteristics of peas, soybeans, lima beans, tomatoes, and white potatoes as they influence the quality of the frozen products.	4020-I	
1026	Effect of low temperature on the Vitamin A content of carrots.	780	
1027	Effect of freezing on white potatoes.	1420	
1028	Sodium content of frozen vegetables (using direct determination of sodium).	1660	
1029	Apparent reactivation of enzymes in some frozen vegetables after thawing.	3090	
<u>Packaging</u>			
1030	Study of effect of packaging on nutritive, keeping quality, and palatability of all meat, dairy, and poultry items produced by a large meat packing business.	290	
1031	Effect of shipping containers for meat on flavor.	1940	
1032	Study of sausage processing conditions and their effects on the quality of the product when encased in a variety of sausage casing types.	4200	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1033	Palatability and keeping qualities of meat as affected by various treatments and wraps before storage in a zero home storage unit.	850	4020
1034	Effect of various metals such as iron, aluminum, and tin on beverages such as beer and carbonated soft drinks.	440	
1035	Investigations to determine the factors affecting quality in glass packed fruits and vegetables and especially fruit juices.	2120	
1036	Discoloration; research on the causes and control of discoloration in packaged food materials.	390	
1037	Comparison of glass and tin packed vegetables in storage on the basis of flavor, color, and vitamin content; five vegetables and two baby food preparations used.	820	
1038	Effect of rubber and various plastic materials on beer and carbonated soft drinks.	440	

Processing

1039	Objective tests of quality as applied to the composition of processed foods.	2100	2500
1040	The effects of processing on the nutritive value of foods. (Cabbage, spinach, turnip greens, snap beans, sweet potatoes and Irish potatoes. Effect of processing on carotene, ascorbic acid B ₂ , Ca, and Fe content determined under controlled conditions.)	1300	4020
1041	The riboflavin content of processed foods. To determine riboflavin losses in foods which have been subjected to various manipulations incident to preparing foods for human consumption.	2120	4020
1042	Retention of folic acid in strained foods.	3120-A	
1043	Ascorbic acid research in food processing.	2910	4020
1044	Milk plant fat losses.	3940	
1045	Keeping quality of bottled milk under various conditions of processing.	3940	
1046	Loss of riboflavin during processing, storage, and handling of milk.	1590	4020
1047	Influence of high temperature heat treatment on certain physical and chemical properties of milk. Changes in milk which result from high temperature processing and which affect the flavor and color and other properties of milk. Production of sulfhydryl compounds.	2100	
1048	Effect of the manufacturing processes on the nutritive value of the proteins of lactalbumin.	3800	
1049	Effect of the homogenizing process on the physical and chemical properties of milk.	3040	
1050	Effect of pasteurization and seasonal environmental factors on the nutritive value of milk.	2870	
1051	A study of several properties of milk as influenced by homogenization, with special reference to its effect on flavor.	2280	
1052	Terminal heating of infant formula.	3060	
1053	Determination of specific amino acids liberated during the ripening of cheddar cheese.	1610	
1054	The study of the effect of processing on the biological value of protein.	1240	
1055	Preserving eggs for home use.	4530	
1056	Effect of processing on the biological value of eggs.	1650	
1057	Light stability studies of meat products; fresh, cured and smoked.	290	

CHEMISTRY

COMPOSITION OF FOOD AS AFFECTED BY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1058	Studies of vitamin content and vitamin losses in canned meat products, fresh meat products and smoked meat products, including keeping quality and shelf life studies.	290	
1059	Tenderness of beef as affected by length of the "ripening" period prior to freezing.	4020-B	
1060	Post-mortem changes in beef; the effects of ageing and cooking methods.	1650	4010-F
1061	Effectiveness of various protein enzymes in hydrolyzing meat proteins.	3800	
1062	Effect of different methods of preparing, curing, and preserving pork products in the south upon palatability, keeping qualities and nutritive value.	2790	
1063	Post-mortem changes in poultry carcasses affecting palatability.	1650	3290
1064	Processing of fruits and vegetables.	750	4020-D
1065	Food preservation studies; blanching and freezing of fruits and vegetables. Comparison of hot water and steam blanching, effect of storage on corn, effect of varieties of beans (soybeans, snap beans). Processing cherries and strawberries in dry sugar.	2390	
1066	Blanching and cooling of fruits and vegetables for freezing. Effect of steam and water blanching, spray cooking and fluming on nutritive value.	600-A	
1067	Vitamin content of vegetables as affected by processing, storage and cooking.	2390	4020
1068	The correlation of several enzyme tests on blanched fruits and vegetables with their nutritive value and quality after processing and storage.	850	4020
1069	The relation between blanching treatment and quality retention in frozen vegetables as measured by enzyme criteria.	4020-I	
1070	Microbiological vitamin assay of fruits and vegetables, before, during and after processing.	2870	
1071	The blanching of peas and the effect of ascorbic acid, thiamine and niacin are being studied via variations in time and temperature of the blanching operation.	820	
1072	Storage studies. Effect of duration and temperature of blanching on vitamin retention by certain vegetables.	3040	2500
1073	Effect of amino acid composition of cereals of ordinary manufacturing processes.	3240	
1074	The oxidase of the olive proved to be phenolase. Its biochemical properties investigated. The role of pH and other factors on color formation during ripe pickling studies.	600-A	
1075	Nutritional quality of soybean oil meal and edible soya products as affected by the heat of processing.	240	
1076	Investigation of the nutritive value of soybean oil extracted meal. A study of the effect of different types of processing of the meal, using rat for evaluation.	990	
1077	The effect of water treatments and other possible treatments during processing upon the nutritive value for poultry of linseed oil meal.	240	
1078	Studies of thiamine losses during processing. Peanuts and peanut butter.	390	

ENRICHMENT OF FOODS

1079	Study on increasing the nutritional value of foods through the use of additives.	4124, 330

CHEMISTRY
ENRICHMENT OF FOODS

<u>Númer</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1080	Addition of various proteins and other nutritional materials to food products, from a public taste acceptance.	890	
1081	Effect of supplementing practical dairy rations with Vitamin A concentrates on milk and milk fat production and on various physiological processes related to milk production.	3040	4020
1082	Improvement of the nutritive value of milk products through enrichment with vitamins.	3730	
1083	Use of various vitamin concentrates in margarine manufacture.	3940	
1084	Effect of added vitamins to canned citrus products.	3900	
1085	To develop an acceptable loaf of whole wheat bread containing added non-fat dry milk solids, which are expected to improve biological value of bread protein.	600-A	
1086	Plant scale production of the factors to enrich food and foodstuffs with the animal protein factor.	1560	
1087	Biological value of protein in different kinds of meat as influenced by nutrition of animal and processing and storage of meat. (a) When meat is only source of nitrogen, and (b) when it is mixed with certain essential amino acids.	4020-C	
1088	Incorporation of dried yeast in processed foods. To develop processed foods (cereals, dry mixes) which contain quantities of dry yeast sufficient to supplement them in amino acid and B Vitamin potencies.	230	
1089	Dried brewer's yeast as compared with enriched bread as a factor in reduction of pellagra death rate in southern states.	4210	
1090	Enrichment of foods with distillers' dried solubles as a source of essential amino acid.	3480	
1091	Studies of thiamine fortification.	390	
1092	Value of cereal enrichment.	3890	4460
1093	Enriched rice and beriberi in Bataan Province.	3065	4460
1094	Enrichment of rice.	1530, 1980	4020
1095	The nutritional significance of the use of enriched flour and cereal.	1740	4460
1096	Improvement of the nutritive value of certain staple southern foods.	750	4460
1097	The nature of nutritional enrichment of refined wheat flour, by dried cultured food yeasts and corn meal.	270	
1098	Concentrated nutritious loaf: To prepare an acceptable loaf of yeast bread with the nutritional allowances in proportion to the caloric value as recommended by the Food and Nutrition Board of NRC. Only natural foods to be used in the loaf.	2390	4020
1099	Investigations of the nutritive value and chemical analyses of the nutritious loaf enriched with Ca lactate and Ca lactate plus cod liver oil. Analyzed for protein, calcium, thiamin, riboflavin, and niacin.	2390	
1100	Improvement of nutritional value of biscuits with wheat germ, thiamine and yeast.	1620	
1101	Nature of the nutritional enrichment of refined wheat flour and corn meal with dried cultured food yeast.	270	4020
1102	The B Vitamin values of enriched and unenriched corn meal and grits as prepared for eating.	3850	
1103	Enrichment of corn products.	1530	
1104	Improvement of the nutritive value of grain products such as flour, corn grits, cereal, etc., through enrichment with vitamins and minerals.	3730	
1105	Nutritional significance of the use of enriched flour and cereals.	1740	

CHEMISTRY

CHEMICAL AND PRESERVATIVES IN FOODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1106	Conservation and availability of the "B" Vitamins and iron in enriched white and corn bread and grits.	120	
1107	Mixtures of vitamins and nutritional factors for the enrichment of foods such as flour, corn grits, cereals, and some fruit juices.	2260	
1108	Nutritive value of wheat and flour. Effect on growth and reproduction of the addition of B Complex Vitamins to the flour to determine the interrelationships between vitamins.	1740	4020
1109	Preparation and evaluation of mineral compounds for fortification of cereal foods. Influence on cooking characteristics, and rancidity in cereal on storage.	2410	
1110	Application of phosphates of calcium and iron to the mineral fortification of cereal products.	4150	
1111	A comparative study of calcium-enriched meat as a source of calcium, phosphorous and protein in rats and in growing children.	2360	
1112	Application of stabilized potassium iodide to salt for uniformity and retention of stabilized potassium iodide without loss till consumed.	630	

CHEMICAL AND PRESERVATIVES IN FOODS

Antioxidants

1113	Antioxidants for various types of food.	2470	
1114	Causes and prevention of off-flavor development in fatty foods.	3220	4010-F
1115	Stabilization of fats toward rancidity.	4450	
1116	Mechanism of synergists in preventing rancidity of fats.	2830	
1117	Development of antioxidants for animal fats and meats.	710	180
1118	Fundamental chemistry of animal fats and oils, and technology of their production, processing, preservation, and use. Improvement of lard quality, especially synthesis and testing of suitable antioxidants for improved preservation of lard.	4020-F	
1119	Antioxidants. Application of various antioxidants to prolong the storage life of nut products and frozen meats. Most effective so far are N.D.G.A. and digallic acid.	600-A	
1120	Stability of hydrogenated shortening and effect of antioxidants.	2150	
1121	Summer stabilization studies on potato chips (antioxidants and related research.)	3630	2620
1122	Study of the use of various organic acids and their esters as antioxidants for meat fats and vegetable oils.	3800	
1123	Pie crust mix. Development and improvement of formulation and use of antioxidants to improve shelf life.	3590	
1124	Antioxidants.	1380	
1125	Antioxidants, their preparation and evaluation.	2400	
1126	Antioxidants and auto-oxidation in fats and oils.	3220	
1127	Stabilization of fats and foods high in fat, through the use of antioxidants, improved processes, elimination of pro-oxidants, etc.	4470	
1128	Antioxidants for food, especially for protection of Vitamin A.	2060	
1129	Study of the effect of certain antioxidants on the flavor and keeping properties of milk and some of its products.	2120	
1130	Control of rancidity in frozen sausage meat by preheating and antioxidants.	1300	3970
1131	Pork rancidity control in freezing.	2150	

CHEMISTRY
CHEMICAL AND PRESERVATIVES IN FOOD

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1132	Butterscotch. Study of packaging and use of antioxidants to improve shelf life.	3590	
1133	Deterioration of dried vegetables. Effect of various anti-oxidants on retention of carotenoids in stored, dehydrated carrots.	600-A	
<u>Bleaching agents</u>			
1134	Study of bleaching and curing agents for flour.	3730	
1135	Physical aspects of flour-bleaching with gases.	1740	
1136	Bleaching foods. Recirculation of hydrogen in converter. High temperature vacuum bleaching. Economical use of bleaching materials. Sparkler filter in bleaching.	3940	
1137	Evaluation of decolorizing materials for a food product.	1940	
1138	Use of chlorine in food processing.	2910	4020
1139	Chemical bleaching of vegetable oils.	3940	
1140	Chlorine dioxide bactericide treatment of the raw or blanched vegetables and fruits.	2140	
1141	Application of new laboratory or pilot plant processes to commercial scale in-plant chlorination.	3970-B	
<u>Fumigants</u>			
1142	Action of sterilizing agents on food; epoxides and other fumigants.	600-A	4010-F
1143	Fate of fumigants in treated foods.	600-A	4010-F
1144	To ascertain by chemical and organoleptic examination the persistence of organic sprays such as DDD, DDT, etc., in the standard procedures for canning and freezing foods.	3370	
1145	Preservation of dried fruits of high moisture content by fumigation with epoxides, possible residue.	600-A	
1146	Methods for detection of chemical warfare agents in food and water; methods for removal of chemical agents from food and water; studies of the reactions of agents in food and water.	4010-A	
<u>Preserving agents</u>			
1147	Preserving agents, their preparation and evaluation.	2400	
1148	Carbon dioxide prestorage treatments in relation to control of storage scald of apples and progress of softening and in relation to rodent extermination.	3320	3290
1149	Retardation of enzyme activity in fruits and vegetables after harvesting by chemical inhibitors.	2270	
1150	Investigation of new bactericides, fungicides, and coating for preservation and non-shrinking of whole citrus fruits.	1720	
1151	Investigation of the efficiency of unobjectionable chemical compounds in preventing spoilage of fruits in the frozen pack industry.	4020-I	
1152	Investigation of germicidal efficiencies of hypochlorites and certain quaternary ammonium salts in the presence of egg material.	4020-F	
1153	Hydrogen peroxide used with catalase as an oxidizing agent or as a preserving agent in the production of foods, catalase eliminates residual and unwanted hydrogen peroxide.	4240	
1154	Preservative action of binary mixtures of sodium benzoate and sulphur dioxide.	2910	
1155	Safety tests on the use of hydroquinine in foodstuffs.	710	

CHEMISTRY

CHEMICAL AND PRESERVATIVES IN FOOD

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Inhibitors</u>			
1156	Development of products for use in the inhibition of bread staling.	60	
1157	Bread softeners. Investigations have been in progress on the effect of certain bread softeners on the properties and keeping quality of bread.	2580	
1158	Use of esters of the sorbitan monostearate type, to retard the staling of bread.	4124	4010-F
1159	Polyoxyethylene stearate, and similar materials for use in bread and cake.	2470	
1160	Development of a mold inhibiting product for use in various food products.	3720	
1161	Rope and mold prevention in bakery products.	2540	
1162	Dough improvers. Improvement of bread and bread doughs by the addition of rope and mold inhibitors, nutritional supplements, etc.	230	
1163	Investigation of time required for development of mold and rope in bread with and without the use of inhibitors.	2580	
<u>Stabilizers</u>			
1164	Study for stabilization of peanut butter. Experiments conducted with a stabilizing agent prepared from peanut oil called "Napeco" indicated that excellent results are obtained for preventing oil separation in peanut oil and retaining flavor and odor.	2600	
1165	Quantitative and qualitative estimation of alginic acid and alginates in frozen desserts; sodium alginate appears to have replaced gelatin to a large extent as a stabilizer in manufacture of ice cream.	3710	
1166	Ice cream stabilizer.	2540, 1610	
1167	Stabilizers and emulsifiers for bread, cake and ice cream.	1170	
1168	Esters of sorbitan and fatty acids for use in foods as stabilizers, emulsifiers, and anti-staling agents.	330	
1169	Effects of stabilizers on chocolate products.	1500	
1170	Role of traces of heavy metals in wine stability. Various methods of removal of traces of heavy metals have been studied and certain improvements made in existing methods.	600-A	
1171	Natural water soluble gums as dispersing and suspending agents in the food and beverage fields.	3030	
<u>Surface active agents</u>			
1172	Surface active agents.	1270	3750
1173	Significance of surface-active agents in food products.	3590	
1174	Application of non-ionic surface-active agents to the food industry.	4124	
1175	Factors involved in formulation and processing with emphasis on the methods used in mixing and the significance of addition of surface-active agents.	3590	
1176	Use of interfacial modifiers and antioxidants in food product development.	410	
1177	Studies on rodent repellants.	3120	

TECHNOLOGY

TECHNOLOGY

ENGINEERING EQUIPMENT AND METHODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1	Engineering research in food processing and equipment.	1490	
2	Administration of research.	80	
3	Development of machinery for food technology.	690	
4	Development of new equipment and machines for producing baby foods.	1310	
5	Development of uses for idle food machinery.	1940	
6	Patents and applications.	395	3750
7	Current evaluation of all food patent applications now in the hands of the United States Chamber of Commerce (German food technology developed during the war.)	4230	
8	Mechanical development of processing equipment.	1460	3110
9	Factory control laboratories.	1460	3110
10	New and improved food processing machinery design and development, fruit washer, package filler, etc.	3970-B	
11	Chemical requirements of the food industry.	3700	4010-F
12	Disposal of food waste from processing plants.	3120	
13	Design and installation of special equipment for storage and heating in the airlines.	2150	
14	Processing and plant engineering research.	2370	
15	Fundamental studies on practical operating problems in food manufacture.	1490	
16	Fundamental studies on new principles and processes of food preservation.	1490	
17	Application of superheated steam to food research.	425	
18	Studies on plant operations relating to the development of processes for the manufacture of specific foods, breakfast foods, salad dressings, etc.	1170	
19	Surface fuels and heating units.	340	3750
20	Adaptation of thermocouple techniques to problems in household equipment.	1650	
21	Application of electronics to food processing.	850	4020
22	Study of the use of dielectric heating on food processing.	1240	
23	Food sterilization equipment.	2940	
24	Operating characteristics of canning equipment and rate of heat penetration in water bath and steam pressure canners as basis for calculating sterilizing values for canning processes.	4020-D	
25	Continuous pressure heat-treating apparatus in which a wide variety of food processing operations can be performed.	430	
26	High temperature food processing.	1160	
27	High frequency radio power in the processing of fruits and vegetables.	4320	
28	Use of electricity in food preservation.	2910	
29	Application of enzymes to the improvement of processing of foods and food materials.	3010	
30	Application of electronics for rapid defrosting of frozen foods with special reference to pre-cooked foods.	4020-I	
31	Electronic thawing and heating. (electronic range.)	2150	
32	Study and development of improved cooking equipment.	4010-E	
33	Electronic baking, - with radarange, etc., for possible civilian and military applications.	3100	
34	Thawing rates of pre-cooked frozen foods under controlled conditions.	2150	
35	Methods for heating pre-cooked frozen foods, for homes and institutions.	2150	
36	Electronic sterilization in relation to frozen foods.	2150	
37	Study of community frozen food locker plants.	850	
38	Studies to determine the most efficient method of community locker plant design and construction.	1300	3970

TECHNOLOGY

ENGINEERING EQUIPMENT AND METHODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
39	Factors in the design and construction of frozen food storage units.	850	
40	Home freezing units.	2280	
41	Development of a low cost mechanical refrigerator for cooling cream on the farm.	2280	
42	Engineering study in relation to refrigerator equipment. Determination of the specific heat of foods as related to water content, water soluble solids and fat content.	3890	
43	Electronic moisture determination apparatus, for use in milling and baking.	3000	
44	Determination of the thermal characteristics of refrigerated foods.	3890	3290
45	Study of aerosols to explore their application to refrigerated warehouses.	2280	3290
46	Odor removal in refrigerated storage.	850	3290
47	Heat transfer aspects of refrigerated warehouse packaged goods in steady and unsteady state as a function of physical properties and conditions.	790	3290
48	Study of refrigeration methods especially as to maintenance of desired relative humidities with respect to the preservation of various food products.	2280	3290
49	Low temperature psychrometry and moisture behavior at subfreezing temperature.	2830	3290
50	Design and development of equipment for deep bed chilling or freezing of fruits and vegetables.	4020-I	
51	Design and development of improved equipment for carrying out the pre-processing steps in the freezing or dehydration of fruits and vegetables.	4020-I	
52	Development of machines for the quick freezing of liquid foods, principally cream, emulsified milk, and fruits and vegetable juices.	1120	
53	Automatic quick-freezing process and apparatus for bulk products.	430	
54	Application of new laboratory or pilot processes to commercial scale efficiency of various types of locker plant freezing units.	3970-B	
55	Equipment and methods for freezing foods for best results. Studies of fundamental physical, chemical, and biological changes occurring in the various methods of food preservation with special reference to freezing.	1280	
56	Investigation of cooking and freezing rates of fruit, vegetable, and poultry products with refrigerated air as the heat exchanging medium.	4020-I	
57	Investigation of drying of solids in falling rate period.	2830	4010-F
58	Design and development of equipment suitable for the continuous final drying of partially dehydrated vegetables to a low moisture content.	4020-I	
59	Survey and evaluation of alfalfa dehydrators.	1750	
60	Anhydration process and apparatus which dries a wide variety of vegetables, fruits, brewery products, and feeds in approximately ten percent of the time at present required.	430	
61	Agitation research.	1880	2260
62	Homogenization efficiency by microscopic determination of the size of fat globules.	4520	
63	Study of the efficiency of industrial homogenizing equipment by chemical methods.	4520	
64	Engineering research on methods for processing whey and related products.	4410	
65	Engineering adaptation of chromatographic analysis to fats and oils.	3120	

TECHNOLOGY

ENGINEERING EQUIPMENT AND METHODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
66	Technological development for hydrogenization, clarification, deodorizing, and tank car transportation of edible oil.	3940	
67	Improvement of methods of refining edible oils from corn and soybeans.	3680	
68	Refining, hydrogenation, and study of catalyzers in processing glyceridic oils.	410	
69	Application of submerged combustion to citrus processing and possible advantages.	3900	
70	Development of quality and production control methods; a new rapid method for estimation of citrus peel oil in citrus juices.	3900	
71	Chemistry and technology of production of refined grape syrups, stabilization, color changes, control, and utilization.	600-A	
72	Investigations on modification of juice from central Washington grown grapes; possibilities of using cation exchangers in a hydrogen cycle to remove potassium from potassium acid tartrate in grape juice; and effect of blends of modified juice with natural juice on the detartration procedure.	4320	4020
73	Laboratory and pilot plant investigation, applied research, efficiency of various types of washers on the washing of small fruits.	3970-B	
74	Development of an electronic sorting machine for grading pickles.	525	2610
75	Methods and equipment for curing and preserving perishable farm products under conditions of controlled temperature and humidity adaptable to use on the farm.	2680	
76	To investigate and evaluate known methods for suitability of washing, sterilizing, waxing, coloring, and preserving the natural qualities of fresh citrus fruit for the fresh fruit market.	3900	
77	Laboratory and pilot plant investigations, applied research, preparation losses involving two methods of lye peeling peaches.	3970-B	
78	Application of new laboratory or pilot plant processes to commercial scale methods for preventing discoloration in apples and peaches during freezing and defrosting.	3970-B	
79	Development of technical methods for production of sugar from sugar cane juice by direct dehydration at low temperature so as to retain all vitamins and minerals.	1870	
80	Investigation of the ion exchange processing of cane juice.	2970	1470
81	Refining of maple syrup by ion exchange.	2110	
82	Inquiries into the fundamental nature of various operations of the chocolate industry.	1810	
83	Methods for particle size determination; a) chocolate liquor b) cocoa c) chocolate.	1810	
84	Effect of varying degrees of carbonation on bottled beverages.	440	
85	Method of extraction of food material from natural product.	1940	
86	Research on formulas for commercial baking practice.	3690	
87	Baking laboratory; biochemical, chemical, and physical factors involved in baking.	3690	
88	Study of the use of pan glaze in baking process.	160	985

DEVELOPMENTAL RESEARCH

General

89	New products.	2690
90	Technological, new and improved food products and processes.	1490

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
91	New Food varieties with special dietetic value.	1490	
92	Technological, bacteriological and chemical research; frozen food research, new products, and by-products.	1460	310
<u>Dairy products</u>			
93	Milk products, including all manufactured milk products as well as fluid milk and ice cream.	1350	
94	Vacreation and homogenation of milk, cream, and ice cream mix.	2910	
95	Improvement in packaged products now manufactured; Canned milk (sweetened condensed and evaporated milk); whole milk powder; powdered ice cream; infant foods; processed cheese; powdered coffee product.	2690	
96	Sterilized cream investigations.	2540	
97	Improving existing dairy products; or development of new methods of manufacturing dairy products or making new types of dairy products.	930	
98	Technological development as it is related to improved methods of manufacturing milk base beverages.	920	
99	The manufacture of dairy products. Use of dry milk solids.	2280	
100	Flavor and color of milk.	2540	
101	Improving cream and milk for manufacturing purposes.	2280	
102	Frozen culture for souring cream and/or milk.	1200	
103	Manufacture of concentrated or dehydrated food products made primarily from milk.	2030	
104	The preparation of dehydrated ice cream mix, and of sweetened concentrated ice cream mix.	10	
105	Whole milk powder improvement.	2540	
106	Buttermilk powder improvement.	2540	
107	Preparation of low heat treated skim milk powder for use in reconstitution of the butter oil.	10	
108	Development of new food uses for whole and non-fat milk solids.	2520	
109	Food specialties made from milk and milk by-products.	2540	
110	Biochemical studies on the properties and potential uses of whey and fractions thereof.	4410	
111	New uses of whey solids. Use of spray process whey powder in manufacture of different flavored ice creams; its effect upon processing, procedure, freezing, hard- ening and dipping of the ice cream.	2390	
112	Production of lactates from whey.	2540	
113	Delactosed whey concentrates.	2540	
114	Production of demineralized whey by means of ion exchange materials.	4520	
115	The digestion of skim milk with proteolytic enzymes.	4520	
116	The food uses of dry milk, and some of the chemical and physical factors affecting such use.	600-A	
117	Milk powder for breadmaking.	2540	
118	Sweetened condensed skim milk.	2540	
119	Processing of evaporated milk.	1160	
120	Evaporated milk improvement.	2540	
121	Milk and cheese for producing products of improved palatability and improved nutrition characteristics.	290	
122	The manufacture and utilization of cheese.	2360	
123	Standardization of the acidity of milk in the manufacture of cheddar cheese.	2390	
124	Factors in the curing of cheese.	3040	4020
125	The mechanism of cheese curing.	2540	
126	The manufacture, ripening and development of foreign varieties of cheese that are now imported into the United States.	4320	

TECHNOLOGY
DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
127	Factors relating to manufacture and keeping quality of cream cheese.	1610	
128	Flavor improvement of cottage cheese.	2420	4020
129	Cottage cheese improvement.	2540	
130	Improving the quality and composition of Oregon butter and cheese.	2910	
131	Butter flavor. Improvement in flavor and heat-stability.	3590	
132	Preparation of pure dehydrated butter oil by a continuous process, its packaging and storing at room temperature, and its reconstitution into fluid milk, cream and ice cream mix.	10	

Fats and oils

133	Research on edible oils.	240	
134	Food processing methods designed to give higher stability and better palatability to all fat and oil products, such as natural fats, hydrogenated animal and vegetable oils, margarine and butter.	290	
135	Preparation of compounds for nutritional studies. Preparation of extremely pure linoleic acid for a food company.	1060	
136	Production of edible derivatives of fatty oils.	700	
137	Processing of fatty oil-bearing materials.	700	
138	Peanut oil: improvement of yield and quality.	3130	
139	Frying of foods (peanuts, potatoes, and donuts) in vegetable fats with and without the addition of catalysts.	3380	
140	The influence of various production and processing factors on the behavior of fats and oils when used in food products.	2910	4020
141	Flavors of oils, as produced by new process.	1940	
142	The use of available edible fats and oils interchangeable in shortening and margarine.	4470	
143	Improvement of margarine flavor, stability of oils, keeping quality of margarine and shortening and certain processing problems involving changes in the glyceride content of certain oils particularly in nutritional characteristics.	1330	
144	Salad dressing. Development of formulations for both mayonnaise-base and liquid emulsion types.	3590	
145	Oil and special starches in salad dressing production.	3020	
146	Development of new and /or improved lecithins for food purposes.	670	

Meats

147	Improvement of existing products in the meat packing business, the creation of new types of products, such as a composite package.	2160	
148	Improved frozen beef stew.	1200	
149	Raw beef stew ingredients.	1200	
150	Studies on the curing of bacon.	710	180
151	Methods of injection for the quick curing of hams.	4020-B	
152	The influence of temperature on the efficacy of methods otherwise standard for curing hams.	4020-B	
153	Meat curing.	1380	
154	Application of new laboratory or pilot plant processes to commercial scale electrically heated ham smoke oven.	3970-B	
155	Research designed to elucidate some of the basic principles involved in curing and smoking of meats, particularly hams and bacons.	2450	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
156	The fundamental reaction of smoking on meat items.	290	
157	Study of food processing with special emphasis on the canned meat items. Improvement of meat products.	2160	
158	Development of improved concentrated soups and bouillons.	1090	
<u>Fish</u>			
159	Processing and formulae and keeping qualities on canned fish, fish cakes, wheat germ, olives and other marketable products.	2750	
160	The development and improvement of fishery food products.	2910	
161	The preparation of fishery products for war needs.	2910	4020
<u>Eggs</u>			
162	An improved method for the fermentation of egg white. Improvement of uniformity, stability and general quality of fermented egg white (dried albumen) in such a manner to provide greater outlets for the product.	4020-A-F	
<u>Baby foods</u>			
163	New baby food products.	1310	
164	Advancement in methods of processing baby foods.	1310	
165	Frozen foods. Preparation of a commercially salable frozen puree food for infant feeding. Also materials suitable for sterile packaging of this product.	390	
166	Canned baby foods (strained and chopped vegetables, fruits, desserts, and meat combinations). Prevention and retardation of syneresis of starch containing products.	140	
<u>Fruits and vegetables</u>			
167	Fruit juice concentration.	850	4020
168	Concentration of fruit juices.	3260	
169	Real fruit juice concentrates, which retain the mineral matter and flavor of the original fruit juice.	4360	
170	Factors affecting the quality of strawberry and other fruit-juice concentrates.	3830	4020
171	Processing of standard single strength canned juices from Southern California and Arizona grapefruit. To study 1) Chemical composition of these grapefruit juices, the natural changes in composition during harvesting season. 2) Methods to correct natural deficiencies in composition.	600-C	4020-A
172	Methods for improving quality of citrus juice and peel products now made.	1140	
173	Manufacture of a bland table syrup from citrus peel paste.	1720	
174	Methods for preparing new citrus juice and peel products.	1140	
175	Methods for lowering processing costs of citrus juice and peel products.	1140	
176	New uses for frozen lemon juice.	1200	
177	To devise improved means of commercially processing apple juice.	4020-A-F	
178	To develop methods of preparing concentrated apple juice and sirup of superior quality.	4020-A-F	
179	Investigations on the development of grape products, also on the recovery of waste products, and varietal juice characteristics.	3850	
180	A study of the manufacture of volatile fruit concentrates.	3930	

TECHNOLOGY
DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
181	The production of maraschino cherries and candied fruits.	2550	
182	The commercial brining of fruits and vegetables.	2790	4020
183	New and/or improved methods for the processing and preservation of packaged dates.	600	4020-A
184	Preparation of fruit products such as preserves, jams and juices from whole frozen fruits.	4020-A-I	
185	Analysis on the market today. A complete analysis as to quality, flavor, texture, color, presence of foreign material of various varieties of finished pickling products to improve quality of the finished product on market.	2280	2610
186	New product developments such as potato puffs. Frozen desserts.	2150	

Legumes and nuts

187	Development of new food products from peanuts.	3630	
188	Peanuts; improvement of processing.	3130	
189	Studies with respect to the improvement of peanuts and peanut products.	2520	
190	Methods of processing nuts.	2350	
191	Preparation of peanut-butter, peanuts, and peanut foods.	3380	
192	Peanut butter: Improvement of texture, food value and stability.	3130	
193	Studies on peanut butter.	1090	
194	Development of a special type peanut butter which can be packaged in flexible cartons similar to the oleomargarine and dairy butter.	2600	
195	Production of edible peanut protein free from oil.	4170	
196	Stabilization of tortilla flour and enhancement of nutritional value of same.	1600-A	
197	Determination of the effects of adding soy bean flour to wheat flour to be used for bread.	2870	4020-E
198	Food products derived from soybean processing such as soya flour, soya meal, concentrated pure proteins and other products.	1330	
199	Development of soybean protein products, whipping agents, proteins for supplementing foods, proteins for various functional purposes.	670	
200	Development of new and/or improved soybean flours. a. defatted flours. b. high fat and lecithinated flours.	670	
201	1. The development of new and/or improved food ingredients from soybeans. 2. Application research on the use of the developed products in various commercial foods.	670	
202	To improve the color, odor, taste, and other physical and chemical properties of soy flour and related products to make them more useful as food products.	4020-A-E-G	
203	Protein researches relating to applications on whipping compounds.	1170	

Grains, cereals, feeds

204	Improvement of flour.	2300	3000
205	Improvement of flour quality for respective purposes. Adjustments of milling procedure.	3100	
206	Development of baking techniques for evaluating the quality of different varieties and classes of wheat.	2870, 1740	4020-E
207	Improvement of flour quality for respective purposes. Through critical varietal selection of wheat.	3100	
208	Evaluation of wheat properties which determine utilization quality in baked products.	1740	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organizations</u>
209	Relationship of flour constituents to the characteristics of chemically leavened products.	1740	
210	Relationship of granulation and particle size to physical and chemical properties of flour.	1740	
211	Protein-enzyme relations in wheat flour. High levels of alpha-amylase in baking. Evaluation of effect of alpha-amylase from various sources.	1740	
212	High levels of alpha amylase in baking; proteolysis in straight and sponge doughs.	1740	
213	Use of high levels of amylase, proteases, lipases, and lipoxidases in baking.	1740	
214	Physical quality of wheat in relation to milling technology.	1740	
215	Protein efficiencies of cereals as influenced by milling and manufacturing.	3240	
216	Effect of premilling treatments of rough rice, milling, cooking and keeping qualities and the vitamin and ash content of milled rice.	4020-E	
217	Process for wet milling of grain sorghums; pilot plant research on extraction of starch from grain sorghums for subsequent processing into sirups and other starch products.	4020-G	
218	Improvements in dry milling of corn and utilization of the products thereof.	1600-A	
219	Studies of flour milling by impact action.	1740	
220	Improvements in malt manufacturing.	1600-A	
221	Development of new breakfast cereals research.	2300	640
222	Developmental work in cereal breakfast foods.	3270	
223	A study of prepared flour mixes.	1740	4020
224	Baking mixes, waffle, roll, cake, etc; causes and prevention of deterioration of quality.	140	
225	Dough mixing studies; enrober coatings.	2490	
226	Baking mixes, waffle, roll, cake, etc; development of mixes with improved stability.	140	
227	The making of cake and other ready prepared mixes.	3930	
228	Premixes - primarily for foods for baking; biscuit and hot roll mixes; stabilizing the yeast in hot roll mix.	3100	
229	Cake, doughnut and other convenience mixes; development for greatest convenience, eating quality, and keeping stability commensurate with the respective marketing conditions.	3100	
230	A comparison of commercial mixes and standard recipes in the preparation of quick breads.	40	
231	Prepared food mixes, including cake, cookie and biscuit mixes.	3360	
232	Formulation of prepared mixes such as cakes, puddings and the like.	1170	
233	Experimenting with a cake-donut flour mix.	2000	
234	Development of improved methods for the manufacture of bread and cake on a large scale.	1090	
235	Breads from whole grain sorghums.	3080	
236	Tolerance of breads and doughs, especially bread doughs, for high percentages of milk solids.	1750	
237	Flour mixtures, effect of baking at high altitudes. Determine 1) how constituents of mixtures behave individually and towards each other under influence of pressure, humidity, and temperature variables. 2) Standards for evaluating quality in finished products. 3) To express mathematically the behavior of mixture constituents.	770	4020
238	Improving the water resistance of pie crust.	1600-A	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
239	Pie Crust Mix - proper adjustment of shortening for different climatic and other conditions such as the variations between civilian-domestic vs. military or export purposes.	3100	
240	Experimenting with a pie filling mix.	2000	
241	Process of sprouting staple grains and legumes for special food purposes.	3120-A	
242	Development of new corn products.	1600-A	
243	Developments of animal feeds, including work in the field of animal nutrition and feeding tests with all types of livestock and poultry, dogs, foxes, mink and small laboratory animals.	3270	
<u>Sugars, sweets, miscellaneous</u>			
244	Production of sugar (sucrose).	1370	
245	New sugar derivatives.	695	3750
246	Carbohydrates; amino sugars-d-glucosamine hydrochloric acid, metal salts, glucosamine pentaacetate.	420	
247	Sugar, sugar processing, and sugar by-products; chemical, biochemical, and engineering research.	200	
248	Glutathione manufacture, process improvement.	3460	
249	Production of monosodium glutamate.	1370	
250	Production of raffinose.	1370	
251	Special forms of cellulose as roughage in food products.	1090	
252	Development of lactose derivatives having nutritional and medical application.	3520	
253	Sterile invert sugar.	2110	3750
254	Sterile invert sugar.	3890	3750
255	Development of blend of synthetic saccharin and dulcin called "dulsac" as a non-caloric sugar substitute; in tablet form as "sweetalids."	3740	
256	Utilization of corn syrups in confectionery, mixed syrups, dairy products, jellies, and preserves, and the like; also corn starches, syrups, and soy flours in bakery goods.	3680	
257	Use of sweetening agents to partially replace sucrose in ice cream mix.	10	
258	A dry powdered stable mixture of chocolate syrup materials.	4450	
259	Product development in the field of convert starch syrups.	960-A	
260	Use of sirups and starches in the confectionery industry.	3020	
261	General research for a development of new confections.	2520	4010-F
262	Development of standards for quality control of chocolate products.	1500	
263	Process improvement and development of chocolate products.	1500	
264	A high caloric chocolate fudge containing 26% or more of emulsified cocoa butter.	4450	
265	Milk chocolate bars which will not melt in semi-tropical or tropical weather and still be palatable.	4450	
266	Improvement in flavor of milk chocolate.	1600-A	
267	Chocolate-like products and their use.	1570	
268	Development of pectinic acids of low methyl ester content for food and industrial users.	4020-A-I	
269	Baking powder, with emphasis on formulation and keeping quality.	3360	
270	A study of the wholesomeness of a new baking powder.	2280	1755
271	Leavening and all its ramifications dealing with stability, dry-mixes, recipe development, and the like.	920	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
272	Leavening agents. Synthesizing and evaluating of acid compounds suitable for reaction with basic salts capable of evolving innocuous gases for leavening. Evaluation includes testing of mixtures in baking powders and "prepared flours."	2410	
273	To determine effects of various types of baking powders on the chemical reaction of batters and doughs and to relate these reactions to objective and subjective measures of quality in typical batter and dough products.	3830	
274	Study of leavening agents, their use in baking powders and application in all types of baked products.	4150	
275	Use of paraffin in pharmaceutical form to be used as chewing gum. a) development of materials which as additives would impart to paraffin more desirable chewing texture. b) development of oil soluble edible colors superior in brightness and fastness.	4240	
276	Gum for use in making chewing gum.	2470	
277	Various gums for use as dispersing agents for oils and vitamins in foods.	2470	
278	Methods of extraction and purification, and the physical and chemical properties of an edible linseed oil meal gum.	3960	
279	Gums from seaweed. To determine the wholesomeness of certain types of gums obtained from seaweeds for use as stabilizers for certain food products.	4030-A	
280	Casein adhesives.	2540	
281	Instant (soluble) coffee; prevention or inhibition of deterioration of quality.	140	
282	New and improved extraction and concentration of coffee and chocolate for preparation of fat and carbohydrate free concentrates to be used in new and better beverages with better keeping quality and finer flavors.	4230	
283	Water soluble coffee and cocoa concentrates which do not oxidize readily and possess the natural flavor.	4360	
284	Studies on soluble coffee.	1090	
285	Instant (soluble) coffee; development of improved methods of manufacture to obtain finished product of improved quality of flavor and aroma, and stability.	140	
286	Development of a process utilizing high vacuum techniques in order to produce a new coffee or more superior coffee product than is now available.	2640	
287	Coffee, baking ingredients, pudding, and gelatin desserts; research deals with basic raw materials and their processing and application in finished food products, including the containers in which they are packed.	1690	
288	Brewing research with reference to flavor stability and shelf life of beer.	3460	
289	Powdered fruit-flavored drinks; improvement of fundamental flavor and air-stability.	3590	
290	Beverage research.	2300	2467
291	Development of new types of non-alcoholic beverages; improvements in carbonated beverages.	1090	
292	Products for beverages.	3020	
293	Development of a carbonated beverage flavor.	1430	
294	Development of new flavors and nutritional additives for soft drinks.	3700	
295	Synthetic food colors and flavors.	1160	
296	Tastes and flavors--development of same for quick freezing and loss or accentuation during storage.	2150	
297	Provision of essential oils from natural sources and the manufacture of synthetic oils for flavoring purposes.	3030	

TECHNOLOGY
DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
298	Development of aromatic chemicals which would be suitable as components for flavoring of food products.	1130	
299	Making of colors and flavoring extracts.	1820	
300	Studies on spicing and flavoring of processed meat products, both in the can and as fresh sausage items or dry sausage items.	290	
301	Improvements in spices; elimination of contamination.	1330	
302	Processing of botanical materials for provision of condiments for the food industry.	3030	
303	Preparation of a dry soup mixture of high nutritive value and low in cost.	40	
304	Preparation of sauces for institution use.	2280	
305	Development of new and improved sauces for seasoning and flavoring. Flavors with particular reference to their use in food.	1090	
306	Foods appropriate for soda fountain use including syrups, toppings, salad dressings, jams and pre-cooked frozen foods. National distribution results in information on taste preferences in different areas.	3300	
<u>Vitamin and other therapeutic agents</u>			
307	Methods of concentrating nutritional factors from raw materials.	4090	
308	The development of vitamin products. Finished product formulation for use in foods, feeds, and pharmaceuticals.	2780	
309	Synthesis of various vitamins and nutritional substances.	4090	
310	Development of special dietary supplements for human nutrition. This includes materials with adequate vitamin, protein and/or carbohydrate content.	1910-A	
311	Methods of providing vitamin products for lay use and for professional use. Development of individual tablets of various vitamin preparations; (a) A & D tablets; (b) B-complex tablets; (c) multiple vitamins in tablet form.	2320	
312	Clinical evaluations of therapeutic products by medical, biological, microbiological or biochemical tests.	1910-A	
313	Stabilized vitamin preparations.	2540	
314	Evaluation of vitamin-containing products to be used by the feed industry.	100	
315	Production of oil-soluble vitamin concentrates.	700	1760
316	Technology of fat-soluble vitamins.	2780	
317	Improving the quality of vitamin A natural oils.	470	
318	Vitamin A and associated fat factors.	420	
319	Extraction of carotene from carrots as a competitor of vitamin A from fish liver oil - also other products from surplus carrots.	350	
320	Dehydration of Kansas foods and food products. Methods of stabilizing carotene in dehydrated alfalfa and a process for preparing carotene concentrates.	1740	4020
321	The preparation of high potency sterilized emulsions of vitamin A and D.	4520	
322	Commercial production of synthetic vitamin A for the food and pharmaceutical industries.	980	
323	Improved methods of recovering carotene from carrots.	2860	
324	Technology of vitamin B-complex. Production and development problems related to rice bran extract and other natural B-complex sources.	2780	
325	Choline. Preparation of choline for use in nutritional deficiencies of man.	800	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
326	Preparation of pyridoxine derivatives and evaluation of their antianemic activity in chicks.	770	
327	Commercial production of vitamin E concentrates for the food and pharmaceutical industries.	980	
328	Development of new therapeutic agents. Vitamins; fatty acids; carbohydrates, gums and mucilages; protein and amino acids; cod liver oil products; antiseptics and antibiotics.	2990	
329	Nutritional effects of chemotherapeutic materials.	100	
330	Yeast - experiments on problems of production and quality of Fleischmann's malt.	3120-A	
331	Active dried yeast. The improvement of growing and drying processes in the production of live dried yeast which will have a longer retention of viability.	230	
332	Improvement of quality and stability of active dry yeast.	3280	
333	Studies on genetics and biology of yeast cultures, utilization of yeast for baking, and development work on commercial production of yeast. Production of alcohol by means of yeast, and other bacterial and fungal fermentation processes.	3690	
334	Dry active yeasts. The betterment of the baking and keeping qualities of dry active yeasts from the viewpoint of both processing and strain selection.	2580	
335	Taste and quality improvement of dry yeast. The development of a yeast strain and growth process for the production of a dried yeast with improved taste and better amino acid balance.	4320	230
336	Production of baker's yeast. Methods for improving the process of yeast manufacture. Aim to obtain better yields, introduce economies and improve baking quality.	2580	
337	Development of nutritional products utilizing primary grown yeast.	3280	
338	High riboflavin yeast. The development of a yeast strain and growing process that will produce riboflavin in quantities exceeding 1 mg. per gram of dried yeast.	230	
339	Manufacture of yeast: B vitamins and yeast protein hydrolyzates for dietary and therapeutic use.	4140	
340	Preparation of an improved yeast hydrolysate with lactalbumin as a dietary supplement for protein deficiency "Proral."	20	
341	Non alcoholic products with high nutritive value from Sacchromyces Alcoless.	4260	
342	Production of synthetic cracked bone to be used as bone black in sugar refining; also other synthetic adsorbents and adhesives.	3120-A	
343	Compounds from vegetable sources and therapeutic agents.	1610	3030
344	Compounds from vegetable sources and therapeutic agents.	4490	3030
345	Compounds from vegetable sources and therapeutic agents.	600-C	3030
346	Pharmacological action of certain botanical specimens of South American origin.	1440	3030
347	Chemical studies of medicinal plants. (1) Maya (2) Coqui (3) Molinillo (4) Doradilla.	3210-C	
348	Purified amino acids as supplements to natural proteins. These include lysine, methionine, and tryptophane.	3270	
349	Development of new and improved preparations to facilitate better nutrition of patients with diseases: with diarrhea, the allergic, the steatorrheal, hypersensitive, premature, immature, undernourished and pregnant individual.	2300	

TECHNOLOGY

DEVELOPMENTAL RESEARCH

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
350	Protein hydrolysates. Physiological, edible, liquid fish animal nutrition products.	420	
351	Production of monosodium glutamate and the utilization of by-product amino acids and other protein hydrolysates.	3680	
352	Development of protein hydrolysates and amino acid combinations for clinical and general food use.	3520	
353	Studies on protein hydrolytics.	240	
354	Enzymic digests of protein.	2540	
355	Preparation of improved protein hydrolysate preparation with dextrose for intravenous use in protein deficiency. "Aminosol 5%."	20	
356	Derivatives of fish proteins; preparation and nutritive value of protein hydrolysates, parenteral and oral.	450	
357	Devitaminized casein.	2540	
358	Study and perfection of appropriate protein hydrolysates for general dietary and food fortification purposes.	378	
359	Investigation and development of preparations for protein and amino acid administration.	4090	
360	Development of suitable protein products particularly casein and lactalbumin for specific or general dietary and therapeutic use.	3780	
361	Preparation of lactalbumin hydrolysates suitable for oral administration.	4520	
362	Fat emulsions.	4090	
363	Development of products for the prevention and control of animal diseases.	3270	
364	Intravenous solutions.	3855	3750
365	Investigation of materials useful as hemostatic agents.	4090	
366	Immunological properties of the polysaccharide from <i>Serratia marcescens</i> .	1643	90
367	Improving flavor of a group of food and medicinal products.	1940	
368	Chitin products-chitosan chitin-methyl, chitosan-acetate, chitosan-tartrate, chitosan-citrate.	420	
369	Manufacture of goitrogenic thiopyrimidines and their effect on the feed; weight-gain ratio of poultry and meat animals.	3460	

PROCESSING

Canning

370	Manufacturing investigation of canning processes so as to retain the highest quantity of food nutrients.	1900	
371	Canning operations improvement studies.	850	2500
372	Canning procedures - compilation of commercial methods of canning various food products.	870	
373	Formulation of canned food products - development of formulae and packing methods for new canned food products.	870	
374	Development of scientific methods for evaluating the quality of canned foods.	80	
375	Improvement of nutritive value of canned foods through the determination of factors in canning and storage procedures which influence nutrient retention.	80	
376	Home canning problems.	2120	4020
377	Methods for home canning of poultry. Effects of various home canning techniques in precooking and packing, and methods of preparation for serving on palatability and other qualities of poultry of known age, breed, and environment.	4020-E	
378	Various experiments with the canning of fruit and vegetables.	2910	

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
379	Fruit and vegetable preservation.	2420	4020
380	Canning and preserving problems of fruits and vegetables.	2910	4020
381	Canning of fruits and vegetables.	3260	
382	Improvements in the methods of canning, freezing, and dehydrating fruits and vegetables.	3330	
383	Canning technology of vegetables grown in the Pacific N. W.	4320, 1590	4020-A
384	Aseptic canning.	2940	
385	Heat penetration studies in processing and cooling various foods: a) using community type #3 canning retort. b) using #2 and #3 tin containers, pint and quart glass containers. c) using water spray cooling under air pressure.	1300	
386	Canning investigations on apricots, plums, nectarines, and cherries.	4320	4020-A
387	Canning and preserving studies of Northwest fruits and vegetables.	2910	4020
388	Problems relating to canning and concentrating of citrus juice and to by-products derived from citrus.	1150	
389	Canning methods for summer apples. To compare effectiveness of antioxidants on peeled fruit prior to canning; to test effectiveness of calcium treatment; to develop home methods for using calcium salts; and to determine procedure to obtain most satisfactory product.	2885	4020
390	Utilization and preservation of tropical and subtropical fruits and vegetables. Methods of preservation by cold storage, freezing, dehydrating, concentrating, bottling, and brining of fruits and vegetables, their juice and pulp, and to study composition and nutritive value of these products as related to preservation by such methods.	2270	
391	Utilization of complex phosphates in food processing.	550	
392	Effects of complex phosphates on the skin texture of fruits and vegetables.	550	
393	Effects of complex phosphates on the extraction of pectin from vegetable tissues.	550	
394	Effects of complex phosphates on proteins.	550	

Dehydration

395	Dehydration and storage of dehydrated products.	2640	
396	To study such methods of home food preservation as dehydration or drying, freezing, salting, and pickling.	2120	4020
397	Study of methods and equipment for curing and preserving perishable farm products under conditions of controlled temperature and humidity adaptable to use on the farm. a) home dehydration of foods.	2680	4020
398	Physical chemistry of any surfaces of freshly exposed food liquids (as related to spray concentrating and spray drying of milk).	960-A	
399	Mass transfer through liquid films.	2830	4010-F
400	Research on drying and evaporating problems of milk in industries other than the milk industry.	1350	
401	Spray drying. Studies of the spray drying operation both from the engineering and biochemical point of view.	960-A	
402	Effect of neutralization of developed acidity in cream and in buttermilk on the alkalinity of the total ash of roller process dry buttermilk solids manufactured therefrom.	1610	120

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
403	Production of spray dried buttermilk.	1430	
404	Moisture studies of dry products of milk.	120	
405	Production of improved dehydrated ice cream mix powder.	1430	
406	A new process for desiccating and defatting raw animal tissues.	4160	
407	Factors controlling the changes in functional properties and palatability of egg products during drying and subsequent storage.	1660	
408	Dried egg products.	2540	
409	Product development in the field of dried egg white. Studies on the production of dried egg white with particular emphasis on factors which affect their functional properties in various products in which dried egg whites are used.	960-A	
410	Processing of horticultural products; dehydration and frozen pack.	3830	4020
411	Preservation of fruit and vegetable products.	850	
412	Investigation on the dehydration of Texas grown vegetables.	3850	4020
413	Dehydration of green snap beans at high altitudes.	4530	4020
414	Dehydration of fruits and vegetables by suspension in a vertical blast of heated air.	2360	
415	Prepared mixes utilizing dehydrated potato.	3360	
416	Experimenting with a dehydrated vegetable soup.	2000	
417	Use of sulfur dioxide in dehydrating fruit.	2910	4020
418	Investigation of dehydration of fruits and processing and storage of dried fruits.	600-A	4020
419	A product consisting of a completely dehydrated orange juice in the form of powder.	4070	
420	Development of a process utilizing high vacuum techniques in order to produce a new or more superior citrus product than is now available.	2640	
421	Food processing. Dehydration, sterilization, and packaging of various food products, coffee, tea, eggs, dry mixes, and gelatin desserts.	3690	
422	Dehydration (particularly in vacuums of one or three millimeters) of orange juice, eggs, gelatin, coffee extract, and gluten.	2110	
423	Fruit granules or powder made from juice and dried fruits with added dextrose.	600	
424	Dehydration of various stock feeds.	3260	

Freezing

425	Miscellaneous freezing studies.	850	4020
426	Developing standards for frozen foods.	2910	4020
427	Development of additional use for frozen foods.	3770	
428	Processing of frozen foods for locker plant and home freezer use.	2360	
429	Drip as a constant for the quality control of frozen foods.	1980	
430	Rapid methods of preparing frozen foods in home.	1200	
431	Freezing preservation of foods.	1160	
432	Survey of present and possible future applications of refrigeration.	2110	3290
433	Factors involved in the preparation for freezing, storing and preparation for serving, of foods.	3040	4020-K
434	Quick freezing of precooked foods. Problems in precooking, chilling, freezing, storage, thawing, and cooking. Also factors influencing rancidity of precooked meats, bacterial problems; thawing indicator.	850	4050-A

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
435	Development of freezing preservation processes for thickened sauces used in pre-cooked frozen foods.	4020-A,I	
436	Preservation of fluid milk by concentrating and freezing.	3040	4020
437	Frozen soft cheeses.	1200	
438	Methods and equipment for preparing eggs, poultry and meat for freezing and the cooking of the frozen products.	4020-D	
439	Investigation of frozen eggs in relation to their use in cooked products.	1770	4020
440	A study of the effects of certain pretreatments upon the culinary characteristics and palatability of eggs preserved by quick freezing and frozen storage.	3220	
441	Correlation of the freezing points of fresh, cured and table-ready-meats with the optimum storage temperature.	3800	
442	A study of rate of freezing and histological characteristics of frozen meat as influenced by size of sample.	4020-B	
443	Time and temperature factors in the aging of beef for freezer preservation.	850	4020
444	Comparison of "aged" meat for freezing.	1200	
445	Studies on freezing meat and poultry products at moderate and extremely low freezing temperatures; histology and keeping qualities.	290	
446	The utilization of turkey products as food by freezing.	1740	4020
447	Sustained research on the freezing of whole live lobsters for selected outlets in the "away from coast" points.	1210	
448	Quick freezing of agricultural products and their storage requirements.	3040	4020
449	Frozen fruit products.	600	3750
450	Processing of citrus juices and their preservation by quick freezing.	600-C	4020-A
451	Development of cold processed jelled fruit products from fresh or frozen juices, purees and crushed fruits, and preserved by freezing.	4020-A, I	
452	Preparation, freezing storage and utilization of purees. Comparison of varieties, methods of preparation, packaging and utilization, and basic study of the changes in vitamins of the B complex, in vitamin C and carotene.	600	
453	Development of an improved technic of pureeing, de-aeration flash heating (pasteurization), and slush freezing of fruit purees and fruit purees and juices preserved by freezing.	4020-A,I	
454	A 42° Brix frozen orange concentrate.	4121	
455	Freezing of fruits and vegetables. To determine the best methods of handling fruits and vegetables for frozen storage.	950	4020
456	Preserving vegetables and small fruits by freezing.	4400	4020
457	Packaging and freezing of whole untreated apricots, figs, grapes and peaches to be preserved by freezing for subsequent manufacture.	4020-A,I	
458	The processing of Hawaii fruits by quick freezing.	1480	4020
459	Freezing of elderberries and uses for the frozen product.	850	
460	Testing methods and improving techniques of quick freezing fruit and vegetable crops for maximum quality.	2910	4020
461	The preservation of fruits, berries and vegetables by means of quick freezing.	850	
462	Freezing studies with apples.	2050	
463	Factors affecting the quality of frozen apples used in the bakery trade.	2280	

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
464	Methods of canning, freezing and processing McIntosh apples.	2120	4020
465	Treatment of sliced apples prior to freezing, to retain desirable texture and flavor.	2280	
466	Preservation of fruits and vegetables by freezing. To determine (1) quality under preservation by freezing of Tennessee fruits and vegetables. (2) best varieties and stages of maturity suited for freezing. (3) best preparatory treatments of fruits and vegetables. (4) protective quality of wrappings and packaging material used.	3830	4020
467	Studies on the preservation of vegetables and fruits under conditions similar to those in the home.	3320	4020
468	Laboratory and pilot plant investigation-applied research, time-temperature data on the freezing of large package sizes of fruits and vegetables.	3970	
469	Freezing preservation of fruits and vegetables in refrigerated locker storages.	1650	4020
470	Frozen fruit and vegetable preservation and storage.	2885	4020
471	Food processing. (1) freezing practices. (2) methods of processing sweet potatoes. (3) development of southern grown crops such as okra, cucumbers and field peas for processing.	1300	3970
472	The quick freeze of okra.	1980	4020
473	Freezing preservation studies on precooked New Jersey grown potatoes.	3370	4020
474	The quick freeze preservation of Irish potatoes.	1980	4020
475	Freezing preservation studies on precooked New Jersey potatoes. To establish standards for organoleptic quality and investigate influence of heat temperature on quality of product.	3370	
476	The freezing technology of vegetables grown in the Pacific Northwest.	1590, 4020-A 4320	
477	The development of freezing preservation processes for vegetables, purees and juices.	4020-A, I	
478	To determine the suitability of known varieties and breeding selections of Texas fruits and vegetables for freezing; to improve quality of frozen fruit and vegetables; to develop new products; and to study effect of packaging and storage on quality of frozen products.	3850	
479	Home preservation of foods. a. methods of home freezing, choice of varieties of fruits and vegetables for freezing preservation. b. methods of home canning with reference to bacteriological soundness of procedures.	1610	4020
480	Development of a small quick freezing process for fruits and vegetables. The plyphase flash freezing process developed at the University of Texas is being applied to commercial installations from 200 to 1,000 lbs of food per hour.	3890	
481	Study of freezing figs and watermelon balls.	40	
482	Sprouted peanuts-preservation (freezing, canning) and palatability.	40	
483	Effects of sugars on fruits.	850	3750
484	Quality of frozen fruit as influenced by type and concentration of sugar or syrup.	1980	4020
485	Adaptation of simple sugars in preserving fruit by freezing.	2910	4020
486	Use of inverted syrups in the preservation of fruit by freezing.	580, 600	
487	Investigation of effectives of various sugars in preserving the color, flavor, and texture of frozen apricots, peaches and nectarines.	600	

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
488	A study of the effect of the concentration and kind of sugar on the quality of several varieties of frozen peaches and figs.	3850	
489	A study of the use of various sugars and syrups on frozen fruits.	3930	
490	Frozen lemon, pineapple and chocolate chiffon pies.	1200	
491	Improved frozen pie formulae.	1200	
492	Quality control of frozen pastry.	2885	4020
493	Development of frozen preservation processes for fruit and cream pies.	4020-A, I	
494	Frozen storage of unbaked biscuits and cakes.	1980	
495	To study factors that affect the quality of precooked and ready-to-cook frozen foods, with emphasis on the comparative suitability of soft-wheat versus hard-wheat flours in frozen batter and dough products.	3830	
496	A study of the freezing of pies and other baked goods.	3930	

Packaging

497	Packaging engineering research.	880	
498	Food containers.	3020	
499	Improvement of containers for foods through fundamental investigations of the materials and methods used in container manufacture.	80	
500	Improvement of food quality through the development of new processing and packaging techniques.	80	
501	Packaging studies.	2940	
502	Packaging materials for foods.	850	
503	Improved testing methods of packaging materials.	1200	
504	Container and closure research.	2940	
505	Product testing and packaging research projects.	1200	
506	Packaging development - specifications for materials.	1200	
507	Development of new types of paper closures and containers.	3490	
508	Mechanical research on packaging and wrapping of food products.	890	
509	Moisture resistance of packaging materials. Development of new packaging techniques.	2490	
510	Improvement and development of protective wrappers for foodstuffs and packages.	210	
511	Minimum and preferred standards of packaging.	1200	
512	Suppliers of protective packaging materials.	4300	
513	Packaging of food items for shipping, including protection of foods from high temperatures and high humidities.	890	
514	Production of solid fibre and corrugated shipping containers and folding cartons for shipping foods.	1220	
515	Basic design data for the use of fiberboard in shipping containers.	4020-M	4010-F
516	Research on packaging of foods. Problems in food distribution, economies in packaging, and merchandising. Work on packaging perishable foods in transparent films for self-service distribution. Investigation of the rate of spoilage, factors influencing spoilage by extending shelf life of perishable goods.	1030	
517	Comparative protection offered by different packaging materials.	3760	
518	Non-metallic packages for food products.	2120	4020
519	Containers for canned foods - testing and development of materials for the fabrication of metal food containers; evaluation with respect to suitability for various food products of containers embodying various types of construction materials.	870	

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
520	Solubility of tin and iron in metal containers packed with food products to determine toxicity range and effect on flavor.	1310	
521	Packaging, requirements of raw and processed foods.	2110	
522	Evaluation of packaging materials, conditions of packaging, and conditions of storage, development of methods of evaluation.	3590	
523	The packaging and storage of processed food.	850	
524	Variations in dimensions and weights of consumer packages.	850	
525	Stiffness of paperboard cartons.	2490	
526	Development of adhesives for packaging foodstuffs, such as adhesives for paper milk bottles, spiral wound food containers, etc.	650	
527	Packaging of frozen foods.	2280	
528	Packaging in frozen food locker plant.	2870	
529	Development of insulpak with lining of Thermocraft and insulated corrugated package capable of holding low temperatures in precooled perishables for air cargo such as fresh fish.	1520, 4350	
530	Frozen food foundation carry home bag for frozen foods.	1200	
531	Packaging - package to withstand frozen storage, normal handling both at retail and institutional level and use as a heating medium.	2150	
532	Fresh and precooked frozen foods, packaging, and by-product utilization.	2160	
533	Packaging and wrapping of frozen foods. (1) study of the storage period of frozen foods wrapped in various packaging materials. (2) study of gas permeability of wrapping materials in relation to development of rancidity on storage.	2360	
534	Improved locker and frozen foods papers.	880	
535	Coatings which are applied to wrapping papers for frozen food storage.	3230	
536	Preparing, packaging and storing foods for freezing.	840	
537	Packaging experiments on various frozen foods.	3090	
538	Sustained research for protective markings on consumer packages of frozen foods. (a) The FFI protective red band - turns red when temperature reaches 14 plus zero F. (b) a chart recording device.	1210	
539	Development of suitable packaging papers for frozen foods.	2950	
540	Research on food packing in glass containers.	1400	
541	Microbiology of hermetic and non-hermetic closures for glass containers.	310	
542	Correlation of process requirements for acid and non-acid foodstuffs packed in glass containers.	310	
543	Bottle and container testing.	2540	
544	Sustained research on glass and metal foil containers for frozen foods.	1210	
545	Aluminum foil for packaging.	70	
546	The possible use in bottle crown manufacture of substitute materials such as aluminum, rubber, plastics, etc.	440	
547	Development and improvement of sealing liners used for food products such as grape juice, ketchup and vinegar.	440	
548	Container studies. The problem of corrosion in metal closures for glass packaged food; to improve the shelf life of packaged merchandise.	390	
549	Packaging of various foods in Pliofilm for improving keeping qualities of packaged food.	1360	
550	Water and moisture vapor resistant papers for all kinds of processed foods.	880	

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
551	Moisture vapor impeding film forming materials of both the solvent deposited and molten types used in food packing and preservation.	3230	
552	Use of paraffin and other waxes in food containers.	4240	
553	Grease proofing film forming materials used in food packing.	3230	
554	Rodent and insect repellent papers.	880	
555	Film forming materials for inhibiting the penetration of food packages by insects, larvae, etc.	3230	
556	Edible food coatings.	1380	
557	Investigation of the properties of new films and papers with respect to permeability by gases, fats, etc.	1240	
558	Elimination of oxygen in packaged foods.	4220	
559	Permeation of organic vapors through barriers.	2830	4010-F
560	Improvement of the heat sealings, moisture vapor-proof lacquer-coated wrapper for food products.	3310	
561	Heat sealing materials used in food package closures, pre-package labeling, and government grade identification.	3230	
562	Laminating composition for combining food packaging components as foil, glassine, cellophane, tissue, etc.	3230	
563	Metals for dairy use.	2540	
564	Suitability of various types of thin plastic films for the packaging of cheddar cheese with the view toward producing a satisfactory rindless cheese package.	4200	
565	Study of methods of packaging or otherwise preparing natural cheese for the retail market.	4490	4020
566	Factors relating to manufacture and curing of rindless American cheddar cheese in transparent sheet wrappers.	1610	
567	Frozen food foundation sectional gallon ice cream containers.	1200	
568	Mullinix margarine cartons.	3940	
569	Improvements in folding cartons and shipping containers for food products as cereals, butter, lard, frozen foods, dairy products, and bakery goods.	4280	
570	Study of various wraps for meat for the freezer.	850	
571	Development of flexible packages for meat products.	4470	
572	Molten dipping compounds into which hams, bacon, cheese, etc. are dipped to lower moisture losses in storage.	3230	
573	Application of new laboratory or pilot processes to commercial scale methods of wrapping smoked meats to minimize microbiological growths.	3970-B	
574	Comparison of various pretreatments and packaging methods for frozen meats.	600	
575	Efficiency of various wrapping and carton materials for storing frozen fish. Studies are being made to develop containers for air transport of fresh fish, and also for shipping small quantities of frozen fish by mail or express.	4030-A	
576	Canned baby foods (strained and chopped vegetables, fruits, desserts, and meat combinations); container evaluation and improvements for increased marketable life.	140	
577	Consumer packaging of fruits.	3040	4020
578	Creation of safe, especially adapted mold inhibiting, processing, and wrapping papers, particularly for fruit.	880	
579	Consumer packaging of vegetables.	3040	4020
580	Consumer packaging of Florida vegetables. To study basic requirements and evaluate methods and materials under various conditions of temperature, humidity, etc. for use in consumer packaging of vegetables.	1150	4020

TECHNOLOGY

PROCESSING

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
581	To investigate basic requirements and evaluate methods of wrapping, handling, transporting, and storing of tropical and subtropical fruits, vegetables, flowers, and bulbs.	2270	
582	Processing and packing dried fruits in hermetically sealed containers.	600	
583	Improvement of flour quality for respective purposes. Packaging to meet the needs of domestic vs. export conditions.	3100	
584	A study of flour packaging methods.	160	3415
585	A study of packaging of bakery products.	160	1860
586	Packaging of foods, feeds, and industrial products made primarily from cereal, grains, and legumes.	3100	
587	Study of moisture relations, processing temperatures, and packaging of peanuts and plant products.	1300	4020
588	Work on storage life, concentration, stabilization, deterioration, and packaging with respect to candy.	1710	
589	Improving shelf life of frozen yeast goods.	1200	
590	Protective packing of active dry yeast.	3280	
591	Developmental packaging and stability studies of pharmaceutical dosage forms containing vitamins and/or minerals.	3510	
592	Improving wrappers for drinking straws.	2710	1005
593	Improved pie cartons and plates.	1200	
594	Procedures for preventing the attack of foods by rodents.	1090	

ECONOMICS

ECONOMICS
AGRICULTURAL ECONOMY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Farm and pasturage</u>			
1	Agricultural engineering research.	2370	
2	Agricultural mechanical development.	1460	3110, 2850
3	Full and efficient use of resources in agriculture in a developing economy.	710	
4	Farm management factors affecting efficient food production.	2280	
5	Study of methods of economic use of electric light, heat, and power for all phases of dairy farmstead.	4490	
6	Weed control.	1900	
7	Weed control by both mechanical and chemical means.	4100	
8	To study the use of calcium cyanamid to control weeds in peas and other crops.	610	
9	Weed control on the non-irrigated lands of Idaho.	1590	
10	The use and effectiveness of chemical herbicides in weed control.	1590	
11	Study of use of chemical weed killers and fertilizer materials in the control of weeds in several vegetable crops.	610	
12	Factors affecting organization and operation of California farms and ranches.	600-A	
13	Induced revegetation of depleted range and abandoned croplands to increase cattle and sheep production.	770	
14	Improved range practices for increased cattle production.	770	
15	Seasonal and annual trends in nutritive value of native forage plants in relation to range livestock production.	770	
16	Pasture investigations.	2280	
17	Irrigated pastures for dairy cattle.	770	
18	Pasture and hayland improvement.	2050	
19	Pasture grass evaluation: effect of management on pasture quality and quantity; studies on the effect of burning and mowing.	1150	
20	Barn hay-drier vs. field curing in relation to the nutrients, the quality and the cost of making hay under Maine conditions.	2050	
21	Methods and equipment for the preservation of grain and forage on the farm. Grain drying.	2680	
22	Nutritive value of range plants in relation to soil maturity and season. Correction of deficient, excessive or toxic materials and the effect on production of meat, wool, etc.	4110	
23	Maximum utilization of roughage and pasture by beef cattle.	2280	
24	Measurement of the nutritive values of pastures and pasture plants.	3040	4020
25	Grain silage in cattle feeding.	3370	
26	Beef cattle grazing.	2050	
27	Evaluation of grasses and legumes for hay, grass silage, and pasture for dairy cattle.	3040	4020
28	Preparation, fermentation, and feeding value of grass and legume silage.	3040	4020
29	Pasture management for dairy cattle.	4490	4020
30	Measurement of the nutritive values of pastures and of pasture plants.	3040	4020
31	Pasture grass evaluation: blood studies of cattle on different pastures.	1150	
32	Pasture research on volusia soil.	3040	4020

ECONOMICS

AGRICULTURAL ECONOMY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
33	Effect of different fertilizers, lime and plaster, and different amounts and sources on the production of corn, oats, mixed clover and timothy in rotation.	3040	4020
34	Pasture grass evaluation: Results of different fertilizer treatments upon the quantity and quality of pasture as measured by cattle performance and forage yield.	1150	
35	Causes of Low Percentage Calf crop in Range herds, Vitamin A and other deficiencies produced by late fall dry vegetation.	600-A	
36	Pasture grass evaluation: biological feeding trials with rabbits.	1150	
37	Producing, curing and storing legume, grass and cereal hay of high protein and high energy value.	2280	
38	Evaluation of grasses and legumes for use as poultry pasture.	3040	4020
39	The relative value of Ladino clover as a range for growing pullets.	2050	
40	Composition of range forage as related to animal nutrition.	1590	4020

Soils and fertilizers

41	Building of the soils organically, the proper feeding of the soil bacteria and fungi and observations of the results that accrue from practices of this type.	1890	
42	The increase of the humus content of soils and the functions of organic matter in producing super-high yields of crops.	1610	1190
43	Soil surveys and fertilizer requirement studies.	1900	
44	Soils and fertilizer research.	2370	

SOIL MANAGEMENT

45	Investigation of seasonal changes in nutrient levels of soils.	610	
46	Build-up and maintenance of soil fertility levels.	610	
47	Fertilizer test and soil building practices, including reclamation of saline and alkali soils.	4100	
48	A coordinated study of the amount and kind of fertilizers, and the time and method of application best suited to Pennsylvania crops, soils and conditions.	3040	4020
49	Fixation of atmospheric nitrogen.	1160	
50	Investigation concerning "M 16" fertilizer.	610	
51	A "Completely Cemented and Mineralized Fertilizer" which prevents the washing out of the very soluble nitrates by rainfall. Patents pending.	2120	
52	Fertilizer salt index.	610	
53	The phosphorous relations of soils and plants.	4490	
54	The influence of phosphate additions upon plant nutrients in the soil, quality and yield of crops.	1590	
55	Effect of phosphate fertilization on the nutrient value of forage.	1590	4020
56	Field test of different carriers of phosphorous.	3040	4020
57	Study of Michigan soil types as related to pasture, alfalfa, corn, potatoes.	2280	

Soil management for fruits

58	Soil management studies with fruits.	2280	

ECONOMICS
SOIL MANAGEMENT

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
59	Effect of various kinds and amounts of plant nutrients used with different cultural treatments, soils, varieties, etc., on the production of avocados, mangoes, limes, papayas, etc.	2270	
60	Fertilizer experiments with apples.	2050	
61	Influence of fertilizers, cover crops, and sods on yield and quality of apples.	3040	
62	Effect of different soil management practices, both with and without nitrogen fertilizers upon apple tree growth and fruiting and upon orchard soil structure and soil and water losses.	3040	4020
63	Soil covers in the apple orchard.	3040	4020
64	Soil management in peach and cherry orchards.	3040	4020
65	Study of factors affecting set of cherries in Sturgeon Bay district. Study of fruiting of cherry with references to effects of pruning and fertilization.	4490	
66	Soil treatment as affecting growth of citrus and walnut trees. Study of effect of N, Zn and other micro elements and of acidity of soil.	600-D	
67	Experiments to ascertain effects of commercial fertilizers on fig trees and crops.	560	4020, 600
68	Irrigation experiments to determine optimum requirements of several fig varieties.	560	4020, 600
69	Soil management in the concord grape vineyard.	3040	4020
70	Grape fertilizer investigations. Evaluation of existing practices; determination of deficiencies; methods and devices for supplying needs; and the determination of relation of deficiencies and additions to yields, quality and keeping quality in grapes.	600	

Soil management for vegetables

71	Method of fertilizer application - peas.	610	
72	Comparison of fertilizer ratios - peas.	610	
73	Rate of fertilizer application - peas.	610	
74	Nutrient requirement of peas.	610	
75	Application of superphosphate with the seed and nitrogen side-dressings after bloom - peas.	610	
76	Nutrient requirements - lima beans, carrots and okra.	610	
77	Fertilizer experiments with potatoes.	2050	
78	Effect of soil acidity, rotations, and time of planting on yields and quality of white potatoes.	3040	
79	Green manure crops as a means of increasing and maintaining the organic matter content of potato soils in Maine.	2050	
80	Tomato plant fertilizer investigation.	610	
81	Major element studies - soil test calibration - tomato research.	610	
82	Major and minor element - per yield studies - tomato research.	610	
83	Nitrogen for tomatoes.	610	
84	A study of the response of several tomato varieties to different fertilizer treatments.	610	
85	Sub-soil plowing in relation to tomato yields.	610	
86	Crop rotation in relation to tomato production.	610	
87	Response of tomatoes to the three most widely used fertilizers in Ontario.	610	
88	Effects of manganese and boron on yield and quality of tomatoes in Ontario.	610	
89	Influence of application of manganese sulphate to the soil on tomato yields.	610	

ECONOMICS

SOIL MANAGEMENT

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
90	Rate of fertilizer application for optimum tomato quality and yields.	610	
91	Plant food leaching problem - tomatoes.	610	
92	Five year continuous fertilization program - tomatoes.	610	
93	Method of fertilizer application - tomatoes.	610	
94	Amounts of fertilizer. Quantity of fertilizer for optimum yields - tomatoes.	610	
95	Effects of fertility levels on the quality of fresh and processed cabbage, sweet corn and tomatoes.	2870	
96	Investigation concerning the relationship of rainfall, soil type and replaceable magnesium to deficiency symptoms.	610	

SHELLFISH

97	Ecology of salt ponds and other coastal areas in relation to their productivity especially in respect to shellfish. This includes investigation of the possibility of using commercial fertilizers to increase productivity.	1440	

ENTOMOLOGY

Insect control

98	Entomology.	3370	2260
99	Insecticidal testing.	850	2260
100	Insecticidal testing.	3370	2260
101	Evaluation and development of new insecticides.	2670	
102	Sugar derivatives as insecticides.		3750
103	Development of new chemicals for use as insecticides, fungicides, bactericides and herbicides.	3040	4020
104	New techniques in insecticide and fungicide applications.	2280	
105	Factors affecting the deposit, retention, and removal of spray residues.	3040	4020
106	Physiological effects of sprays, insects and insecticides on citrus fruits.	600-D	
107	Amino acids and insect control. Study of nature and function of amino acids in insect blood; information required for propagation of useful insects and control of undesirable species.	850	1850
108	Determination of the possibility of controlling economic insects by the application of chemicals upon or near the soil surface.	2280	
109	Nutrition of insects as it affects their response to attractants and repellants.	4010-A	
110	Insect vectors of crop diseases.	2280	
111	Disease and insect control.	1900	
112	The control of insects attacking vegetable crops.	3040	
113	Aerosols and other concentrated spray methods for controlling vegetable insects.	4490	2185, 235
114	The improved production of snap beans by applications of insecticides, hormones and related substances.	4490	
115	Corn insect investigations.	4490	
116	Investigation of the newer materials and schedules for spraying potatoes.	3040	
117	Methods of controlling certain insects and mites affecting cultivated mushrooms.	3040	4020
118	Spraying of tomatoes.	3040	
119	Fruit-tree insects.	2280	
120	Relative effectiveness and safety of fungicides, insecticides, and mixtures that may be used on apples, peaches and cherries.	3040	4020

ECONOMICS

ENTOMOLOGY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
121	Biology and control of the cherry fruit flies in the great lakes region.	3040	4020
122	Biology and control of the codling moth.	3040	4020
123	Control of oriental fruit moth by DDT.	2280	
124	Biology and control of the grape berry moth (<i>polychrosis viteana clemens</i>) in the Erie Grape Belt.	3040	4020
125	Control of insect pests, principally nitidulid beetles, but also mites and thrips which may infest fruit, by use of chemical dusts, sprays, and soil flooding.	560	4020, 600
126	Biology and control of the plum curculio (<i>conotrachelus nunuphar</i> Hbst.) on peach.	3040	4020
127	Improved repellent for bees to protect from poison spray also as repellent for curculio moth and as fungicide.	2120	1020
128	Investigations and dissemination of information on beekeeping problems of Wisconsin.	4490	4020
129	Entomological problems affecting dairying, including insect pests of both dairy animals and dairy produce.	4490	
130	Control of infestation of stored grain and foods.	2060	
131	Study of methods of storing and shipping peanuts without the use of cold storage and prevention of insect infestation.	2600	

FISHERY INVESTIGATIONS

132	Physiology, propagation, growth and fattening of oysters. Natural enemies. Pollution.	4030-A	
133	Relation between insect prevalence and the abundance of trout in improved and unimproved streams.	2280	
134	Alaska fishery investigations. Salmon resources in Bristol Bay, Karluk River, Kodiak Island. Pink salmon of Southeastern Alaska, herring of Alaska, appearance time and abundance. Improvement and expansion spawning areas.	4030-A	
135	Abundance of shrimp, migrations, life history and survival. Effect of shrimp trawling on fishes. Effect of chemical plant control.	4030-A	
136	Physical and Chemical factors affecting abundance of Columbia river salmon and trout. Extent and cause of mortality. Natural propagation.	4030-A	
137	Distribution of nematopsis in coastal waters. Movements, propagation and methods of control in Long Island Sound.	4030-A	
138	(Fish culture) General diagnostic service. To aid fish culturists by diagnosing diseases and recommending treatments.	4030-A	
139	Great Lakes Fishery Investigations. Life histories, abundance, propagation and effect of turbidity on white-fish, yellow pike, longjaw, lake trout.	4030-A	
140	Life history, distribution and toxonomic studies of certain groups of fishes, anchovies, herrings, croakers, drum and sea trout and menhaden.	4030-A	
141	North Atlantic Fishery Investigations - abundance, survival, migration of haddock, groundfish, flounders, lobsters. Effect of price ceiling regulations on the fishery.	4030-A	
142	Pilchard fishing - abundance, availability, spawning.	3700	4030-A
143	Physiology and therapeutics of fish; propagation of black bass, pond fishes, fish production and managements.	4030-A	
144	Shad, - abundance, mortality, migration, effect of pollution. Life histories and abundance of shore fishes - striped bass, weakfish, fluke, sea bass, scup, and blue crab.	4030-A	

ECONOMICS

FISHERY INVESTIGATIONS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
145	Management of trout streams, life history, and productivity. Effect of water - use projects on fisheries; Keswick Dam, Shasta Dam, and salvage program.	3700	4030-A
146	Western fish - cultural investigations. Biological control and diet evaluation for maintaining salmon runs blocked by dams.	2910	4030-A
147	Western fish culture investigations. Physiology of disease and control methods (Columnaris disease.)	2910	4030-A
148	To determine cause and cure of anemia in trout.	4030-A	
149	Effects on fishes of atomic explosions. Reef, lagoon, and pelagic fish.	3700	4030-A, 4050
150	Studies of sources of pollution of fish and shellfish area, methods for purification of shellfish, and toxicity of clams and mussels due to certain foods in some areas.	4030-A	
151	Effects of DDT on oysters and other shellfish.	4030-A	
152	Clam farming project.		
	Financial possibilities of hard clam fishery in New Jersey; availability of seed clams, growth rates, changing quality with season and age, transplanting and harvesting.	3370	
153	Edible muscles and clams. To determine possibility of commercial production and conservation of edible mollusca other than oysters.	4030-A	
154	Toxicology. Effects of insecticides and chemicals on fish.	4030-A	
155	To assess the effects of water-hyacinth-control measures on fish, fish food, and aquatic environments.	4030-A	
156	Nutritional requirements of salmonoid fishes. Minimum and optimum requirements of various vitamins as a guide in fish feeding. Effect of growth and conditions of fish of feeding various dietary supplements to discover means of applying research findings in fish rearing.	4030-A	
157	Nutrition of fishes with particular references to small particles of various food materials.	4030-A	

UTILIZATION OF BY-PRODUCTS AND ABUNDANT PRODUCTS

158	Investigation of by-products for general food manufacture.	2740	

Dairy products

159	Utilization of intact milk protein in various food combinations.	3520	
160	Marketing outlets for dry whole milk.	4490	
161	Sweetened condensed whole milk in the manufacture of caramels.	1610	
162	A study of dairy products which would be suitable for use in milk chocolate and candy manufacture.	4490	
163	Value of milk by-products for feeding poultry.	850	
164	Whey utilization.	2540	
165	Use of whey, whey fractions, and products arising from fermentation of whey in poultry nutrition.	4490	4410
166	Use of demineralized whey in cookery.	4490	
167	Nutritional investigation of value of whey products and other agricultural by-products in animal and human nutrition.	4410	
168	Corrosion inhibitors from proteins protein derivatives.	4020-A, I	
169	Development of a new dairy food, having protein content of lean beef, which when used in place of meat results in products with definite meaty tastes.	270	

Fats

170	A natural butter suitable for use under tropical conditions.	2360	2850

ECONOMICS

UTILIZATION OF BY-PRODUCTS AND ABUNDANT PRODUCTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
171	Use of lecithins in various food fields.	670	
172	Wax and fatty by-products from sugarcane.	4020-A	3750
<u>Meat products</u>			
173	Utilization of packing house by-products.	1600-A	
174	Studies on nutritive value of animal by-product protein feeds.	710	180
175	The economics of production of pharmaceuticals from slaughter house by-products to be surveyed in connection with tanning industry.	1750	1735
176	Study on various ways of cutting down the strength of wastes from a packing house in order to make valuable recoveries of materials which may be used in feed, fertilizer, or in case of greases, raw material for manufacture of soap.	2450	
<u>Fishery by-products</u>			
177	Utilization of fishery by-products.	2910	
178	Utilization of Alaskan cannery waste, - large quantities of salmon trimmings and viscera, - as pharmaceuticals being considered.	4030-A	
179	Shark meal; trials with poultry, swine, and cattle; biological value; chemical evaluation of nitrogen components.	1150	
180	Growth materials from waste fish water as feed supplements.	1330	
181	Special recipes for using frozen fish.	1200	
182	Methods of harvesting and utilizing coarse fleshed and other fish found abundantly in Michigan waters.	2280	
183	Research on utilization of fish wastes for commercial concerns.	2110	
184	Marine plankton as an emergency source of food for survivors at sea; and consideration of nutritional value of plankton as food for domestic animals.	1440	
<u>Eggs</u>			
185	Utilization of dried and frozen eggs products in foods.	1740	4020
186	Performance of eggs and egg products and their use in foods.	1740	
187	Study of the biocolloidal condition of eggs, including watery eggs, and for use in development of new industrial products.	4320	4020
<u>Fruits and vegetable products</u>			
188	Engineering development of processes for preparing biological culture medium concentration from fruit and vegetable culls, wastes, and processing residues.	4020-A, I	
189	Utilization of meats, fruits, vegetables, and their products.	1300	4020
190	Development of new products using fruit and vegetable wastes.	2910	
191	Utilization investigations on apple and juice products such as essence, sirup, and concentrate.	4020-A, F	
192	Salvage from apple product waste of potentially useful by-products.	3780	
193	To incorporate various apple products in confections.	4020-A, F	
194	Utilization of summer apples in frozen pies.	2885	4020
195	Ammoniated citrus pulp; analyses, feeding trials, and growth studies.	1150	
196	Expanded use of agricultural products in candy.	2550, 4020	
197	Recovery of trace elements and citric and ascorbic acid from ion exchanges, during the back wash from the manufacture of bland syrup.	1720	

ECONOMICS

UTILIZATION OF BY-PRODUCTS AND ABUNDANT PRODUCTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
198	To develop a process for preparing sugar solutions from pear cannery wastes, which are free from objectionable amounts of suspended solids, flavor, color, and spray residue.	4385, 4320	4020-A
199	Engineering development of processes for production of protein and vitamin rich yeasts from fruit wastes.	4020-A, I	
200	Study of utilization of dried and dehydrated fruits.	3930	
201	Development of freezing preservation processes to produce edible food from vegetable wastes.	4020-A, I	
202	Chemical and nutritional studies of agricultural waste products; sugar cane cachaza; coffee husk.	3210-C	
203	Chemical engineering investigations on the extractions of vitamins from vegetable wastes.	4020-A, F	
204	Vitamin concentrates from vegetable wastes.	4020-A, F	
205	Chemical engineering investigations on the preparation of high-vitamin, high-protein animal feeds from vegetable wastes.	4020-A-F, 950	
206	Utilization of sweet potatoes in the making of vinegar, sirup, and a dehydrated food product.	3830	4020
207	Recipes for use of flour from sweet potatoes.	30	
208	Sweet potato meal; analysis, amino acid studies, and feeding trials.	1150	
209	Study of processing utilization of sweet potatoes, beets, okra, spinach and parsley, with reference to products grown in Louisiana.	660	
210	Development of foods from vegetable protein.	1940	
211	Utilization of sugar beet by-products.	770	
212	Beet by-products.	4530	3750
213	To determine value of wet beet pulp, beet top silage, and corn silage as feed for steer.	1590	
214	Utilization of sugar beet by-products as livestock feed.	4100	
215	Dehydrated bean vines and celery wastes; poultry feeding trials and analyses.	1150	
216	Removal of corn starch from corn cannery waste.	3090	
217	Application of edible soya products in the food field.	240	
218	Soybeans and soybean products as human food.	1610	4020
219	Utilization of soya beans, flax seed, and cotton seed as protein supplements in feeds.	1890	437
220	Soybean oil, meal, and their cleavage products in food, feed, and industrial uses.	3100	
221	Use of various soy flours in bakery products, confectionery products, and other food industries.	670	
222	Use of soy albumen in confectionery items, bakery products, and miscellaneous uses.	670	
223	Studies on lupine seed meal.	1150	
224	Study of jelling characteristics of protein from alcohol - extracted oilseed meal, including soybean meal, as a constituent of desserts, confections, ice creams, and bread-like materials without use of meat.	4020-G	
225	Ramie meal; analyses, digestion trials, nitrogen balance, poultry growth studies, and vitamin analyses.	1150	
226	Squash seed (cucurbita pepo); cooking qualities and palatability as a food for human consumption.	810	
227	To develop new outlets for citrus. This project covers not only new products for human consumption but also animal feed stuffs and chemicals.	3900	
228	Manufacture of a washed peel, instead of a limed one, such as is customary, to be used as feed as source of pectin or cellulose.	1720	2300
229	Citrus seed meal; amino acid analysis, and poultry growth studies.	1150	

ECONOMICS

UTILIZATION OF BY-PRODUCTS AND ABUNDANT PRODUCTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Grain products</u>			
230	Industrial utilization of sorghum grains.	2300	
231	Grain milling products utilization for food, feed, and industrial uses; sirup, gluten, and other cleavage products of carbohydrates, proteins, and vegetable oils.	3100	
<u>Distillers' by-products</u>			
232	Production of food products from distillers' dried solubles neutral solubles for incorporation into recipes for making bread, chocolate milk supplement, cookies, crackers, biscuits, breakfast cereals, and other foods.	3480	
233	Production of food products from distillers' dried solubles; protein hydrolysate for incorporation into bouillon, gravy mixes, steak sauces, and other like foods.	3480	
234	Use of distillery by-products in poultry rations.	2870, 4490 4290	3440, 4290
235	Study of hatchability potency of distillers' by-products in poultry rations.	2120	3440
236	Value of distillers' dried solubles and dried grains with solubles in ration of dairy calves.	3040	3440
237	Use of distillers' by-products in calf nutrition.	2870	4290
238	Nutritive value of dried distillers' solubles for dairy calves.	850	
239	Study of constituents of distillery wastes which have value as supplementary cattle food.	340	
240	Use of distillers' by-products in swine nutrition.	1610	4290
<u>Miscellaneous</u>			
241	Development of high protein feed from yeast; source of basic materials is agricultural waste materials.	2460	
242	Investigation of plants indigenous to Southwest as sources of oils, starches, proteins, antioxidants, vitamins, sterols, and alkaloids.	3870	
243	Separation of pectic materials and gums from joints of the cactus plant, Pountia, a Texas plant, in amounts to permit segregation and purification of components. Purified substances in powder form subjected to comparative tests with other commercial gums derived from other plants.	3830	
244	Gelidium cartilagineum, the chief source of agar agar.	3620	
245	Vitamin C in Idaho rose hips.	1590	
246	Engineering investigations on utilization of (Persian) walnut hulls as a source of vitamin C.	4020-A, I	
247	Chemical composition and utilization of almond hulls.	600	

MARKETING AND SUPPLY

<u>General</u>			
248	Merchandising survey.	1200	
249	Agricultural markets and prices.	710	
250	Consumption economics.	3700	
251	Economic studies, business research in food yield.	1490	
252	Economic factors involved in the distribution of foods through retail outlets.	3120	
253	Factors affecting efficiency in the marketing of California farm products.	600	
254	Factors affecting the supply, demand, and prices of important California farm products.	600	

ECONOMICS

MARKETING AND SUPPLY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
255	Agricultural adjustments in Maine and Maine farm prices in postwar period.	2050	
256	Seasonal variation of Michigan farm prices.	2280	
257	Factors affecting agricultural prices and price relationships in Pennsylvania.	3040	4020
258	Market conditions and trends in Pennsylvania arising from the truck movement of produce and from changes in merchandising methods and dietary habits.	3040	4020
259	Rating and evaluation of foods for consumer use.	2740	
<u>Frozen foods</u>			
260	Frozen food lockers.	1610	
261	Business analysis of frozen food locker plants.	4490	
262	Frozen food business, agriculture, and grocery stores. Economics of operations of frozen food lockers, their impact on food industry as a whole, and the consequences on the consumer.	1750	1735
263	Frozen food business in Kansas. Examination of integration of agricultural production with quick-freezing operations in Kansas.	1750	1735
264	Study of the comparative costs of certain fruits and vegetables home and commercially frozen, and the comparative cost of home freezing in lockers and home freezers.	4340	
265	Relative costs of using commercial locker and home freezing units.	1650	
266	Freezing of foods, operation of locker plants and merchandising of frozen foods.	1960	
267	Comparative edible portions of frozen, canned and fresh foods.	1200	
268	Study of consumer demand for frozen foods in Syracuse, N. Y.	850	
269	An evaluation of zero storage in a community.	850	
270	Methods of delivery of frozen foods to home.	1200	
271	Development of a frozen pack and canning industry in Idaho.	1590	
<u>Dairy products</u>			
272	Marketing, dairy project.	1610	
273	Developments in dairy marketing.	2280	
274	Consumer demand for dairy products.	3040	4020
275	Cost of marketing dairy products.	3040	4020-K
276	Marketing milk.	3040	4020
277	Costs of producing milk.	3040	4020
278	Milk facts. Milk distribution costs.	2330	
279	An economic analysis of the cost of distributing milk to consumers.	3220	
280	An economic analysis of the Indianapolis milk market.	3220	
281	An economic study of the dairy industry in Maine.	2050	
282	Marketing milk in Tennessee.	3830	
283	Study of the effectiveness of milk control programs in securing quality milk production in selected Indiana areas.	3220	
284	Improvement of milk supply for Idaho creameries and cheese factories.	1590	
285	Nationwide survey of the availability of vitamin D milk to consumers.	3780	
286	Effects of various types of butter packaging on (1) butter quality and flavor; (2) costs of packaging; and (3) merchandising problems and costs of distribution at retail and consumer levels.	4490	2975

ECONOMICS
MARKETING AND SUPPLY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Eggs</u>			
287	Marketing eggs.	1610	
288	Marketing Wisconsin eggs.	4490	
289	Analysis of the production of eggs as raw material for dehydration or freezing.	4020-I	
290	Egg production, home use, storage, and marketing as done by the Home Demonstration Club members of Bexar County during one year. Questionnaire and personal interview used.	3890	
<u>Meat</u>			
291	Meat packaging and merchandising.	2280	
292	Economic problems of small slaughter houses.	1750	1735
293	Livestock marketing and feeding in Washington.	4320	
294	Objective methods for classifying beef carcasses with respect to market grades.	4020-B	
295	The eastern packer market for Indiana hogs.	3220	
296	Personalized meat cutting for locker plant patrons.	850	4020
297	Marketing veal calves on a carcass grade and weight basis.	4490	
<u>Poultry</u>			
298	Factors affecting the market quality of dressed and drawn poultry.	3040	4020-K
299	Factors affecting the price of broilers in Indiana.	3220	
300	Economic production of turkeys.	3040	
301	An economic study of demand, supply, price and marketing conditions for turkeys.	4320	4020
302	Alternative methods of merchandising turkey meat.	3220	
303	Uses of turkey parts as they appear on the retail market.	3890	
<u>Fruits and vegetables</u>			
304	Use of cracked ice in preserving the quality of fruits and vegetables between the time of harvesting and storage or use.	2390	
305	The use of ice in preserving the nutritive value of fresh fruits and vegetables.	2885	
306	The use of crushed ice for the preservation of fresh fruits and vegetables.	3220	2480
307	Handling of perishable produce for local consumption.	2120	2480
308	Effect of packing fresh fruits and vegetables in ice.	1770	
309	Effect of cracked ice in retaining vitamin C, sugar, weight, color and taste of fresh vegetables during various treatments representing shipping, storage, and retail market conditions.	1150	4020
310	Consumer reaction to the use of crushed ice in displaying vegetables in retail stores.	2870	2480
311	Effect of chipped-ice packing on market losses and on ascorbic acid content and palatability of four varieties of freshly harvested kale.	810	2480
312	Effect of crushed ice refrigeration on conservation of vitamin C content and on retention of weight of Ohio grown vegetables.	2870	
313	Effect of consumer packaging of fresh fruits and vegetables, on marketing techniques and practices, prices and quality of products.	600	
314	Packaging and marketing fruits and vegetables.	2280	
315	Storage and marketing of farm and garden crops.	3830	

ECONOMICS
MARKETING AND SUPPLY

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
316	An economic study of the handling, packaging, and distribution of consumer packaged fruits and vegetables in the Fort Wayne, Indiana Area, with special emphasis upon work simplification.	3220	
317	Consumer unit packaging and distribution as a means to marketing Indiana fruits and vegetables.	3220	
318	Fast freezing and precooking as methods of preservation by, and aids in the orderly marketing of Indiana horticultural products.	3220	
319	Horticultural marketing. A study of consumer unit packaging and distribution as a means of marketing Indiana fruits and vegetables.	1630	4020
320	Storage and handling problems of citrus fruits and the avocado.	600-C	
321	Determination of optimum storage conditions for fruits and vegetables.	1940	
322	Production costs and efficiency for fruits and vegetables, Washington.	4320	
323	Marketing methods for fruits and vegetables in Pennsylvania.	3040	4020-K
324	Factors affecting maturity, shipping, and storage quality of fruits.	2100	
325	Analysis of the supply of fruits and vegetables as raw materials for the freezing industry.	4020-I	
326	A comparative study of the cost, availability, and nutritive value of fresh, canned, and frozen fruits and vegetables in the retail market.	850	
327	Comparative cost of fresh frozen and canned fruit and vegetables throughout the year.	40, 4540	
<u>Fruits</u>			
328	Marketing fruits.	1610	
329	Factors affecting Michigan peach prices.	2280	
330	Harvesting, packaging and shipping trials with peaches.	2280	
331	Laboratory and pilot plant investigation - applied research, effect of transportation on the quality of small fruits.	3970-B	
332	Precooling of Indiana melons.	3220	2480
333	The relation of sugar content, waxing, branding, precooling and other factors in market value of Indiana cantaloupes.	3220	
334	Problems of packing, shipping and marketing of fresh vegetables and melons.	590	4415
<u>Vegetables</u>			
335	Preservation of freshness in vegetables and fruits from harvest to consumption.	950	2480
336	Marketing vegetables.	1610	
337	Vegetable marketing. Development of easily applied measures of quality factors involved in market grades and standards.	2100	
338	Use of ice in maintaining quality and vitamin C content of harvested vegetables. The use of ice in marketing of sweet corn. A study of broccoli deterioration.	600-B	3290
339	Marketing problems resulting from wartime shifts and changes in potato production and possible programs necessary to effectuate desirable adjustments.	3040	
340	Potato marketing and processing.	2280	
341	New methods of grading, packaging, and shipping to improve and maintain the quality of potatoes and to determine consumer acceptance for same.	1590	
342	The quality-price relationships of potatoes at the retail level.	2810	

BACTERIOLOGY

BACTERIOLOGY
FOOD SPOILAGE AND PRESERVATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>Causes and methods of control (general)</u>			
1	Bacteriology of foods related to preservation.	2940	
2	Causes of food spoilage and damage.	2740	
3	Food preservation studies.	1980	4020
4	Chemical and bacteriological research.	2370	
5	Bacterial growth indicator.	2150	
6	Simplifying mold counting techniques.	2870	
7	Food preservation and decomposition studies.	2280	4020
8	Bacterial studies of the degradation of food, beverages, containers and related products.	3380	
9	Study of changes in viability of various microorganisms when suspended in food materials and stored in frozen conditions. Studies also on effect of various environmental factors and temperatures on enzymes when present in food materials stored in frozen conditions.	2360-A	4050-A
10	Use of mycostatic and bactericidal agents and refrigeration for the preservation of certain perishable products and beverages in refrigerated warehouse cooler storage.	2910	3290
11	Effects of cold on microorganisms; quick frozen dairy and poultry products. Studies on the contamination of eviscerated poultry.	2680-A	
12	Food sterilization methods.	2940	
13	Sterilization of packed baby foods. Investigations and evaluations of proposed new methods of sterilizing glass packaged food.	390	
14	Bacteriological methods for canning. Process evaluation.	1160	
15	Spoilage in canned foods - diagnosis of microbiological and other spoilage in canned foods; the study of microbiological agents of spoilage and their relation to canning plant conditions and canning procedures.	870	
16	Protection of the public health through the determination and establishment of proper sterilizing processes for canned foods.	80	
17	Sterilization of canned foods - heat penetration tests and calculation of processing times and temperatures for new canned food products, and review of processes for standard items.	80	
18	To isolate, characterize, and study the thermal characteristics of microorganisms responsible for spoilage of home canned acid foods and of organisms from other natural sources which are capable of causing such spoilage.	4020-D	
19	Sterilization of food materials.	1380	
20	Thermal death time studies.	2940	
21	Microbiological, thermal death time studies on food spoilage organisms.	1490	
22	Factors affecting heat resistance of spores of clostridium botulinum.	710	
23	The ecology of clostridium botulinus in soils of North Dakota.	2810	
24	Public health significance of salmonella types and species.	710	
25	Bacterial disintegration by radio frequencies.	3120	
26	Sterilization, including blanching, involving a complete study of the full range of wave lengths for sterilization from sonic vibrations through to x-rays and cathode rays.	2110	
27	Pasteurization studies.	2540	
<u>Dairy products</u>			
28	Evaluation of microscopic procedure for detecting thermoduric bacteria in raw milk supplies and for determining quality of pasteurized milk.	3040	4020

BACTERIOLOGY

FOOD SPOILAGE AND PRESERVATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
29	The keeping quality of milk in home refrigeration.	4400	4020
30	Comparative studies on reductase production by micro-organisms isolated from milk as revealed by methylene blue and by resazurin.	520	
31	Preservation of cottage cheese.	2810	
32	Control of mold growth in cheese curing room by aid of ultraviolet ray lamp.	1590	
33	Bacteriological study of vanilla and chocolate ice cream.	540	
34	Factors affecting the quality of ice cream.	3040	1055, 3800
35	A study of the mold content of cream and mold mycelia content of commercial butter.	3220	
36	Chlorine resistance of certain water borne microorganisms related to deterioration of butter.	2810	
37	Influence of various factors on the growth of <i>Pseudomonas putrefaciens</i> in butter.	2810	
38	The effect of various microorganisms upon oils with different iodine numbers.	1600	

Meat products, poultry, fish

39	The chemistry of <i>Staphylococcus enterotoxin</i> .	710	
40	Public health aspects of <i>staphylococcus</i> food poisoning in relation to meat. "Thermal death time of a strain of <i>staphylococcus</i> in meat."	2360	2450
41	Relationship of <i>Clostridium botulinum</i> to canned meat processing.	1610	2450
42	Evaluation of lethality of pasteurization processes used in the meat packing.	2450	
43	Bacteriological studies relating to thermal processing of canned meats.	2360	2450
44	Bacteriological studies on the discoloration of cured meats.	710	180
45	Effect of holding periods of ultra-violet light on pork to be frozen and stored at 0 degree F.	850	
46	Incidence of putrefactive anaerobic spores in meat products prior to heat processing.	1650	4010-F
47	Determination of base line data on the presence of heat resistant putrefactive spores in meat products.	290	4010-F
48	Studies on bacteriology of fresh, canned and cured meats.	290	
49	Study of bacteriological problems in the manufacture of sausage items.	4490	2160
50	Spoilage of mildly cured, sliced, vacuum-packed bacon, the causes and methods for prevention.	4020-B	4020
51	Bacteriology of canned bacon.	2360-A	
52	Molds of meats.	1010	
53	Production and bacteriology of precooked frozen stew.	2280	
54	Salmonellas in poultry and poultry products.	2870	
55	Microbiology of shrimp. A quantitative and qualitative determination of the flora of Gulf shrimp.	3890	4040
56	Antiseptic means for prolonging the time for which fresh seafoods may be kept fresh after they have been removed from the water.	430	
57	Studies on the establishment of safe heat sterilization times for canned fishery products.	600-G	

Eggs

58	Keeping quality of eggs; satisfactory process for cleaning shell eggs and maintenance of quality during summer.	2390	
59	Prevention of spoilage in eggs by their bacterial content; therm-stabilized eggs.	2390	3800

BACTERIOLOGY
FOOD SPOILAGE AND PRESERVATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
60	Prevention of spoilage in eggs by controlling their bacterial count. Determining the influence of pasteurized treatments on the keeping quality and palatability of shell and dried eggs.	2390	
61	Effect of various cleaning processes on the microbiology and physical properties of eggs in storage.	810	
62	Comparison of the effect of emulsept and chlorine in washing dirty eggs upon the bacterial count of the egg pulp.	1600	
63	Preservation of quality in shell eggs by shell treating.	2870	
64	Investigation of pathogenic and potentially pathogenic microorganisms in dehydrated egg and products related thereto.	4020-F	
65	Investigation of spoilage microorganisms in dehydrated eggs.	4020-F	
66	Microbiology of frozen eggs.	2780	
67	The longevity and behavior of pathogenic bacteria in frozen foods. Object; frozen whole eggs.	3220	4040
<u>Precooked frozen foods</u>			
68	Microbiological survey on commercially frozen precooked foods from fifteen different states. Bacteriological food spoilage indicator to warn consumer of foods which have thawed.	2110	
69	Investigations of numbers and types of microorganisms in precooked frozen foods.	4020-I	
70	Bacteriological aspects of precooked frozen foods.	2680-A	4010-F
71	Bacteriological studies - standards for each precooked frozen food product currently manufactured.	2150	
<u>Fruits and vegetables</u>			
72	Factors affecting the quality of home-canned vegetables. measurement of heat penetration, in green beans using six sources of heat - 2 sizes of electric heat unit, two sizes of gas burner, wood and kerosene oil.	3890	
73	Development of methods for safe processing of home canned food, meat, blackeye peas and peaches. Heat penetration recorded, lowest safe processing time calculated.	3850	
74	Bacterial spoilage of canned fruits. A recent new type of spoilage. The sources of contamination, nature of the bacteria responsible and control measures.	600	
75	To develop techniques and bacteriologically sound processes for the home canning of fruits, vegetables, and meats of maximum quality. Quality and nutritive value of fruits, vegetables and meats so processed and stored for varying periods.	4020-D	
76	Investigations of factors influencing microbial numbers in frozen pack snap and lima beans.	4020-I	
77	Microorganisms causing spoilage of dried fruits. Study of sugaring and fermentation; isolation, identification and study of pure cultures of microorganisms (chiefly yeasts); control measures.	600	
78	Microbiological studies in dehydration and dried fruit packing plants. Extent and sources of contamination of dried vegetables and fruits with bacteria, yeasts and molds, factors affecting their numbers and methods of control. Identification of microorganisms responsible for souring of vegetables.	600	

BACTERIOLOGY

FOOD SPOILAGE AND PRESERVATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
79	Clarification and sterilization of apple juice.	2280	
80	Improvement of technique of mold count in tomato products.	2110	
81	Spoilage of date fruit in relation to microorganisms.	600-D	
82	Bacterial spoilage of ripe olives during pickling.	600	
83	Spoilage of pickles. Chiefly, the bacteriology of barreled peppers. Nature of spoilage organisms and methods of prevention and control.	600	
84	Problems of green olive pickling. Effect of certain metals, particularly copper, in green olive brines, studies on bacterial spoilage, causes of abnormal color in flesh of green olives, use of bacterial starters and other factors.	600	

Nuts

85	Study of optimum moisture content of shelled and unshelled peanuts for safe storage to prevent fungi damaging the nuts.	2600	

Grains and bakery products

86	Microbiology of milled grains and bakery products.	3000	
87	Safety tests on canned bread inoculated with Cl. Botulinum spores.	710	
88	Study of the possibilities of growth of clostridium botulinum in canned bread.	2360-A	

NUTRITIVE REQUIREMENTS OF MICROORGANISMS

General

89	Microorganisms.	3890	2260
90	Nutritive requirements of microorganisms.	4490	4040
91	Nutritional requirements of Doderlein's bacillus.	2920	
92	Investigations of variant of mutant strains of the food poisoning bacterial species Salmonella typhimurium in respect to dietary requirements. Strains isolated which lack ability to manufacture certain metabolites.	220	

Amino acids

93	The cellular chemistry of amino acids. Relation of amino acids to growth of mutant strains of Neurospora.	590	4010-F, 2850
94	Chemical genetics.	590	2260
95	The nutritional requirements of protozoa with special reference to essential vitamins, minerals and serum fractions required by Trichomonas vaginalis.	2920	
96	Nutrition in the protozoa and specifically on problem of nutrition in paramecium.	4250	
97	Requirements of microorganisms for amino acids and other nutrients and the determination of amino acids in plant and animal products.	600-A	4040
98	Nutritional requirements of microorganism with particular emphasis on inorganic trace elements needs, and on the factors affecting growth of photosynthetic organisms in light and in darkness.	1450	
99	Nutritional requirements of the tubercle bacilli.	1440	
100	Nutritional requirements of yeast. Production of food yeasts.	2580	

BACTERIOLOGY

NUTRITIVE REQUIREMENTS OF MICROORGANISMS

Number		Laboratories	Supporting Organization
101	The physiology and nutrition of yeast organisms; particularly as regards the production of vitamins. Food yeasts; food value for humans; needs of yeast in culture.	4490	4020
102	Determination of the metabolic activities of yeast cells by means of X-ray induced mutations.	3400	
103	Carbon and nitrogen metabolism of unicellular organisms	710	
104	Physiology of spore formation and spore germination. Effect of physiological and nutritive factors on formation and germination of spores of food spoilage anaerobes. Special attention to <u>Clostridium botulinum</u> .	3890	4010-F
105	Amino acid metabolism by the Genus <i>Proteus</i> .	3400	
106	Development of culture media and methods. Techniques suitable for bacteriological studies of fish diseases.	4030-A	
107	Influence of steepwater in various substrates which are employed for growing microorganisms.	1600	
108	Amino acid analysis of steepwater liquor and zein by microbiological techniques.	1600	
109	Chemical reactions leading to synthesis of amino acids in living organisms with attention to the mechanisms by which lactic acid bacteria synthesize amino acids.	3850	

Vitamin requirements

110	Relation of vitamins to bacterial metabolism.	710	
111	Determination of vitamin function by use of microorganisms. Function of B vitamins in metabolism of microorganisms and the application of this information to animals and man.	850	4020
112	Mechanism of vitamin action in metabolism of microorganisms, particularly B complex. Mechanism of biological oxidation; development of improved biological tests for qualitative estimation of the vitamins; discovery of unknown vitamins.	1650	4020
113	Synthesis of B complex vitamins by tubercle bacilli (biotin and folic acid) and inhibition of this synthesis.	1010	2090, 2650
114	Role of pantothenic acid in bacteria metabolism.	1660	4460
115	Role of vitamin B ₆ in the conversion of indole to tryptophane by <u>L. arabinosus</u> .	3850	
116	Growth factors and vitamin requirements for microorganisms.	4490	4020-I, 2260 1910
117	Growth stimulants in the microbiological assays for biotin by <i>L. Casei</i> and <i>L. arabinosis</i> .	1980	4020

Unidentified factors

118	Comparison of growth factors required by mold-like microorganisms with those required by the guinea pig.	3700	2850
119	<i>Lactobacillus gayoni</i> 8289 growth factor.	2910	4460
120	Vitamin requirements of unicellular animal organisms.	220	
121	Factors influencing growth and development of <i>E. histolytica</i> in vitro and in vivo.	600-F	
122	Isolation and identification of unknown factors involved in bacterial growth.	3120	
123	A growth stimulatory substance for a strain of <i>staphylococcus</i> which appear not to be identified with any of the presently known growth substances.	1440	
124	Serial passage of Hodgkin's disease extracts and tissues in chicken eggs.	600-F	

BACTERIOLOGY

MICROBIOLOGICAL ASSAY METHODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
<u>General</u>			
125	Microbiology.	3700	2260
<u>Amino Acids</u>			
126	Amino acids.	3200	2260
127	Amino acids.	600	2260
128	Development of bioassays for amino acids; reaction of nitrogen compounds in plants.	3700	2850
129	Development of bioassays for amino acids.	590	2850
130	Microbiological analysis of amino acids.	600	2850
131	Microbiological determination of certain amino acids in foods.	4380	
132	Microbiological assay of amino acids and other nutrilites.	710	
133	Microbiological methods of determining some of the amino acids.	3570	
134	Microbiological assay of amino acids. To adapt published methods to assay of distillers' dried solubles and by-products prepared from solubles, development of new assay procedures and routine assay of materials.	3480	
135	Microbiological determination of amino acids.	3890	
136	Microbiological assay procedures for amino acids.	2260	
137	The microanalysis of amino acids and proteins in the of isotopic derivatives.	2770	90
138	Microbiological determinations to estimate the nutritive value of proteins. To develop and apply methods for determining amino acids in proteins and foods.	4020-D	4020
139	Microbiological protein assay methods.	280	
140	Amino acid metabolism studies employing microbiological methods of assay.	3510	
141	The bacterial metabolism of the sulfur containing amino acids.	3400	
142	Study of hydrolysis procedures for the determination of tryptophane vegetable products by microbiological methods.	260	
<u>Vitamins</u>			
143	Assay of vitamins by microbiological techniques.	3510	
144	Microbiological studies on known and unknown vitamins.	2980	
145	Microbiological synthesis and assay for vitamins.	850	
146	Microbiological methods for determining some of the vitamins.	3570	
147	Methods of assay for vitamins and minerals.	3510	
148	Development of a microchemical method for thiamine and natural derivatives in fluids and tissues.	3200	
149	Analytical procedures for yeast analysis, and vitamin assay procedures for thiamin and riboflavin.	2580	
150	Microbiological assays for riboflavin content of foods. Assays on whole fluid milk, evaporated milk and beef and pork liver prepared by different methods.	3220	
151	Development of a microchemical method for riboflavin and natural derivatives in body fluids and tissues.	3200	
152	Microbiological assay of PAB and its physiological function during growth for food and fermentation processes by means of a yeast strain Rhototorula Aurantiaca.	4260	
153	Microbiological methods of determining folic acid.	3570	
154	Microbiological studies of folic acid.	4380	

BACTERIOLOGY

MICROBIOLOGICAL ASSAY METHODS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
155	A microchemical method for folic acid and natural derivatives in body fluids and tissues.	3200	
156	Determination of vitamins by microbiological methods in milk and milk products. Special emphasis to folic acid, stability in milk and in milk products containing iron.	4520	
157	Microbiological studies of anti-metabolites.	3510	
158	Microbiological determinations for vitamins, amino acids, anti-vitamins, and unidentified growth factors for various types of microorganisms.	1910-A	
159	Microbiological studies of nutrients of unknown chemical composition.	3510	
160	Microbial flora of the food of wild drosophilidae of the Hawaiian Islands.	1600	
161	Dried bacterial cultures.	2540	

ROLE OF INTESTINAL MICROORGANISMS

162	Relation of intestinal flora to nutritive requirements; vitamin requirements of different genetic strains of mice as related to size of flora.	4540	90
163	Role of intestinal microorganisms in the nutrition of animals.	4490	
164	Use of germ-free chickens for investigating the possibility of new and unknown factors needed for chicken nutrition.	2840	
165	Germ-free baby rats, special casein and dried milk formula for use in rearing.	2840	
166	Problems related to the synthesis of niacin in the rat.	600-F	
167	Synthesis of vitamins by intestinal tract bacteria--the effect of surgical removal of caecum and large intestine in rats.	4420	4460
168	Influence of dietary fat on growth and the micro-flora of the intestinal tract of rats, and the nutritive value of fat fractions.	4490	2530
169	Influence of pyridoxine deficiency on the niacin synthesis in the intestine and tissues of the rat.	600-C	
170	Biosynthesis of nicotinic acid.	4540	4460
171	Rumen fermentation studies.	2280	
172	Synthesis of water soluble vitamins in the alimentary tract of livestock.	600	
173	Influence of feed fed dairy cows on rumen digestion of crude fiber and the synthesis of thiamin and riboflavin.	2050	
174	Decomposition and absorption of cellulose by microorganisms of intestinal tract of ruminants. a) Extent of cellulose decomposition in various feeds. b) Microorganisms responsible. c) Decomposition products formed and absorption. d) Factors (diet) which influence decomposition.	260	
175	Effect of dietary fat on intestinal flora of calves.	2360	101
176	Study of the influence of distillers' dried solubles and synthetic vitamins on biosynthesis of vitamins in the intestine of the chick.	3220	3480
177	Production of riboflavin by microorganisms. Study of conditions favoring riboflavin production more especially by yeast and yeast like organisms.	2580	
178	Determination and correlation of the utilization of different proteins in normal and protein depleted dogs with appetite and with intestinal flora.	3370	4010-F
179	Animal protein factor; attempts to synthesize it by microbial processes.	1560	
180	Studies of protein synthesis in microorganisms.	2830	

BACTERIOLOGY
ROLE OF INTESTINAL MICROORGANISMS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organizations</u>
181	Synthesis of amino acids by intestinal bacteria in the rat.	780-A	

SANITATION

Bactericides, detergents and quaternary ammonium compounds

182	Sanitation surveys and studies which include bacteriological surveys to test efficiency of clean-up procedures and efficiency of bactericides, detergents, etc.	1900	
183	Investigation of the efficacy of sterile lamps in destroying mold bacteria in some refrigeration systems. Study of some scientific testing of mold and bacterial control in both room freezing and immersion freezing.	3890	
184	The use of ultraviolet rays for sterilizing milk cans.	1590	
185	Relationship between bacterial levels of market milk supplies and methods of cleaning farm equipment.	2710	765
186	Comparative value of factors affecting clean milk production.	2280	
187	Creamery and milk plant sanitation.	2280	
188	Sterilizing agents for dairy use.	2120	
189	Detergents and sterilizers for dairy use.	2540	
190	Cleaning and sterilizing investigations. Comparative survey of certain cationic germicides, efficiency of several quaternary ammonium compounds. Effect of temperature and organic materials - possible resistance development of <i>Escherichia coli</i> after repeated exposure.	850	2900
191	Plant sanitation and other health aspects. The use of insecticides and rodenticides as applied to plant sanitation.	4030-A	
192	Plant and product sanitation investigations.	3020	
193	Microbiological aspects as sanitation in food establishments, wineries, dried fruit packing plants, dehydraters and freezing establishment. Sources of contamination, types of microorganisms present and methods of control.	600-A	
194	Determination of effectiveness of commercial frozen foods packing sanitation methods.	3770	
195	Development of bactericides for the food sanitation industry.	860	
196	Antibacterial agents.	2830	
197	Use of calcium sequestering compounds and of quaternary ammonium compounds in cleaning and sterilizing food handling equipment.	20	
198	Synthesis and application of quaternary ammonium compounds as germicides for the sanitization of eating and drinking utensils. Evaluation included the usual organisms as <i>S. aureus</i> and <i>E. typhosa</i> , etc.	4130	
199	Effectiveness of various germicides.	3220-A	1780
200	Germicidal efficiency of BTC, tetrasan, and Isothan Q-15. a) Killing dilutions against human pathogens. b) Death rate. c) Temperature coefficient. d) Coefficient of dilution. e) Effect of pH. f) Bacteriostatic and fungistatic properties. g) Effect of organic matter.	2900	
201	More effective chemical sanitation compounds.	3770	
202	Relation between the results obtained by microscopical analysis and sanitary conditions existing at the time of manufacture of canned foods.	3770	

PSYCHOLOGY

BACTERIOLOGY

SANITATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
203	Field tests on a neutral bactericidal detergent, containing a quaternary ammonium compound, taking bacterial counts of dishes and glassware from public eating places where the detergent is in use.	3590	
204	Protein - fatty acid wetting agents and detergents.	420	
205	Bactericidal detergents. Showed that quaternary ammonium compounds cannot be used in detergent compositions if the pH of the detergents is sufficiently alkaline to saponify fats and oils, thereby producing soap which inactivates the quaternary.	3590	
206	Development of detergents for the food sanitation industry, dairy, brewery, soft drinks, bakery, etc.	860	
207	Development of techniques for evaluation of dishwashing detergents; a) factors involved in the adherence of microorganisms to eating utensils surface. b) development of germicidal detergent for hand dishwashing. c) compilation of bibliography of literature on subject of dishwashing and eating utensil sanitation.	1050	
208	Development of ways to provide educational programs for workers involved in various dairy and food plants in the nation.	1780	

FERMENTATIONS AND YEASTS

209	Fermentation studies.	2280	4020
210	Fermentation studies; development of new varieties.	2490	
211	Fermentation and enzymes.	2770	3750
212	Studies on yeast and yeast derivatives.	2960	
213	Basic research on yeast physiology. Investigations on formation of formic, lactic, and acetic acids by yeasts.	600	
214	Biochemistry of yeast.	3280	
215	Investigations on the microbiology of wine. Yeasts in musts and bacteria. Influence on odor of wines, control and selection of microorganisms. Riboflavin, pantothenic and nicotinic acids in musts and wines. Amino acids in yeast nutrition.	600	
216	Bacteria of wines, isolation, identification, associative activity with yeasts, growth requirements, effects produced in wines, control measures and other factors for a number of acetic and lactic acid bacteria of wines. Studies concerned with basic research.	600	
217	Yeasts of grapes and wines. Yeasts causing spoilage of bottled wines and their control.	600	
218	Properties of and use of Flor yeasts in sherry making, importance of pH value, addition of CaSO ₄ , alcohol concentration, temperature, size of container and O ₂ supply.	600	
219	Chemistry, technology and bacteriology of tartrates production. Role of pH value and Ca ions in precipitation of tartrates; bacterial spoilage and prevention. Taxonomy of spoilage organisms.	600	
220	Preservation of food by fermentation. a) Identification of bacteria involved in fermentations. b) Chemical changes occurring during fermentation. c) Effect of environmental factors upon bacterial and chemical changes.	850	4020
221	Bacteriological causes of gaseous fermentation in development of bloater stock in the fermentation of pickling cucumbers in brine.	4020-A	2610
222	Physico-chemical changes which occur during dough fermentation.	3760	

BACTERIOLOGY
FERMENTATIONS AND YEASTS

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
223	Fermentative processes as well as other research projects in the field of milling and baking.	3000	
224	Bacterial cultures for development of flavor in bread and in cake.	1170	
225	Action of yeast in dough. Observation of the influence of different yeast processing factors on gas production in doughs as indicated by gassing curves.	2580	
226	Soda cracker fermentation.	4000	
227	Molasses fermentations.	4490	3750
228	Vitamin production-fermentative production of various vitamins by growth of certain molds and bacteria in variety of media, containing substances derived principally from cereal grains or agricultural residues, (riboflavin generation by action of <u>Ashbya gossypii</u>).	4020-G	
229	Food materials from fermentation processes. A study of the efficacy of various microorganisms as fermenters for producing soy sauce from soybeans.	4020-G	
230	Production of food acids by microorganisms in media containing cereal grain wastes. Citric acid production, with study of factors which influence speed and efficiency of its formation. Study of a-ketoglutaric acid production, with research on mechanism of biological oxidation.	4020-G	
231	Microbiological investigations employing whey as a fermentation medium for the derivation of nutritionally valuable materials.	4410	

ANTIBIOTICS

232	Antibiotics.	4490, 3370 3040	2260
233	Production of antibiotics.	480	
234	Studies on finding new antibiotics.	3220	4090
235	Antitubercular compounds.	4190	2260
236	Antibiotic effect of penicillin on the bacterial population of fresh, natural milk. Comparative studies on reductase production by microorganisms isolated from milk as revealed by methylene blue and by resazurin.	520	
237	Plant antibiotics active against plant and animal pathogens.	4120	1190
238	Yeast extracts in manufacture of antibiotics.	4140	
239	Two new biochemical factors, bacillin and antibacillin.	3890	4460
240	Antibiotics in foods. Effect of feeding antibiotic carrying foods in physiological processes of the white rat; nutritive value of foods preserved with antibiotic substances.	2280	4020
241	Antibacterial action of inactivated ergosterol in the guinea pig and man.	1320	
242	Mechanism of action of antibacterial agents. (1) The occurrence of resistant individuals in the microbial population. (2) Purified bacterial enzymes prepared, and effect of inhibitors on these. (3) Action of useful agents on growth, respiration of food spoilage organisms.	3890	4010-F
243	Bactericidal or bacteriostatic agents.	2400	

PSYCHOLOGY
FOOD ACCEPTANCE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
1	Food acceptance.	2830	4010-F
2	Studies on physiology of appetite; factors affecting amount of food ingested.	1680	4010-F
3	Studies on physiology of voluntary food intake.	1580-Z	4010-F
4	Influence of variations in diet upon voluntary food intake of experimental animals.	3510	4010-F
5	Comparative studies on acceptability and nutritive value of fresh and dehydrated foods.	3620	4010-F
6	Preparation of a critical review of psychological literature upon food acceptance in animals and analysis of laboratory data relating to palatability and appetite.	1610	4010-F
7	Studies on self-selection of diets.	3120	2850
8	Psychological aspects of feeding; "free selection" of food and feeding interval by the infant.	4330	
9	Free-choice feeding; self-selection of diets.	1700	3750
10	Nutritive value of fat, carbohydrate and protein determined by a single food choice method.	1700	
11	Endocrine factors in the self-selection of diet by rats; the validity of self selection of diet by rats as an instrument with which to investigate the metabolic needs of the animal.	1260	4040-C
12	Influence of food constituents upon acceptability of foods.	2770	4010-F
13	Consumer acceptance of the "main dish" in school lunch meals.	2280	
14	Nutritive value and acceptability of food served in large scale feeding establishments.	4010-E	4010-F
15	Acceptability to patients and cost of hospital diets fortified with protein concentrates and hydrolyzates.	4010-B	
16	Study on food acceptance methods.	1310	
17	Studies on acceptability of foods; role of bulk in relation to satiety value.	3620	
18	Relation of spoilage to food acceptability and nutritive value.	3620	4010-F
19	Role of naturally present deleterious compounds in acceptability.	600-A	4010-F
20	Human appetite; to correlate acuity of sense of smell and intensity of appetite.	1580-EE	4010-F
21	Studies on appetite mechanisms as determined by nutrition.	4120	4010-F
22	Utilization of proteins correlated with appetite and intestinal flora.	3370	4010-F
23	Appetite levels of food consumption in Iowa.	1650	4010-F
24	Appetite levels of food consumption in South Carolina.	750	4010-F
25	Appetite levels of food consumption in Vermont.	4120	4010-F
26	Study of rate of acceptance, range in degree of preference, and the preferred method of preparation for foods used by city bred and reared, and by farm population in Florida.	1150	4020
27	Food habits of Alabama people; urban families, high school and college students.	40	
28	Study of food habits of a representative group of families in Austin and Abilene, Texas.	3890	
29	Habits, preferences, and practices in selection, preparation and use of food by Iowa families.	1660	
30	Study of food habits of Negro school children in Ascension Parish, Donaldsonville, Louisiana.	3640	
31	Food preparation of both white and negro village families in the short leaf pine and delta areas of Mississippi which will conserve nutritive value and yet not change acceptability.	2380	4020
32	To determine food acceptance for native born Rhode Islanders.	3320	4020
33	To determine rate of acceptance and range in preference of food of native rural and urban middle-aged men in South Carolina.	750	4010-F 4020

PSYCHOLOGY

FOOD ACCEPTANCE

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
34	State-wide survey of the eating habits of South Dakota school children.	3610	
35	Effects of environmental and chemical factors on appetite and the mechanism of action of appetite depressants and stimulants.	790	4010-F
36	Food acceptance in relation to physiological stress.	3120	
37	Study on appetite depressants in relation to ration acceptability.	790-A	4010-F
38	Effect of food and environment on food intake.	4540	4010-F
39	Research on specific problems for psychometric evaluation of certain food products.	3480	
40	Method research on psychometric evaluation of food and beverage products.	3480	
41	The comparative sweetness of dextrose, sucrose and levulose, using dextrose and levulose each in turn as the basis of comparison.	1000	
42	Taste perception and taste preference as based on the three basic tastes, - sweet, salt and sour - of the average consumer.	1000	
43	Studies of psychological attitudes toward ingestion of food.	790-A	
44	Food acceptance under emotional stress.	3120	4010-F
45	Psychophysical development of pre-school child.	3880	
46	Longitudinal study of food intake and food habits of a group of children, ages from three months to six years.	2170	
47	"Food acceptance study," including both high school students and members of adult extension groups.	2420	
48	Comparative studies of various physical and mental responses evidenced by young adults in relation to graded breakfast patterns.		1250
49	Food habits and food likes and dislikes of men and women students at a dormitory in one of the Teachers' Colleges in Oklahoma.	2890	
50	Food preferences of the aged.	4350	
51	Food habits of two age levels of persons of military age.	3040	4010-F

NUTRITION EDUCATION

Literature

52	Publication of "Nutrition Reviews"; review of research literature in the science of nutrition.	1440	2850
53	Publication of "Nutritional Observatory" and cumulative index.	3120-A	
54	Publication of "Nutricion," the Spanish edition of "Nutrition Reviews" for distribution to the Spanish-speaking Americas.		2850
55	Survey of food and nutrition research in the United States.	2635	4010-F
56	Nutrition and resistance to climatic stress; literature survey and critical review.	1610	4010-F
57	Research in nutrition at the University of California; publications 1942 to 1947.	600	
58	Publication of data useful to groups in studies of child development.	4420	2850
59	"Food and Agricultural Policy" - publication.	1440	
60	Review of technical and trade literature.	1200	
61	First supplement of the literature search on the preservation of foods by freezing.	1280	
62	Literature research on the handling, storage, and transportation of fruits and vegetables.	4180	3970
63	Collection of complete bibliography on poultry products.	1660	290
64	Flour consumption in the United States since 1940, - a publication.	3700	

PSYCHOLOGY

NUTRITION EDUCATION

Number		Laboratories	Supporting Organization
65	Manioc: a tropical food resource, - a book.	3700	
66	Publication of C.S. Hudson papers.	95	3750
67	Recovery of the sugar industry in western Europe, - an article.	3700	
68	Sugar in World War II, - a book.	3700	
69	Preparation of a monograph on the digestibility of feeds.	4400	
70	Latin-American agricultural developments, 1939-1948, - a book.	3700	
71	Preparation of a book to summarize the present factual knowledge of the various biochemical entities as related to clinical medicine.	3210-C	
72	Bibliography translation of reprints of the more obscure foreign literature on vitamin C, citrus, vitamin P, plant pigments, adrenal or epinephrine metabolism, purpura, and capillary fragility.	570	
73	"The basis of American and FAO food objectives: nutrition fact or fancy?", - an article.	3700	
74	World grain crisis of 1945-1948, - a book.	3700	
75	Commercial fertilizers in World War II, - a book.	3700	
76	Coffee, tea, and cocoa in World War II, - a book.	3700	
77	Fats and oils in World War II, a book.	3700	
78	Whaling and whale oil during and after the war, - a pamphlet.	3700	
79	Economic stabilization through international commodity stockpiling, - a book.	3700	
80	Theory of inverse carrying charges in future markets, - an article.	3700	
81	Soviet-Russian agriculture in the interwar period; statistical appraisal, - a book.	3700	
82	Closure of the public domain, - book.	3700	

Community projects

83	Public health nutrition investigations in Florida.	1147	2850
84	County agent and extension workers advisory and cooperative work and meetings.	1150	
85	Development of school and community program in nutrition; methods, techniques, and materials for effective teaching of nutrition at different age levels. Program initiated in an experimental elementary school in Washington-Heights-Riverside Health District of New York City.	790	1250
86	Research and education in community nutrition. Nutrition education in public schools; (a) in elementary and (b) in junior and senior high schools.	1440	2850
87	Nutritionist for outpatient department, - Flint Goodrich Hospital.	1580-M	970
88	Organization of food department of small community hospitals, - survey and recommendations by trained worker.	4340	
89	Nutritionist for Hume Child Development Centre, New Orleans.	1580-T	970
90	Teaching Center, Hillman Hospital.	1580-R, 741	4460
91	Educational needs of rural homemakers of low socio-economic status.	1660	
92	Annual homemaking institute to which community is invited.	970	
93	Educational procedures needed to change food habits, with special reference to college home economics students.	1660	4020
94	Nutrition education in the elementary school; evaluation of selected activities used in primary and fifth grades.	710	
95	Consumer educational panels in conjunction with consumer advisory councils.	1210	
96	Florida Feed Dealers Nutrition Conference.	1150	

PSYCHOLOGY

NUTRITION EDUCATION

<u>Number</u>		<u>Laboratories</u>	<u>Supporting Organization</u>
97	Permanent exhibit on nutrition.	1745	2660
98	Distribution of Heinz nutritional charts to medical schools and hospitals, and the Spanish edition to other Americas.	1490	3120-A

Financial support

99	Grant for equipment for nutrition research.	1440	2850
100	Grant for clinical Research	1585	1380
101	Grant to New York University-Bellevue Medical Center Fund.	2770, 1580-B	3695
102	Grant for organic research	710	1380
103	Fellowship fund for training in the clinical and public health aspects of nutrition.	1440	2850
104	Personnel training program.	1200	
105	Fellowship in animal nutrition at Illinois Experiment Station, Purdue, and Ohio Experiment Station.	670-A	

ORGANIZATIONS

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
	A		
10	Abbott Dairies, Inc. 238 Lombard St. Philadelphia, Pa.	190	American Medical Association 535 North Dearborn St. Chicago 10, Ill.
20	Abbott Laboratories 14th St. and Sheridan Rd. North Chicago, Ill.	195	American Potash and Chemical Corporation 132 East 26th St. New York 17, N. Y.
30	Alabama Polytechnic Institute Auburn, Ala.	200	American Sugar Refining Company 120 Wall St. New York, N. Y.
40	Alabama, University of University, Ala. (A) Medical College Birmingham, Ala.	210	American Viscose Corporation Sylvania Division Marcus Hook, Pa.
50	Alaska, University of College, Alaska	215	Ames Company Elkhart, Ind.
60	Alrose Chemical Company 180 Mill St. Cranston, R. I.	220	Amherst College Amherst, Mass.
70	Aluminum Company of America P. O. Box 772 New Kensington, Pa.	230	Anheuser Busch, Inc. Research Laboratories St. Louis, Mo.
80	American Can Company 11th Ave. and St. Charles Ave. Maywood, Ill.	235	Ansul Chemical Company Marinette, Wis.
90	American Cancer Society 47 Beaver St. New York 4, N. Y.	240	Archer-Daniels-Midland Company 3100 38th Ave., South Minneapolis, Minn.
95	American Chemical Society Washington, D. C.	250	Arizona State College Tempe, Ariz.
100	American Cyanamid Company 30 Rockefeller Plaza New York 20, N. Y. (A) Lederle Laboratories Division Pearl River, N. Y.	260	Arizona, University of Tucson, Ariz.
101	American Dairy Association 111 North Canal St. Chicago 6, Ill.	270	Arkansas, University of Fayetteville, Ark. (A) Medical College Little Rock, Ark.
110	American Diabetes Association 429 Clinton Ave. Brooklyn 5, N. Y.	280	Arlington Chemical Company Yonkers 1, N. Y.
120	American Dry Milk Institute, Inc. 221 North LaSalle St. Chicago 1, Ill.	290	Armour and Company Chemical Research and Develop- ment Department Union Stockyards Chicago 9, Ill.
130	American Home Economics Associa- tion 620 Mills Bldg. Washington, D. C.		Armour Research Foundation See Illinois Institute of Tech.
140	American Home Foods Division of American Home Products Corporation 22 East 40th St. New York 18, N. Y.	310	Armstrong Cork Company Lancaster, Pa.
150	American Honey Institute Commercial State Bank Bldg. Madison 3, Wis.	320	Associated Seed Growers, Inc. 205 Church St. New Haven, Conn.
160	American Institute of Baking 1135 Fullerton Ave. Chicago, Ill.	330	Atlas Powder Company Wilmington 99, Del.
170	American Lecithin Company Elmhurst, L. I., N. Y.		B
180	American Meat Institute 59 East Van Buren St. Chicago 5, Ill.	340	Bacon Laboratories, Frederick S. 192 Pleasant St. Watertown 72, Mass.
		350	Barnett Laboratories 6256 Cherry Ave. Long Beach 5, Calif.
		360	Battelle Memorial Institute Columbus 1, Ohio
		370	Baxter, Don, Inc. Research and Production Labs. 1015 Grandview Ave. Glendale 1, Calif.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
380	Beacon Milling Company, Inc. Cayuga, N. Y.	540	Butler University Indianapolis, Ind.
390	Beech-Nut Packing Company Canajoharie, N. Y.	C	
395	Belmont Chemical Sales and Develop- ment Company 80 East Jackson Blvd. Chicago, Ill.	545	Calco Chemical Company American Cyanamid Company Bound Brook, N. J.
400	Ben Venue Laboratories, Inc. Bedford, Ohio	550	Calgon, Inc. Hagan Bldg. 323 4th Ave. Pittsburgh, Pa.
410	Best Foods, Inc. 88 Lexington Ave. New York 16, N. Y.	560	California Fig Institute 617 Rowell Bldg. Fresno, Calif.
420	Bioproducts Oreg. Ltd. Warrenton, Oreg.	570	California Fruit Growers Exchange Los Angeles, Calif.
425	Bioresearch Labs 139 8th Ave. Newark 4, N. J.	580	California and Hawaiian Sugar Refining Corporation, Ltd. Crockett, Calif.
430	Birdseye, Clarence Eastern Point Blvd. Gloucester, Mass.	590	California Institute of Technology Pasadena, Calif.
435	Bjorksten Research Laboratories Chicago, Ill.	595	California Packing Corporation 101 California St. San Francisco, Calif.
437	Blaw Knox Company Farmers Bank Bldg. Pittsburgh, Pa.	600	California, University of (A) Berkeley Campus (B) Davis Campus (C) Los Angeles Branch (D) Riverside Campus (E) Santa Barbara Campus (F) San Francisco Campus (G) George William Hooper Foundation
440	Bond Crown and Cork Company Division of Continental Can Company 16th and Locust Sts. Wilmington 99, Del.	610	Campbell Soup Company 100 Market St. Camden, N. J.
450	Booth Company, Inc., F. E. 1290 Powell St. Emeryville 8, Calif.	620	Can Manufacturers Institute, Inc. 60 East 42nd St. New York 17, N. Y.
455	Borden Company 350 Madison Ave. New York 17, N. Y.	630	Carey Salt Company Hutchinson, Kans.
457	Boston University Boston, Mass. Bowman Fund for Cancer Research, Jonathan See University of Wisconsin	640	Carnation Company Research Laboratories 2344 North Oakland Ave. Milwaukee 11, Wis.
470	Branchflower Company, Lyle 15th Ave., N.W. at Shilshole Seattle 7, Wash.	650	Casein Company of America Division of Borden Company Bainbridge, N. Y.
480	Bristol Laboratories, Inc. Syracuse 1, N. Y.	660	Central Products Company 214 West Ohio St. Chicago 10, Ill.
490	Brookhaven National Laboratory Associated Universities, Inc. Upton, L. I., N. Y.	670	Central Soya Company, Inc. Decatur, Ind. (A) McMillen Feed Mills
500	Brooklyn College of the City of New York Bedford Ave. and Ave. H Brooklyn, N. Y.	680	Cerophyl Laboratories, Inc. 2438 Broadway Kansas City 10, Mo.
510	Brown University Providence, R. I.	690	Chain Belt Company Milwaukee 4, Wis.
520	Bucknell University Lewisburg, Pa.	695	Chattanooga, University of Chattanooga, Tenn.
525	Buehler Company Howard St. Chicago, Ill.	700	Chemical Foundation, Inc. 40 Wall St. New York, N. Y.
530	Buffalo, University of Buffalo, N. Y.		

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
705	Chicago Medical School 710 South Wolcott Ave. Chicago, Ill.	900	Cutter Laboratories 4th and Parker Sts. Berkeley 1, Calif.
710	Chicago, University of Chicago, Ill.	D	
730	Children's Fund of Michigan 660 Frederick St. Detroit, Mich. Childs Memorial Fund for Medical Research, Jane Coffin (Cancer) See Yale University	910	Dairymen's League Cooperative Assoc., Inc. Dairymen's League General Labo- ratory 810 Burnet Ave. Syracuse 1, N. Y.
741	Cincinnati, University of Cincinnati, Ohio	920	Davis Company, R. B. 38 Jackson St. Hoboken, N. J.
750	Clemson Agricultural College Clemson, S. C.	930	Dean Milk Company 20 North Wacker Dr. Chicago 6, Ill.
760	Clinton Industries, Inc. Clinton, Iowa	940	Deepfreeze Motor Products Corpora- tion 2301 Davis St. North Chicago, Ill.
765	Colgate-Palmolive-Peet Company 105 Hudson St. Jersey City 2, N. J.	950	Delaware, University of Newark, Del.
770	Colorado Agricultural and Mechanical College Fort Collins, Colo.	960	Denver, University of (A) Bureau of Industrial Research Denver, Colo.
780	Colorado, University of Boulder, Colo. (A) Medical College, Denver, Colo.	970	Dillard University New Orleans, La.
790	Columbia University New York, N. Y. (A) College of Physicians and Surgeons 630 West 168th St. New York, N. Y.	980	Distillation Products, Inc. 755 Ridge Road West Rochester 13, N. Y.
800	Commercial Solvents Corporation Terre Haute, Ind.	985	Dow-Corning Company 592 Saginaw Road Midland, Mich.
810	Connecticut, University of Storrs, Conn.	990	Drackett Company, Manufacturers 5020 Spring Grove Ave. Cincinnati 32, Ohio
820	Continental Can Company, Inc. 4633 West Grand Ave. Chicago 39, Ill.	1000	Drexel Institute of Technology Philadelphia, Pa.
830	Corn Industries Research Foundation 3 East 45th St. New York 17, N. Y.	1005	Drinking Straw Institute 369 Lexington Ave. New York 17, N. Y.
840	Corn Products Refining Company Argo, Ill.	1010	Duke University Durham, N. C.
850	Cornell University Ithaca, N. Y. (A) Cornell Medical College and New York Hospital East End Ave. and 68th St. New York, N. Y.	1020	Du Pont de Nemours Company, Inc., E. I. Wilmington 98, Del. (A) Biological Laboratory Organic Chemicals Department Jersey Ave. and Hay St. P. O. Box 71 New Brunswick, N. J.
860	Cowles Detergent Company Cleveland 3, Ohio	E	
870	Crown Can Company Division of Crown Cork and Seal Co., Inc. Erie Ave. at H St. Philadelphia, Pa.	1040	Eastern States Farmers' Exchange Westbrook Farm Rockville, Conn.
880	Crown Zellerbach Company Camas, Wash.	1050	Economics Laboratory, Inc. Manufacturing Chemists Guardian Bldg. St. Paul, Minn.
890	Curtiss Candy Company Chicago 13, Ill.		

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
1055	Edible Gelatin Manufacturers Research Society Bryant Park Bldg. 55 West 42nd St. New York City 18, N. Y.		G
1060	Eimer and Amend Manufacturers Greenwich and Morton Sts. New York 14, N. Y.	1220	Gaylord Container Corporation 111 N. 4th St. St. Louis 2, Mo.
1070	Emory University Emory University, Ga.	1230	General Electric Company 1285 Boston Ave. Bridgeport 2, Conn.
1080	Endo Products, Inc. 84-40 One Hundred and First St. Richmond Hill 18, N. Y.	1240	General Foods Corporation Postum Bldg. 250 Park Ave. New York, N. Y.
1090	Esselen Research Corporation 857 Boylston St. Boston 16, Mass.	1250	General Mills, Inc. 400 Second Ave., South Minneapolis 1, Minn.
1100	Evans Research and Development Corporation 250 East 43rd St. New York 17, N. Y.	1260	George Washington University Washington, D. C.
1110	Evaporated Milk Association 307 N. Michigan Ave. Chicago 1, Ill.	1270	Georgetown University Washington, D. C.
	F	1280	Georgia School of Technology Atlanta, Ga.
1120	Flakice Corporation 360 Furman St. Brooklyn, N. Y.	1290	Georgia State College of Women Milledgeville, Ga.
1130	Florasynth Laboratories, Inc. 1513 Olmstead Ave. New York 61, N. Y.	1300	Georgia, University of Athens, Ga. (A) School of Medicine Augusta, Ga.
1140	Florida Citrus Cannery Cooperative Box 112 Lake Wales, Fla.	1310	Gerber Products Company Gerber's Baby Foods Fremont, Mich.
1145	Florida Citrus Fruit Growers Assoc.	1320	Glenn Dale Sanatorium Glenn Dale, Md.
1147	Florida State Board of Health Tallahassee, Fla.	1330	Glidden Company 1396 Union Commerce Bldg. Cleveland 14, Ohio
1150	Florida, University of Gainesville, Fla. (A) Citrus Experiment Station Lake Alfred, Fla.	1340	Godchaux Sugars, Inc. Carondelet Bldg. P. O. Box 226 New Orleans, La.
1155	Folger Coffee Company Howard and Spear Sts. San Francisco, Calif.	1350	Golden State Company, Ltd. 425 Battery St. San Francisco 11, Calif.
1160	Food Machinery Corporation San Jose 5, Calif.	1360	Goodyear Research Laboratory Goodyear Tire and Rubber Co. Akron, Ohio
1170	Food Technology, Inc. 5903 Northwest Highway Chicago 31, Ill.	1365	Grange League Federation Exchange, Inc. Ithaca, N. Y.
1180	Fordham University New York, N. Y.	1370	Great Western Sugar Company Sugar Bldg. Denver, Colo.
1190	Frasch Foundation, Herman U. S. Trust Company of New York 45 Wall St. New York 5, N. Y.	1380	Griffith Laboratories 1415 West 37th St. Chicago 9, Ill.
1200	Frozen Food Foundation, Inc. 600 West Genessee St. Syracuse 4, N. Y.	1390	Guggenheim, Murry and Leonie, Dental Clinic 422-428 East 72nd St. New York, N. Y.
1210	Frozen Food Institute 90 West Broadway New York, N. Y.	1400	Gutmann, Ferdinand, and Company 36th to 37th St. and 14th Ave. Brooklyn 18, N. Y.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
	H		D
1410	Hahneman Medical College and Hospital 235 N. 15th St. Philadelphia 2, Pa.	E	Brigham, Peter Bent Boston 15, Mass.
1420	Hampton Institute Hampton, Va.	F	Brooklyn Jewish Brooklyn, N. Y.
1430	Harris Laboratories Nebraska Theatre Bldg. Lincoln 8, Neb.	G	Cedars of Lebanon Los Angeles, Calif.
1435	Harrower Laboratories, Inc. 920 East Broadway Glendale 5, Calif.	H	Children's Boston, Mass.
1440	Harvard University Boston, Mass.	I	Children's Iowa City, Iowa
1450	Haskins Laboratories, Inc. 305 East 43rd St. New York 17, N. Y.	J	Children's Los Angeles, Calif.
1455	Hastings Foundation Pasadena, Calif.	K	Children's Philadelphia, Pa.
1456	Havana, University of Havana, Cuba	L	Colorado General Denver, Colo.
1460	Hawaiian Pineapple Company, Ltd. Honolulu 1, T. H.	M	Elgin State Elgin, Ill.
1470	Hawaiian Sugar Planters' Assoc. P. O. Box 2450 Honolulu, T. H.	N	Flint Goodridge New Orleans, La.
1480	Hawaii, University of Honolulu, T. H.	O	Flower and Fifth Avenue New York, N. Y.
1490	Heinz, H. J., Company P. O. Box 57 Pittsburgh 30, Pa.	P	Ford, Henry Detroit, Mich.
1500	Hershey Chocolate Corporation Hershey, Pa.	Q	Gallinger Washington, D. C.
1510	Hess and Clark, Inc. Ashland, Ohio	R	Hastings Home, Charles Cook 3800 N. Lincoln Ave. Altadena, Calif.
1520	Hinde and Dauch Paper Company Sandusky, Ohio	S	Hillman Birmingham, Ala.
1530	Hoffmann-LaRoche, Inc. Nutley 10, N. J.	T	Home and Hospital of Daughters of Jacob New York, N. Y.
1535	Holy Cross, College of Worcester, Mass.	U	Hume Child Development Center New Orleans, La.
1540	Hood and Sons, H. P. 56 Roland St. Boston 29, Mass.	V	Johns Hopkins Baltimore, Md.
	Hooper Foundation, George William See University of California	W	Los Angeles County General Los Angeles, Calif.
1560	Hoosier Soybean Mills 33rd and Nebraska Sts. Marion, Ind.	X	Massachusetts General Boston, Mass.
1570	Hooton Chocolate Company 351 North 5th St. Newark 7, N. J.	Y	McKinley Trenton, N. J.
	Hormel Institute See University of Minnesota	Z	Montreal General Montreal, Canada
1580	<u>Hospitals</u>	AA	Mt. Sinai New York, N. Y.
A	Baltimore Baltimore, Md.	BB	Mount Zion Los Angeles, Calif.
B	Bellevue New York, N. Y.	CC	New York Memorial New York, N. Y.
C	Beth-Israel Boston, Mass.	DD	New York Postgraduate New York, N. Y.
		EE	Pennsylvania, Philadelphia- Lying-In Philadelphia 7, Pa.
		FF	Permanente Foundation Oakland, Calif.
		GG	Reese, Michael Chicago, Ill.
			State of Wisconsin, General Madison, Wis.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
HH	Strong Memorial Rochester, N. Y.	1680	Jefferson Medical College Philadelphia, Pa.
II	Texas, for Cancer Research University of Texas Galveston, Tex.	1690	Jewel Tea Company, Inc. Jewel Park Barrington, Ill.
JJ	University Cleveland, Ohio	1700	Johns Hopkins University Baltimore, Md.
KK	University Iowa City, Iowa	1710	Johnson Candy Company, Walter H. 4500 W. Belmont Ave. Chicago 41, Ill.
LL	U. S. Naval Oakland, Calif.	1720	Juice Industries, Inc. P. O. Box 157 Dunedin, Fla.
1585	Howard University Medical School Washington, D. C.		
I		K	
1590	Idaho, University of Moscow, Idaho	1730	Kalamazoo College Kalamazoo, Mich.
1600	Illinois Institute of Technology (A) Armour Research Foundation Chicago, Ill.	1735	Kansas Industrial Development Commission
1610	Illinois, University of Urbana, Ill. (A) Medicine Chicago, Ill.	1740	Kansas State College of Agriculture and Applied Science Manhattan, Kans.
1620	Independent Biscuit Manufacturers Co. Technical Institute 7002 North Clark St. Chicago 26, Ill.	1750	Kansas, University of Lawrence, Kans. (A) Medical College Kansas City, Kans.
1630	Indiana University Bloomington Campus, Ind. (A) School of Medicine, Indianapolis	1755	Kedzie Chemical Laboratory, East Lansing, Mich.
1640	Institute of American Poultry Industries 110 North Franklin St. Chicago 6, Ill.	1760	Kellogg Company, M. W. Jersey City 3, N. J.
1643	Institute for Cancer Research Lincoln-Liberty Bldg. Philadelphia, Pa.	1761	Kellogg Foundation of Medicine, W.K. Battle Creek, Mich.
1645	Interchemical Corporation 350 Fifth Ave. New York 1, N. Y.	1770	Kentucky, University of Lexington, Ky.
1647	International Association of Ice Cream Manufacturers c/o National Dairy Council 111 North Canal St. Chicago, Ill.	1780	Klenzade Products, Inc. Beloit, Wis. Klenzade Research Foundation See Purdue University
1648	International Minerals and Chemical Corp. 20 N. Wacker Dr. Chicago 6, Ill.	1800	Knox Gelatin Company, Inc., Charles B. 4th and Erie Sts. Camden, N. J.
1650	Iowa State College of Agriculture and Mechanic Arts Ames, Iowa	1810	Kohler Swiss Chocolates Company, Inc., Peter Callier 555 S. 4th St. Fulton, N. Y.
1660	Iowa, State University of Iowa City, Iowa	1820	Kohnstamm and Company, Inc., H. 537-555 Columbia St. Brooklyn 31, N. Y.
1670	Ives-Cameron Company, Inc. International Vitamin Division 1 Main St. Brooklyn 1, N. Y.	1830	Kraft Foods Company 500 N. Poshtigo Court Chicago 11, Ill.
J		1840	Kroger Food Foundation Proctor and Gamble Company 1212 State Ave. Cincinnati 4, Ohio
1675	Jackson Memorial Laboratory, Roscoe B. Bar Harbor, Maine	L	
		1850	Lalor Foundation Lancaster Pike and Old Baltimore Rd. Wilmington, Del.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
1860	Laminated Paperboard Package Assoc. 111 West Washington St. Chicago 2, Ill.	2040	MacDonald College McGill University Montreal, Canada
	Lederle Laboratories Division See American Cynamid Company	2050	Maine, University of Orono, Maine
1870	Lee Foundation for Nutritional Research 2023 W. Wisconsin Ave. Milwaukee, Wis.	2060	Mallinckrodt Chemical Works 3600 North 2nd St. St. Louis 7, Mo.
1880	Lehigh University Bethlehem, Pa.	2070	Malt Research Institute P. O. Box 2039 Madison 5, Wis.
1890	Leslie Laboratories Traver Rd. Ann Arbor, Mich.	2080	Maltine Company 18th St. and 8th Ave. Brooklyn, N. Y.
1900	Libby, McNeill and Libby Food Products Chicago 9, Ill.	2090	Markle Foundation, John and Mary 14 Wall St. New York, N. Y.
1905	Life Insurance Medical Research Foundation 2 East 103rd St. New York, N. Y.	2095	Marquette University Milwaukee, Wis.
1910	Lilly and Company, Eli Lilly Research Laboratories Indianapolis 6, Ind.	2097	Martin Food Products Co., Inc. 3641 S. Iron St. Chicago 9, Ill.
1920	Limestone Products Corporation of America Lime Crest Research Laboratory R. D. #1 Newton, N. J.	2100	Maryland, University of College Park, Md. (A) School of Medicine Baltimore, Md.
1930	Lincoln University Jefferson City, Mo.	2110	Massachusetts Institute of Technology Cambridge, Mass.
1940	Little, Inc., Arthur D. Chemists - Engineers Memorial Dr. at Kendall Sq. Cambridge 42, Mass.	2120	Massachusetts, University of Fort Devens, Mass.
1950	Long, W. E., Company 155 North Clark St. Chicago 1, Ill.	2130	Massengill Company, S. E. Bristol, Tenn.
1960	Long Island Agricultural and Technical Institute Farmingdale, N. Y.	2140	Mathieson Alkali Works, Inc. 60 E. 42nd St. New York 17, N. Y.
1970	Long Island College of Medicine Brooklyn, N. Y.	2150	Maxon Food Systems, Inc. 460 W. 34th St. New York, N. Y.
1980	Louisiana State University and A and M College Baton Rouge, La. (A) Medical College New Orleans, La.	2160	Mayer and Company, Oscar Madison, Wis.
1990	Louisville, University of Louisville, Ky.	2170	Mayo Foundation and Mayo Clinic Rochester, Minn.
2000	Loy Foods Company 1400 S. Harwood St. Dallas 1, Tex.		McArdle Memorial Cancer Laboratory See University of Wisconsin
2010	Loyola University Chicago, Ill.	2185	McConnon and Company Winona, Minn.
2020	Loyola University New Orleans, La.	2190	McCormick Memorial Fund, Elizabeth 848 North Dearborn St. Chicago 10, Ill.
	M	2195	McGill University Montreal, Quebec, Canada
2030	M and R Dietetic Laboratories, Inc. 8 East Long St. Columbus, Ohio	2200	Mead Johnson and Company Evansville 21, Ind.
		2210	Medical College of the State of South Carolina Charleston, S. C.
		2220	Medical College of Virginia Richmond, Va.
		2230	Meharry Medical College Nashville, Tenn.
			Mellon Institute of Industrial Research See University of Pittsburgh

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
2260	Merck and Company, Inc. Rahway, N. J. (A) Institute of Therapeutic Research	2467	Muehlebach Brewing Company, George 316 Oak St. Kansas City, Mo.
2270	Miami, University of Coral Gables, Fla.	2470	Munch Research Laboratories, Inc. 306 South 69th St. Upper Darby, Pa.
2280	Michigan State College East Lansing, Mich.		N
2290	Michigan, University of Ann Arbor, Mich. (A) Thomas Henry Simpson Memorial Institute for Medical Research	2480	National Association of Ice Industries 1706 L St., N. W. Washington 6, D. C.
2300	Midwest Research Institute 4049 Pennsylvania Kansas City 2, Mo.	2485	National Association of Margarine Manufacturers Muncy Bldg. Washington, D. C.
2310	Milbank Memorial Fund 40 Wall St. New York 5, N. Y.	2490	National Biscuit Company 449 West 14th St. New York 11, N. Y.
2320	Miles Laboratories, Inc. Myrtle and McNaughton Sts. Elkhart, Ind.	2500	National Canners Association Can Manufacturers Institute Research Laboratories 1739 H St., N. W. Washington, D. C.
2330	Milk Industry Foundation Chrysler Bldg. New York 17, N. Y.	2510	National Cheese Institute 110 North Franklin St. Chicago, Ill.
2340	Millers National Federation National Assoc. of the Flour Milling Industry - Wheat Flour Institute 309 West Jackson Blvd. Chicago, Ill.	2520	National Confectioners' Assoc. 1 North LaSalle St. Chicago 2, Ill.
2350	Miner Laboratories 9 South Clinton St. Chicago 6, Ill.	2530	National Dairy Council 111 North Canal St. Chicago 6, Ill.
2360	Minnesota, University of Minneapolis, Minn. (A) Hormel Institute	2540	National Dairy Research Labs. 1403 Eutaw Place Baltimore 17, Md.
2370	Minnesota Valley Canning Company Le Sueur, Minn.	2550	National Distillers Products Corp. 7818 Anthony Wayne Ave. Cincinnati, Ohio
2380	Mississippi State College State College, Miss.	2560	National Drug Company Haines and McCallum Sts. Philadelphia 44, Pa.
2390	Missouri, University of Columbia, Mo.	2570	National Foundation for Infantile Paralysis 120 Broadway New York, N. Y.
2400	Molnar Laboratories 211 East 19th St. New York 3, N. Y.	2580	National Grain Yeast Corporation Belleville, N. J.
2410	Monsanto Chemical Company 1700 South 2nd St. St. Louis 4, Mo.	2590	National Livestock and Meat Board 407 South Dearborn St. Chicago 5, Ill.
2420	Montana State College Bozeman, Mont.	2600	National Peanut Council, Inc. Office of Research and Develop- ment McLellan Bldg. Griffin, Ga.
2430	Moore Laboratory 64 South Division St. Buffalo 3, N. Y.	2610	National Pickle Packers Association 233 North East Ave. Oak Park, Ill.
2440	Moorman Manufacturing Company Quincy, Ill.	2620	National Potato Chip Institute, Inc. 1142 Hanna Bldg. Cleveland 15, Ohio
2450	Morrell and Company, John Ottumwa, Iowa		
2460	Morse Laboratories 316 Sixteenth St. Sacramento 14, Calif.		
2465	Mt. St. Joseph, College of Mt. St. Joseph, Ohio		

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
2630	National Preservers Association 839 17th St. Washington 6, D. C.	2780	Nopco Chemical Company, Inc. 1st and Essex Sts. Harrison, N. J.
2635	National Research Council 2101 Constitution Ave. Washington, D. C.	2790	North Carolina, State College of Agriculture and Engineering of the University of Raleigh, N. C.
2640	National Research Corporation 70 Memorial Dr. Cambridge 42, Mass.	2800	North Carolina, University of Chapel Hill, N. C.
2645	National Sugar Refining Company 129 Front St. New York, N. Y.	2810	North Dakota Agricultural College State College, N. Dak.
2650	National Tuberculosis Association 1790 Broadway New York 19, N. Y.	2820	North Texas State Teachers College Denton, Tex.
2660	National Vitamin Foundation 150 Broadway New York 7, N. Y.	2830	Northwestern University Evanston, Ill.
2670	Naugatuck Chemical Division of U. S. Rubber Company Naugatuck, Conn.	2840	Notre Dame, University of Notre Dame, Ind.
2680	Nebraska, University of Lincoln, Neb. (A) Medicine Omaha, Neb.	2850	Nutrition Foundation, Inc. Chrysler Bldg. 405 Lexington Ave. New York 17, N. Y.
2690	Nestle's Milk Products, Inc. 155 East 44th St. New York 17, N. Y. (A) Laboratory Marysville, Ohio	2860	Nutritional Research Associates, Inc. Box 205 South Whitley, Ind.
2700	New Hampshire, University of Durham, N. H.	O	
2710	New Jersey Dairy Laboratories 222-226 Easton Ave. New Brunswick, N. J.	2870	Ohio State University Columbus, Ohio
2720	New Mexico College of Agriculture and Mechanic Arts State College, N. M.	2880	Ohio University Athens, Ohio
2723	New York City Department of Health	2885	Oklahoma Agricultural and Mechanical College Stillwater, Okla.
2725	New York Diabetes Association 2 East 103rd St. New York City, N. Y.	2890	Oklahoma, University of Norman, Okla.
2730	New York Medical College New York, N. Y.	2895	Ontario Agricultural College Guelph, Ontario, Canada
2740	New York Produce Exchange Bureau of Chemistry 2 Broadway New York, N. Y.	2900	Onyx Oil and Chemical Company Warren and Morris Sts. Jersey City 2, N. J.
2745	New York City Food and Nutrition Committee 45 Lafayette St. New York, N. Y.	2910	Oregon State College Corvallis, Oreg.
2750	New York State Psychiatric Institute 722 West 168th St. New York, N. Y.	2911	Oregon, University of Eugene, Oreg.
2760	New York Sugar Trade Laboratory, Inc. 113 Pearl St. New York 4, N. Y.	2920	Ortho Research Foundation Raritan, N. J.
2770	New York University 477 First Ave. New York, N. Y.	2930	Overly Biochemical Research Foundation, Inc. 254 West 31st St. New York 1, N. Y.
		2940	Owens-Illinois Glass Company Ohio Bldg. Toledo 1, Ohio
		2950	Oxford Paper Company Rumford, Maine
		P	
		2960	Pabst Brewing Company 917 West Juneau Ave. Milwaukee 3, Wis.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
2970	Pacific Chemical and Fertilizer Company Honolulu 10, T. H.	3155	Polytechnic Institute of Brooklyn Brooklyn, N. Y.
2975	Paraffined Carton Research Council 111 West Washington St. Chicago 2, Ill.	3160	Poultry and Egg National Board 308 West Washington St. Chicago 6, Ill.
2980	Parke, Davis and Company Detroit, Mich.	3170	Princeton University Princeton, N. J.
2990	Patch Company, E. L. Stoneham Post Office Boston, Mass.	3180	Producers Creamery Company Springfield, Mo.
3000	Patterson Company, C. J. 3947 Broadway Kansas City 2, Mo.	3190	Providence Council of Social Agencies 100 North Main St. Providence 3, R. I.
3010	Paul-Lewis Laboratories, Inc. 918 North 4th St. Milwaukee 3, Wis.	3200	Public Health Research Institute of The City of New York, Inc. Foot of East 15th St. New York 9, N. Y.
3020	Penick and Ford Ltd., Inc. Cedar Rapids, Iowa	3210	Puerto Rico, University of (A) Rio Piedras - Pharmacy (B) Mayaguez - Agriculture (C) San Juan - School of Tropical Med.
3030	Penick and Company, S. B. 50 Church St. New York, N. Y.	3220	Purdue University Lafayette, Ind. (A) Klenzade Research Foundation
3040	Pennsylvania State College State College, Pa. (A) Ellen H. Richards Institute	3230	Pyroxylin Products, Inc. 4851 South St. Louis Ave. Chicago 32, Ill.
3050	Pennsylvania, University of Philadelphia, Pa. (A) Henry Phipps Institute	Q	
3060	Pet Milk Company 1401 Arcade Bldg. St. Louis 1, Mo.	3240	Quaker Oats Company 141 West Jackson Blvd. Chicago 4, Ill.
3065	Philippine, Department of Health and Public Welfare National Museum Bldg. 25th St. Port Area, Manila Phipps Institute, Henry See University of Pennsylvania	3250	Quality Bakers of America Cooperative, Inc. 120 West 42nd St. New York 18, N. Y.
3080	Physicians and Surgeons, College of School of Dentistry San Francisco, Calif.	3260	Quality Products, Inc. La Feria, Tex.
3090	Pictsweet Foods, Inc. Mt. Vernon, Wash.	R	
3100	Pillsbury Mills, Inc. Minneapolis 2, Minn.	3270	Ralston Purina Company Checkerboard Sq. St. Louis 2, Mo.
3110	Pineapple Research Institute of Hawaii Honolulu, T. H.	3280	Red Star Yeast Products Company 325 North 27th St. Milwaukee 8, Wis.
3120	Pittsburgh, University of Pittsburgh, Pa. (A) Mellon Inst. of Industrial Research	3290	Refrigeration Research Foundation, Inc. 410 Mercantile Bldg. Berkeley, Calif.
3130	Planter's Nut and Chocolate Company Suffolk, Va.	3300	Rexall Drug Company 8480 Beverly Blvd. Los Angeles 36, Calif.
3140	Plotz Foundation for the Advancement of Scientific Investigation, Ella Sachs Massachusetts General Hospital Fruit St. Boston 14, Mass.	3310	Rhineland Paper Company Rhineland, Wis.
3150	Polarographic Analysis, The Lab. of 7002 South Halsted St. Chicago 21, Ill.	3320	Rhode Island State College Kingston, R. I. Richards Institute, Ellen H. See Pennsylvania State College

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
3330	Richmond-Chase Company San Jose 7, Calif.	3490	Sealright Company, Inc. Fulton, N. Y.
3340	Rochester, University of Rochester, N. Y.	3500	Shankman Laboratories 2023 South Sante Fe Ave. Los Angeles 21, Calif.
3350	Rockefeller Foundation 49 West 49th St. New York 20, N. Y.	3510	Sharp & Dohme, Inc. Medical Research Division Glenolden, Pa.
3355	Rockefeller Institute for Medical Research New York, N. Y.	3520	Sheffield Farms Company, Inc. 524 West 57th St. New York 19, N. Y.
3360	Rumford Chemical Works Rumford 16, R. L.	3530	Shoreland Freezers, Inc. South Division St. at Bateman Salisbury, Md.
3365	Russell Sage Institute of Pathology The New York Hospital New York, N. Y.	3540	Simpson, Harold N. Company 818 Harrison St. Oak Park, Ill.
3370	Rutgers University New Brunswick, N. J.		Simpson Memorial Institute for Medical Research, Thomas Henry See University of Michigan
S			
3380	Sadtler and Son, Inc., Samuel P. 210 South 13th St. Philadelphia 7, Pa.	3560	Smith College Northampton, Mass.
3390	St. Augustine's College Raleigh, N. C.	3570	Smith Pharmacal Company, Carroll Dunham New Brunswick, N. J.
3400	St. Bonaventure College & Seminary St. Bonaventure, N. Y.	3580	Smyth Laboratories, Inc. 34th St. below Chestnut St. Philadelphia, Pa.
3410	St. Louis University St. Louis, Mo.	3590	Snell, Inc., Foster D. 29 West 15th St. New York, N. Y.
3415	St. Regis Paper Company Panelyte Division Enterprise Ave. Trenton 4, N. J.	3600	South Dakota State College of Agriculture and Mechanic Arts Brookings, S. Dak.
3420	Salsbury's Laboratories, Dr. Charles City, Iowa	3610	South Dakota, University of Vermillion, S. Dak.
3430	San Francisco, University of San Francisco, Calif.	3620	Southern California, University of Los Angeles, Calif.
3433	Sansum Clinic Santa Barbara, Calif.	3630	Southern Research Institute 917 South 20th St. Birmingham 5, Ala.
3435	Saskatchewan, University of Saskatchewan, Canada	3640	Southern University Baton Rouge, La.
3440	Schenley Distillers Corporation Empire State Bldg. 350 Fifth Ave. New York 1, N. Y.	3650	Southwestern Medical College of the Southwestern Medical Foundation 2211 Oak Lawn Ave. Dallas 4, Tex.
3450	Schieffelin & Company 16-30 Cooper Sq. New York 3, N. Y.	3660	Squibb and Sons, E. R. 745 Fifth Ave. New York 22, N. Y.
3455	Schlitz Brewing Company 235 West Galena St. Milwaukee, Wis.		(A) Squibb Institute for Medical Research New Brunswick, N. J.
3460	Schwarz Laboratories, Inc. 230 Washington St. Mt. Vernon, N. Y.	3680	Staley Manufacturing Company, A. E. Decatur 60, Ill.
3470	Scien-Tech 1819 Broadway New York 23, N. Y.	3690	Standard Brands, Inc. 595 Madison Ave. at 57th St. New York 22, N. Y.
3475	Scripps Metabolic Clinic La Jolla, Calif.	3695	Standard Oil Company of New Jersey
3480	Seagram & Sons, Inc., Joseph E. 7th St. Rd. Louisville 1, Ky.	3700	Stanford University Palo Alto, Calif.

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
3710	State Chemical Laboratory State of South Dakota Vermillion, S. Dak.	3890	Texas, University of Austin, Tex. (A) Medicine Galveston, Tex.
3720	Stein, Hall & Company, Inc. 285 Madison Ave. New York 17, New York	3900	Texsun Citrus Exchange Weslaco, Tex.
3730	Sterling-Winthrop Research Institute Rensselaer, N. Y.	3910	Thurston Laboratories, Emory W. 1207 South Vermont Ave. Los Angeles 6, Calif.
3740	Strathmore Products Company 11-15 West Palisade Ave. Englewood, N. J.	3920	Toronto, University of Toronto, Ontario, Canada
3750	Sugar Research Foundation, Inc. 52 Wall St. New York 5, N. Y.	3930	Tressler and Associates, Donald K. Consulting Food Technologists North Compo Road Westport, Conn.
3760	Sunshine Biscuits, Inc. 29-10 Thomson Ave. Long Island City 1, N. Y.	3940	Tuckers Foods, Inc., Mrs. Sherman, Tex.
3770	Superior Laboratories 10 West Ohio St. Indianapolis 4, Ind.	3945	Tufts College Medford, Mass.
3780	Supplee Research Corporation, G. C. Bainbridge, N. Y.	3950	Tulane University of Louisiana New Orleans, La.
3790	Swanson and Sons Omaha 2, Neb.	3960	Tuskegee Institute Tuskegee Institute, Ala.
3800	Swift and Company Union Stockyards Chicago 9, Ill.	3970	T. V. A. (A) Agricultural Relations Division (B) Regional Products Research Division - Commerce Dept. Knoxville, Tenn.
3810	Synthetical Laboratories 5558 Ardmore Ave. Chicago 30, Ill.	3980	Twining Laboratories P. O. Box 1472 Fresno 16, Calif.
3820	Syracuse University Syracuse, N. Y.		U
	T	3990	Union University Albany, N. Y.
3825	Temple University Philadelphia, Pa.	3995	Union University Jackson, Tenn.
3827	Tennessee Agricultural and Industrial College Nashville, Tenn.	4000	United Biscuit Company of America 1041 West Harrison St. Chicago 7, Ill.
3828	Tennessee Eastman Corporation Kingsport, Tenn.		UNITED STATES GOVERNMENT
3830	Tennessee, University of Knoxville, Tenn.	4010	United States Army (A) Chemical Center Medical Division Edgewood Arsenal, Md.
3840	Territorial Department of Health Territorial Bldg. P. O. Box 1931 Juneau, Alaska		(B) Medical Nutrition Lab. 1849 West Pershing Rd. Chicago, Ill.
3850	Texas, Agricultural and Mechanical College of College Station, Tex.		(C) Medical Department Field Research Lab. Fort Knox, Ky.
3855	Texas College of Arts and Industries Kingsville, Tex.		(D) Medical Research and Development Board Office of Surgeon General Washington, D. C.
3860	Texas State College for Women Denton, Tex.		(E) Pentagon Nutrition Laboratory The Pentagon Washington, D. C.
3870	Texas State Research Foundation P. O. Box 43 Renner, Tex.		(F) Quartermaster Food and Con- tainer Institute for Armed Forces 1849 West Pershing Rd. Chicago, Ill.
3880	Texas Technological College Lubbock, Tex.		

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
4020	United States Department of Agriculture Washington, D. C. Agricultural Research Administration (A) Bureau of Agricultural and Industrial Chemistry (B) Bureau of Animal Industry (C) Bureau of Dairy Industry (D) Bureau of Human Nutrition and Home Economics (E) Bureau of Plant Industry, Soils, and Agricultural Engineering (F) Eastern Regional Research Laboratory Philadelphia, Pa. (G) Northern Regional Research Laboratory Peoria, Ill. (H) Southern Regional Research Laboratory New Orleans, La. (I) Western Regional Research Lab. Albany, Calif. (K) Research and Marketing Administration (L) Production and Marketing Administration (M) Forest Products Laboratory Madison, Wis.	4121	Vacuum Foods Corporation Plymouth, Fla.
		4122	Valentine's Meat-Juice Company 1600 Chamberlayne Parkway Richmond 9, Va.
		4123	Van Camp Sea Food Company 772 Tuda St. Terminal Island, Calif.
		4124	Vanderbilt Company, R. T. 230 Park Ave. New York 17, N. Y.
		4125	Vanderbilt University Nashville, Tenn.
		4126	Vermont, University of, and State Agricultural College Burlington, Vt.
		4130	Vestal, Inc. 4963 Manchester Ave. St. Louis 10, Mo.
		4140	Vico Products Company 415 West Scott St. Chicago 10, Ill.
		4150	Victor Chemical Works 11th and Arnold Sts. Chicago Heights, Ill.
		4160	VioBin Corporation Monticello, Ill.
4030	United States Department of Interior Washington, D. C. (A) Fish and Wildlife Service	4170	Virginia-Carolina Chemical Corporation Carteret, N. J.
4040	United States Federal Security Agency Washington, D. C. (A) Childrens Bureau (B) Food & Drug Administration (C) Public Health Service National Institute of Health C Division of Physiology C(1) National Cancer Institute C(2) Research Grants Division C(3) States Relations Division C(4)	4180	Virginia Polytechnic Institute Blacksburg, Va.
		4190	Virginia, University of Charlottesville, Va.
		4200	Visking Corporation 6733 West 65th St. Chicago 38, Ill.
		4210	Vitamin Food Company, Inc. 187 Sylvan Ave. Newark 4, N. J.
4050	United States Navy Washington, D. C. (A) Office of Naval Research	4220	Vita-Zyme Laboratories, Inc. 546 West Washington Blvd. Chicago 6, Ill.
4060	United States Veterans Administration Washington, D. C.	4230	Von Goehde Laboratories 5th St. Albans Rd. Boston 15, Mass.
4070	United States Testing Company, Inc. 1415 Park Ave. Hoboken, N. J.		W
4080	United States Vitamin Corporation 250 East 43rd St. New York 17, N. Y.	4240	W and F Manufacturing Company, Inc. 251 Seneca St. Buffalo 4, N. Y.
4090	Upjohn Company Kalamazoo 99, Mich.	4250	Wabash College Crawfordsville, Ind.
4100	Utah-Idaho Sugar Company Salt Lake City 13, Utah	4260	Wahl, Manfred The Kenilworth, Alden Park Germantown, Philadelphia 44, Pa.
4110	Utah State Agricultural College Logan, Utah	4270	Wake Forest College The Bowman Gray School of Medicine Winston-Salem, N. C.
4120	Utah, University of Salt Lake City, Utah		

ORGANIZATIONS

NUMBER	NAME	NUMBER	NAME
4280	Waldorf Paper Products Company St. Paul 4, Minn.	4450	Wilbur-Suchard Chocolate Company, Inc. Lititz, Pa.
4290	Walker, and Sons, Inc., Hiram Peoria, Ill.	4460	Williams-Waterman Fund 405 Lexington Ave. New York 17, N. Y.
4295	Wallace and Tlerman Georges Rd. and U.S. Route 1 New Brunswick, N. J.	4470	Wilson and Company 41st St. and Ashland Ave. Chicago 9, Ill.
4300	Warren Company, S. D. 89 Broad St. Boston 1, Mass.	4475	Wine Advisory Board of California 717 Market St. San Francisco 3, Calif.
4310	Washington Gas Light Company Eleventh and H Sts., N. W. Washington 1, D. C.	4480	Wirthmore Research Laboratories 259 Washington St. Malden 48, Mass.
4320	Washington, State College of Pullman, Wash.	4485	Wisconsin Cannery Association 1003 Tenney Bldg. Madison, Wis.
4330	Washington University St. Louis, Mo.	4490	Wisconsin, University of Madison, Wis. (A) Bowman Fund for Cancer Research, Jonathan (B) McArdle Memorial Cancer Lab.
4340	Washington, University of Seattle 5, Wash.	4500	Wistar Institute of Anatomy and Biology 36th St. and Woodland Ave. Philadelphia 4, Pa.
4350	Wayne University Detroit, Mich.	4503	Leonard Wood Memorial Madison Ave. New York, N. Y.
4360	Weber Laboratories, M. 551 Prospect St. Maplewood, N. J.	4505	Worcester Foundation for Experimental Biology Work 222 Maple Ave. Shrewsbury, Mass.
4370	Wellcome Research Laboratories Tuckahoe 7, N. Y.	4510	Wrigley Company, William, Jr. 410 North Michigan Ave. Chicago 11, Ill.
4380	Wellesley College Wellesley, Mass.	4520	Wyeth, Inc. Mason, Mich.
4385	Wenatchee Valley Foods, Inc. Wenatchee, Wash.	4530	Wyoming, University of Laramie, Wyo.
4390	Wesleyan University Middletown, Conn.		Y
4400	West Virginia University Morgantown, W. Va.		
4410	Western Condensing Company 935 East John St. Appleton, Wis.	4540	Yale University New Haven, Conn. (A) Jane Coffin Childs Memorial Fund for Medical Research (cancer)
4415	Western Growers Association Research Institute 606 South Hill St. Los Angeles, Calif.		
4420	Western Reserve University Cleveland, Ohio		
4430	White Laboratories, Inc. 113 North 13th St. Newark 7, N. J.		
4440	Wickenden, Leonard 120 Wall St. New York 5, N. Y.		

PERSONNEL

PERSONNEL

NUMBER REFERS TO ORGANIZATION

A						
Abbott, Ouida Davis	Ph.D.	1150	Althouse, P. M.	Ph.D.	3040	
Abshier, Claude S.	M.A.	3770	Altman, Kurt S.	M.A.	710	
Abshier, G. S.	M.S.	3220	Altschul, Aaron M.		4020 H	
Abt, A.	M.D.	1580 FF	Altschul, Rudolf	M.D.	3435	
Acker, M.	B.S.	1060	Ambrose, A. M.	Ph.D.	4020 I	
Acker, Roy M.	M.S.	710	Amerine, M. A.	Ph.D.	600	
Ackerman, Edw. L.	M.S.	3190	Ames, Stanley R.	Ph.D.	980	
Ackerson, C. W.	Ph.D.	2680	Amick, G.		1650	
Acosta, R.	B.S.	260	Ammerman, Elizabeth		3040 A	
Adair, C. Roy	Ph.D.	4020 E	Andersen, A. A.	Ph.D.	4020 I	
Adamcik, Lillian		3890	Andersen, Dorothy H.	M.D.	790 A	
Adams, Mable	M.S.	40	Anderson, A. W.		4030 A	
Adams, R. L.	Sc.D.	600	Anderson, Arthur K.	Ph.D.	3040	
Adams, Roger	Ph.D.	1610	Anderson, Bernice L.	M.S.	4040 C(4)	
Adams, S. L.	M.S.	3480	Anderson, Betty		1280	
Adamy, Ruth A.	B.S.	1200	Anderson, C. A.	B.A.	1910	
Addinall, Carl R.	Ph.D.	2260	Anderson, E. J.	Ph.D.	3050	
Addis, T.		3700	Anderson, G. V.		4010 B	
Adelson, S. F.	M.A.	4020 D	Anderson, Geo. E.	M.D.	110	
Adler, Howard		4150	Anderson, Gerald C.	B.S.	2390	
Adolph, Edward F.		3340	Anderson, J. B.	M.E.	1490	
Ahlgren, H. L.	Ph.D.	4490	Anderson, John A.	Ph.D.	3370	
Aiton, H. F.		4010 B	Anderson, Kenneth E.	Ph.D.	3400	
Alba, Ralph T.		2930	Anderson, Lillian W.	B.S.	2360	
Albanese, Anthony A.	Ph.D.	2770	Anderson, M. D.		3890 A	
Albaum, H. G.	Ph.D.	500	Anderson, Marie	B.Chem.	1050	
Albert, Paul W.	B.A.	3620	Anderson, R. A.	B.S.	4020 G	
Albert, W. B.	Ph.D.	750	Anderson, R. C.	M.A.	3170	
Albertson, Noel F.	Ph.D.	3730	Anderson, Rudolph J.	Ph.D.	4540	
Albrecht, C. Earl	M.D.	3840	Anderson, Viola J.		1750	
Albright, A. R.		410	Anderson, William E.	M.A.	1040	
Albright, Fuller		1440	Anderson, William W.		4030 A	
Albritton, Errett C.	M.D.	1260	Andrew, Robert H.	Ph.D.	4490	
Alden, H. S.		1070	Andrews, B. S.	M.S.	3480	
Alderfer, R. B.		3040	Andrews, F. N.	Ph.D.	3220	
Alderton, G.	M.S.	4020 I	Andrews, Helen	B.S.	2280	
Aldrich, Daniel G., Jr.	Ph.D.	600 D	Andrews, J. T. R.	Ph.D.	1840	
Aldrich, Robert	M.D.	2360	Andrews, James C.	Ph.D.	2800	
Alexander, Benjamin	M.D.	1440	Andrews, John S.	Ph.D.	1250	
Alexander, Benj. H.		4020 G	Angst, Carl	Ph.D.	2690	
Alexander, H. B.	Ch.E.	1240	Anker, Herbert S.	Ph.D.	710	
Alexander, Lucy M.	B.S.	4020 D	Anklam, William E.		1250	
Alexander, O. R.	Ph.D.	80	Ansbacher, Stefan	Ph.D.	1560	
Alexander, P. E.	B.S.	80	Anthony, R. D.	Ph.D.	3040	
Alexander, Taylor	Ph.D.	2270	Antoshkiw, Thomas	B.S.	1670	
Alfredson, B. V.	M.S.	2280	Apperly, Frank L.	M.D.	2220	
Allee, Warder C.	Ph.D.	710	Appleman, D.	Ph.D.	600 C	
Allen, Albert S.	B.S.	1030	Archer, Jean	B.S.	1510	
Allen, J. S.	B.S.	3900	Archer, Sidney	Ph.D.	3730	
Allen, N. N.	Ph.D.	4490	Archibald, Juanita H.	M.A.	790	
Allen, Robert	Ph.D.	2680 A	Armstrong, Carroll	B.S.	3100	
Allen, Robert M.	M.A.	4210	Armstrong, Jack W.		1170	
Allerton, Joseph	Ph.D.	2540	Armstrong, M.		600 A	
Allison, J. E.	B.S.	3240	Armstrong, W.D.	Ph.D., M.D.	2360	
Allison, James B.	Ph.D.	3370	Arnold, Aaron	Ph.D.	3730	
Allred, C. E.	M.S.	3830	Arnon, D. I.	Ph.D.	600 A	
Almquist, H. J.	Ph.D.	450	Arnow, L. Earle	M.D.	3510	
Almquist, J. O.	Ph.D.	3040	Aron, H. C. S.		2830	
Almy, L. H.	Ph.D.	1490	Artom, Camillo	M.D.	4270	
Alogdelis, Stella	M.S.	3620	Artz, N. E.	Ph.D.	840	
Alper, Carl	Ph.D.	3660 A	Ascham, Leah	Ph.D.	1740	
Alstrand, D. V.	B.S.	80	Asdell, S. A.	Ph.D.	850	
			Asenjo, Conrado F.	Ph.D.	3210 C	
			Ashby, R. C.		1610	

Ashley, Warren C.	Ph.D.	3230	Barden, Robert B.	Ph.D.	3620
Ashton, William H.	B.S.	870	Baril, Olier L.	Ph.D.	1535
Ashworth, U. S.	Ph.D.	4320	Barker, H. A.	Ph.D.	600 A
Asmundson, V. S.		600 B	Barmore, M. A.	Ph.D.	4320
Atkeson, F. W.	M.S.	1740	Barnaby, Joseph T.		4030 A
Atkins, Cedric D.	B.S.	1150 A	Barnard, J. D.	B.A.	2370
Atkinson, Ida		1300	Barnby, Herbert A.		2940
Attoe, Osborne J.	Ph.D.	4490	Barnes, H. M.	Ph.D.	1240
Atwood, Curina	B.S.	1940	Barnes, John R.	B.S.	3040
Atwood, R.	M.S.	230	Barnes, L. L.	Ph.D.	850
Aub, J. C.		1440	Barnes, Richard H.	Ph.D.	3510
Aubel, C. E.	Ph.D.	1740	Barnett, Harold M.	Ph.D.	350
Auernheimer,		3700	Barnett, Henry L.	M.D.	850
Arthur H.			Barnum, C. P.		2360
Ault, W. C.	Ph.D.	4020 F	Baron, A. L.	Ph.D.	3030
Austin, Ursula S.	B.S.	1940	Barr, W. L.	M.S.	3040
Avery, T. B.	M.S.	1740	Barrett, Harold	Ph.D.	770
Awapara, Jorge	Ph.D.	3620	Barrick, E. R.	Ph.D.	3220
Axelrod, A. E.	Ph.D.	3120	Barrick, M.		1650
Axelrod, H. E.		600 A	Barry, F. J.	B.S.	1490
Ayres, T. B.	B.S.	80	Barry, Mildred B.	B.S.	3190
B			Barta, E. J.	Ph.D.	4020 I
Babcock, MacLean	Ph.D.	2830	Barte, G.		1650
Bachmann, Geo.	M.D.	1070	Bartholomew, E. T.	Ph.D.	600 D
Bacon, E. Kyle	M.S.	4090	Bartholomew, Wm. H.	Ph.D.	2260
Baeder, Helen A.	M.S.	3100	Bartlett, Grant R.	M.D.	3475
Bagwill, Judson, Jr.		450	Bartlett, J. W.	Ph.D.	3370
Baile, John R.	M.S.	2540	Bartlett, Paul DeVere	M.S.	1580 O
Bailey, G. F.	B.A.	4020 I	Bartlett, R. W.		1610
Bailey, R. M.	B.S.	2050	Bartron, L. R.		1880
Bainbridge, W. C.		1820	Baselt, F. C.	E.E.	80
Baines, R. C.	Ph.D.	600 D	Basemore, Alva W.	Ph.D.	2260
Baker, Anne		4126	Basinski, D. H.	Ph.D.	1660
Baker, Dwight L.	Ph.D.	4220	Bass, Fae	B.S.	3890
Baker, Elizabeth F.		600 B	Bass, Marion	B.A.	1130
Baker, G. O.	M.S.	1590	Bassett, S. H.		3340
Baker, Geo. L.	M.S.	950	Bassler, G. C.		3040
Baker, Marguerite F.		2870	Batchelder, Esther L.	Ph.D.	4020 D
Bakerman, Howard		4040 C	Batchelor, L. D.	Ph.D.	600 D
Bakken, H. H.	M.A.	4490	Bateman, G. Q.		4110
Bakwin, Harry		2770	Bates, Philip K.	Ph.D.	3300
Balch, Royal T.		4020 A	Bates, R. W.	B.S.	290
Baldauski, F. A.	M.S.	3520	Bauer, F. C.		1610
Baldwin, A. R.	Ph.D.	840	Bauer, Mary		3040 A
Baldwin, H. R.	M.S.	1660	Bauer, Virginia E.		4010 B
Baldwin, K. M.	M.S.	3520	Bauer, Walter		1580 W
Baldwin, Keturah E.		130	Baum, Evelyn	B.S.	2160
Baldwin, R. R.	Ph.D.	1240	Baumann, C. A.	Ph.D.	4490
Baldwin, R. W.	Ph.D.	1240	Baur, L. S.	Ph.D.	2030
Ball, Chas. D.	Ph.D.	2280	Baxley, Hartlee May	B.S.	2790
Balls, A. K.	Ph.D.	4020 I	Baxter, J. Grove	Ph.D.	980
Balocca, A. E.	B.S.	80	Bayles, B. B.		4020 E
Banasik, O.	B.S.	2810	Baylin, Geo. T.		1010
Bandurski, Robert J.	S.M.	710	Bayors,		1180
Banfi, Roberto	M.D.	2770	Beach, B. A.	D.V.M.	4490
Banker, Jane L.		2100 A	Beach, Elliot F.	Ph.D.	730
Banks, S. O.	D.D.S.	2230	Beach, W. S.	Ph.D.	3040
Bannister, W. J.		800	Beacham, Harry H. Jr.	Ph.D.	3120
Barackman, Rufus A.	B.S.	4150	Beachell, H. M.	M.S.	4020 E
Barail, Louis C.	M.D.	4070	Beadle, B. W.	Ph.D.	180
Barbazen, Marcelle	B.S.	1660	Beadle, G. W.	Ph.D.	590
Barbella, Nicholas	M.S.	4040 C(4)	Beadles, J. R.		1610
Barber, Franklin W.	Ph.D.	2540	Beagley, Bruce E. Jr.		3590
Barber, William R.	B.A.	880	Beal, Grace	B.S.	710
Barch, W. E.	B.S.	3690	Beal, John M.	Ph.D.	710
Barclay, Marian	Ph.D.	1650	Beal, R. E.	B.S.	4020 G
			Beal, Virginia	M.Pub.H.	780 A
			Beall, A. R.	M.S.	80

Beals, Ernest L.	Ph.D.	4370	Bessey, Otto A.	Ph.D.	1610
Beamer, William Dale	Ph.D.	1680	Best, Audrey		3120 A
Bean, Ross	Ph.D.	4020 I	Best, C. H.		3920
Bean, W. B.		4010 B	Bethell, Frank H.	M.D.	2290
Bear, J.		1650	Bethke, R. M.	Ph.D.	2870
Bear, Richard S.	Ph.D.	2110	Bever, James S.	M.S.	2360
Beard, F. J.	Ph.D.	4020 B	Beyer, James C.	M.D.	2010
Beasley, H. K.	B.S.	4124	Biale, J. B.	Ph.D.	600 C
Beavens, E. A.	Ph.D.	4020 A	Bibby, Basil G.	Dr.	3945
Beck, Herbert H.	B.S.	4490	Biddick, Burdette	B.E.	2160
Beck, L. D.	B.S.	2810	Biddulph, Clyde	Ph.D.	4110
Beckel, A. C.	Ph.D.	4020 G	Bidstrup, Perry L.	M.A.	2300
Beckmann, C. O.	Ph.D.	790	Bierman, C. R.	B.S.	80
Beckord, O. C.	Ph.D.	2680	Biester, Alice	M.A.	2360
Becks, H.		600 A	Bigas, J. L.	M.S.	80
Bedford, C. L.	Ph.D.	4320	Bigler, A. J.		4100
Beery, Isabel	B.A.	2870	Bigos, Joseph	M.S.	3120
Beeson, K. C.	M.S.	850	Bills, C. E.	Ph.D.	2200
Beeson, W. M.	Ph.D.	3220	Bing, Franklin C.		160
Beezley, M. B.		680	Binkley, S. B.		480
Begley, H. L.		4020 I	Binns, Wayne		4110
Belkengren, R. O.	Ph.D.	1460	Bird, E. W.	Ph.D.	1650
Belko, John	B.A.	4126	Bird, F. H.		600 B
Bell, Grace H.	M.S.	3620	Bird, Francis H.	Ph.D.	1040
Bell, Jean	B.S.	3130	Bird, H. R.	Ph.D.	4020 B
Bell, W. C.		3120 A	Bird, O. D.	Ph.D.	2980
Bellard, J. Q.	A.B.	1910	Birdseye, Clarence		430
Bellinger, Frederick W.	Ph.D.	1280	Birdseye, Kellogg G.		430
Belt, Margaret		100 A	Biren, Caryl	M.D.	1580 E
Belter, P. A.	B.S.	4020 G	Birkhill, R.		4010 B
Belton, W. E.	Ph.D.	3960	Birnstiel, Peter	B.S.	1500
Bender, C. B.	M.S.	3370	Bisbey, Bertha	Ph.D.	2390
Bender, Maurice	M.S.	4030 A	Bishop, Clare		3000
Bender, W. A.	B.S.	1240	Bishop, Helen	B.S.	1580 W
Bendixen, H. A.	Ph.D.	4320	Bittenbender, Wm. A.	Ph.D.	2260
Ben-Dor, Ben-Ami	Ph.D.	4010 E	Bittner, Alice N.	B.A.	4020 I
Benham, G. H.		1600	Bittner, J. J.		2360
Benjamin, H. A.	B.S.	80	Black, Alex	Ph.D.	3040
Bennett, A. N.	M.A.	1370	Black, John D.		1440
Bennett, J. F.		3000	Black, R. H.	M.S.	4400
Bennett, L. J.		3040	Black, W. C.	M.S.	3020
Bennett, Merrill K.	Ph.D.	3700	Blackburn, N. D.	Ph.D.	3040
Benoy, Marjorie P.	Ph.D.	3120	Blair, B. W.	B.S.	80
Benson, R.	Ph.D.	2730	Blair, E. R.	B.S.	80
Bent, Michael J.	M.D.	2230	Blair, J. S.	Ph.D.	80
Bentley, F. L.	M.S.	3040	Blair, Ruth	Ph.D.	780
Berg, Clarence P.	Ph.D.	1660	Blake, Ennis	B.A.	4020 D
Bergdoll, M. S.	B.S.	3220	Blake, Walter T.	B.S.	3100
Bergdoll, Merlin S.	Ph.D.	710	Blakeslee, L. H.	Ph.D.	2280
Bergeim, Olaf	Dr.	1610 A	Blakslee, E. J.	B.S.	80
Berger, Carl	M.S.	2540	Blanchard, Ernest W.	Ph.D.	3450
Berger, K. C.	Ph.D.	4490	Blanchard, Evelyn	Ph.D.	1350
Bergmann, Lucy	M.A.	2930	Blanchard, Marian L.	M.A.	2770
Bergren, Wm. R.	Ph.D.	3620	Blanck, F. C.	Ph.D.	3120 A
Bergstrand, Evalyn		810	Blanco, Ana Teresa	M.S.	3210 A
Berkeley, Bernard	B.S.	3590	Blandino, S. T.	B.S.	3570
Berman, David T.	D.V.M.	4490	Blankertz, Donald F.		3050
Bernhart, F. W.		4520	Blayney, J. R.		710
Bernheim, Frederick	Ph.D.	1010	Blengsli, H. L.	Ph.D.	3690
Bernstein, Leon	Ph.D.	710	Bletcher, Jack	B.S.	2870
Berry, Geo. P.		3340	Blincoe, C. R.		2390
Berry, James A.	M.S.	4020 I	Bliss, D. E.	Ph.D.	600 D
Berryman, George H.		4010 B	Bloch, Konrad E.	Ph.D.	710
Berson, Bella Z.	A.B.	3200	Block, H.	B.A.	600 C
Bertrand, P.	M.S.	80	Block, Richard J.	Ph.D.	2730
			Blood, Frank R.	Ph.D.	960
			Bloom, E. S.		1020
			Bloor, W. R.	Ph.D.	3340

Blumberg, Harold	Sc.D.	3730	Branaman, G. A.	Ph.D.	2280
Blundell, C. C.		3090	Brand, Erwin		790
Bly, C. G.		4010 B	Brandly, C. A.	D.V.M., M.S.	4490
Boatner, Charlotte H.		4020 H	Brandow, G. E.	Ph.D.	3040
Boaz, Henry M.	B.S.	870	Brandt, Karl	Ph.D.	3700 A
Bode, Charles E.	M.S.	4020 E	Brasch, J.	M.S.	230
Boegner, Richard		3000	Brasher, E. P.		950
Boer, Arend	Ph.D.	3120	Bratzler, J. W.		3040
Bogert, J. L.		3690	Brauchli, Hans W.	Dr. Tech. Sc.	2690
Boggs, Mildred M.	M.S.	4020 I	Brauer, Ralph W.	M.D.	1440
Bogorad, Lawrence	S.B.	710	Braun, J. N.	B.S.	80
Bohart, Geo. S.	Ph.D.	4020 I	Braun, O. G.	M.S.	80
Bohn, Guy W.	Ph.D.	4020 E	Braunmuller, A. R.	Ph.D.	2260
Bohstedt, G.	Ph.D.	4490	Bray, Mark W.	M.S.	4020 M
Bolander, Magnus	B.A.	3260	Bray, R. R.		1610
Bolin, D. W.	M.S.	2810	Brayton, John R.	M.D.	3770
Bolin, F.M.	D.V.M.	2810	Brazda, Fred G.	Ph.D.	1980 A
Bolling, Diana		2730	Brehm, Joseph R.	A.B.	4450
Bond, Helen Judy	Ph.D.	790	Breivik, O. M.	Ph.D.	3690
Bond, Howard W.		4040 C	Brekke, O. L.	B.S.	4020 G
Bond, Robt. W.	Ph.D.	2260	Brereton, John G.	Ph.D.	3520
Bonn, Robt.	M.S.	3120	Breslow, L.	M.D.	1580 FF
Bonner, David H.		4540	Brewer, Nathan R.	Ph.D.	710
Bonner, Walter D.	Ph.D.	4120	Briant, Alice M.	Ph.D.	850
Booher, Lela E.	Ph.D.	1250	Bricker, M. L.		1610
Borchers, Raymond	Ph.D.	2680	Bridge, Edward M.	M.D.	530
Bordawekar, B. R.		4340	Bridgwater, Anna	M.S.	3120
Borgmann, Carl W.	Ph.D.	780	Briggs, D. R.	Ph.D.	2360
Borland, A. A.	M.S.	3040	Briggs, S. W.	Ph.D.	2260
Bornmann, Adelaide	M.S.	2670	Brighton, K. W.	Ph.D.	80
Bornor, D. H.	B.S.	3520	Brink, R. A.	D.Sc.	4490
Borowsky, Harry	B.S.	2900	Brinkman, J.	B.S.	980
Borsook, Henry	Ph.D.	590	Bristol, W.	M.S.	4320
Borst, J. R.	B.S.	3520	Bristow, J. J. R.		1720
Bortree, Alfred L.	M.S., D.V.M.	2280	Brittin, W. A.		390
Boruff, C. S.	Ph.D.	4280	Brittingham, W. H.	Ph.D.	3850
Borup, Richard E.	M.S.	3590	Brobeck, John R.	M.D., Ph.D.	4540
Bosley, Bertlyn	Ph.D.	2790	Brock, Vernon C.		1480 A
Bosma, James F.	M.D.	2360	Brockington, S. F.	M.Sc.	3240
Bosshardt, David K.	Ph.D.	3510	Brockman, M. C.	Ph.D.	3480
Boswell, Victor R.	Ph.D.	4020 E	Brodie, Harold J.	Ph.D.	1630
Botley, R. M.		1460	Brody, James	M.S.	730
Boucher, R. V.		3040	Brody, Samuel		2390
Boudreau, Frank G.	M.D.	2310	Broestl, E. A.		2830
Bourquin, Anne	Ph.D.	3820	Brokaw, G.	Ph.D.	980
Boutwell, R. K.	Ph.D.	4490 B	Bronson, Theo. E.	M.S.	4490
Bowden, Ruth		3433	Brooke, Richard O.	Ph.D.	4480
Bowen, Ann	B.S.	40	Brooks, Gilbert N.	B.S.	4490
Bowman, Donald E.		1630 A	Brooks, Josephine	Ph.D.	770
Bowman, Ferne	M.S.	2390	Brooks, Ruth I.		3040 A
Boxer, Geo. E.	Ph.D.	2260	Brother, Geo. H.	Ph.D.	4020 I
Boyce, A. M.	Ph.D.	600 D	Browe, John H.	M.D.	4126
Boyd, E. J.		1660	Brown, A. H.	M.S.	4020 I
Boyd, James C.	M.S.	1590	Brown, A. J.	B.A.	80
Boyd, Julian D.	M.D.	1660	Brown, Betty C.	B.S.	4020 D
Boyd, Linn J.	Dr.	2730	Brown, D. S.	Ph.D.	1460
Boyden, Alan A.	Ph.D.	3370	Brown, Dorothy		1390
Boyden, R. E.	M.A.	1770	Brown, E. H. C.	B.S.	3480
Boyer, Paul D.	Ph.D.	2360	Brown, E. M.	Ph.D.	4020 E
Boyer, R. A.		990	Brown, Edna G.	Ph.D.	2280
Braasch, J. W.	M.D.	1610 A	Brown, Eva May	B.A.	380
Bradbury, J. T.	Sc.D.	1660	Brown, Geo. A.	B.S.	2280
Bradley, William B.	Ph.D.	160	Brown, Geo. G.	Ph.D.	2540
Brady, Joan	M.S.	1660	Brown, H. D.	Ph.D.	2260
			Brown, Helen B.	Ph.D.	400

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Carter, A. S.	M.S.	3220	Christian, J. A.	M.S.	3040
Carter, Anne C.	M.D.	850 A	Christian, Johnie		3860
Carter, G. H.	B.A.	4320	Christman, C. C.	Ph.D.	2260
Carter, H. E.		1610	Christopher, Everett P.	Ph.D.	3320
Carter, T. H.		80			
Cartwright, Geo. E.	M.D.	4120	Chrysler, L. H.		2030
Cartwright, Leonard C.	A.M.	3590	Chung, Arthur	M.D.	2770
Carver, J. S.	B.S.	4320	Cimenera, Joseph L.	B.S.	3510
Cary, Charles A.	S.B.	4020 C	Clagett, C. O.	Ph.D.	2810
Casida, L. E.	Ph.D.	4490	Clancy, John	B.S.	1940
Caso, Eliz. K.	S.M.	1440	Clark, B. S.	Sc.D.	80
Cass, Graydon V.	B.S.	870	Clark, Barbara K.	M.D.	530
Cassady, E. V.	B.S.	80	Clark, E. B.	B.S.	320
Cassidy, H. G.		4540	Clark, Esther L.	B.S.	3780
Caster, William O.	B.Sc.	2360	Clark, George	M.D.	2680 A
Castor, John G. B.	Ph.D.	600	Clark, H.		1650
Castillon, L. E.		4020 H	Clark, J. A.	M.A.	4020 E
Cattell, Jaques		1440	Clark, Paul	M.D.	4126
Cattell, Mckeen	M.D., Ph.D.	850	Clark, Paul F.	Ph.D.	4490
Caul, Jean	Ph.D.	1940	Clark, R. L.	Ph.D.	2260
Caulfield, W. J.		1650	Clark, Ralph H.	B.S.	4520
Cayer, David	M.D.	4270	Clark, Robt. C.		4520
Cederquist, Dena	Ph.D.	2280	Clark, T. B.	M.S.	4400
Ceithaml, Joseph J.	Ph.D.	710	Clark, William G.	Ph.D.	3475
Cerecedo, Leopold R.	Ph.D.	1180	Clarke, David A.	M.S.	600
Chadderdon, H.		1650	Clarke, Geo. L.	Ph.D.	1440
Chadwick, Leigh E.	Ph.D.	4010 A	Clarke, H. T.		790
Chaikoff, I. L.	M.D., Ph.D.	600 A	Clarke, W. S., Jr.	M.S.	3040
Chamberlain, T. K.		3850	Claus, W. D.	Ph.D.	2960
Chamberlin, E. M.	Ph.D.	2260	Clausen, S. W.	M.D.	1580 HH
Chance, F. S.		3830	Claxton, E.		310
Chandler, Fremont A.	M.D.	1610 A	Clayton, Mary M.	Ph.D.	2050
Chandler, Joseph P.	Ph.D.	850	Clayton, R.		4010 B
Chandler, R. F., Jr.	Ph.D.	2700	Clemons, H. B.	B.S.	600 B
Chanutin, A.		4190	Cleveland, E. A.		840
Chapman, Carleton	M.D.	2360	Clifcorn, L. E.	Ph.D.	820
Chapman, H. D.	Ph.D.	600 D	Cline, J. K.		40 A
Chapman, R. A.	Ph.D.	2040	Cline, K. D.	M.S.	4520
Chapman, R. K.		4490	Cline, M. A.	M.S.	3480
Chapman, W. M.		4340	Clinkscales, E.	M.S.	40
Chappell, Victoria M.	M.S.	810	Clopton, J. R.	Ph.D.	3870
Chargaff, Erwin	Ph.D.	790 A	Cloud, W. S.		890
Charipper, H. A.		2770	Clyde, A. W.	M.S.	3040
Charkey, Lowell	Ph.D.	770	Cobb, J. S.	M.S.	3040
Chase, Grafton D.	B.S.	870	Coburn, A. F.		790
Chase, J. T.		1610	Cochran, Fred D.	Ph.D.	2790
Chase, M. L.		1610	Cochran, L. C.	Ph.D.	600 D
Chase, R. G.	Ph.D.	2260	Codie, John F.		3620
Cheldelin, Vernon H.	Ph.D.	2910	Coghill, Robt. D.		20
Chen, Chiadao	Ph.D.	3120	Cogswell, Robt. C., Jr.		4010 B
Chen, James L.	Ph.D.	280	Cohen, Eugene J.	M.D.	850 A
Cheng, Amber Lieng-Shan	M.S.	3620	Cohen, Philip		4490
Cherkin, A.		370	Cohen, Saul L.		2360
Chermerda, J. M.	Ph.D.	2260	Cohn, Essie White	Ph.D.	960
Chernick, S.	Dr.	600 A	Colby, B. W.		3360
Cheronis, Nicholas D.		3810	Cole, H. M.	M.A.	1240
Chiamori, Cornelius Y.	M.S.	3620	Cole, John Wm.	M.S.	3600
Chieffi, M.	M.D.	4330	Cole, Warren H.	M.D.	1610 A
Chiego, Bernard	D.Sc.	425	Coleman, H. M.	Ph.D.	290
Chipault, J. R.	Ph.D.	2360	Coles, Jessie V.	Ph.D.	600 A
Chipman, W. A., Jr.		4030 A	Colin, P. G.	Ph.D.	2260
Chow, Bacon F.	Ph.D.	3660 A	Collignon, U. J.		4010 C
Christanson, C. M.	Ph.D.	2360 A	Collings, Alice R.	M.S.	4020 I
Christensen, Halvor N.	Ph.D.	1580 G	Colowick, Sidney P.	Ph.D.	3200
			Combs, O. B.	M.S.	4490
			Combs, W. B.	M.S.	2360
			Comfort, James E.	B.S.	2390
			Comfort, Mandred W.	M.D.	2170

Common, J. L.	M.S.	1240	Cravens, W. W.	Ph.D.	4490
Compton, R. B.		1220	Crawford, Elizabeth	B.S.	3200
Compton, W. A.	M.D.	2320	Crawford, Iona	M.S.	970
Comstock, Delos	M.D.	3620	Creech, Hugh J.		1643
Conard, George	B.S.	1340	Cremer, Mabel		3560
Conger, T. W.	Ph.D.	4090	Crismon, J. M.	M.D.	3700
Conklin, E. B.		4124	Critzman, C. G.	B.S.	80
Conklin, R. L.	M.D.	2320	Cronheim, Georg E.	Ph.D.	2130
Conn, J. B.	Ph.D.	2260	Crooker, Ernest C.	B.S.	1940
Conn, Lillian W.	M.S.	2540	Cross, Robt. J.	M.A.	2860
Connell, J. C.	B.S.	80	Crossland, L. B.	B.S.	4124
Connell, W. E.	M.S.	770	Crotty, James F.	B.S.	870
Connors, William M.	M.S.	3620	Crowley, L. V.		4010 B
Conover, Leonard	M.A.	360	Croxton, Frank C.	Ph.D.	360
Conquest, Victor	Ph.D.	290	Cruess, W. V.	Ph.D.	600 A
Conrad, Ralph M.	Ph.D.	960 A	Csonka, F. A.	Ph.D.	4020 D
Consolazio, F.		4010 B	Cuckler, Ashton C.	Ph.D.	2260 A
Converse, H. T.	B.S.	4020 C	Cull, S. T. W.	M.D.	270 A
Conway, Marie Carita		4340	Culton, T. G.	M.S.	2050
Cook, Bessie B.	Ph.D.	600 A	Culver, Perry	M.D.	1440
Cook, C. Wayne		4110	Cunha, T. J.	Ph.D.	4320
Cook, Charles A.	Ph.D.	2990	Cunningham, C. J.	B.S.	4400
Coon, B. F.	Ph.D.	3040	Cunningham, R. L.	B.S.	4130
Coonen, N. H.	M.S.	80	Curtis, E. B.	M.A.	4124
Cooper, F. S.		1450	Curtis, G. E.	B.S.	80
Cooper, J. R.	M.S.	270	Curtis, J. J.	B.S.	4020 G
Cooperman, Jack M.	Ph.D.	1530	Czarnecki, J. D.	B.Ch.E.	80
Cope, James K.	B.S.	4420	Czarnetzky, E. J.	Ph.D.	4470
Cope, Oliver		1580 W			
Copeland, D. H.	B.S.	30			
Copson, R. L.		3360			
Corcoran, Lucille E.	R.N.	4040 C(4)	Dack, Gail M.	Ph.D.,M.D.	710
Corey, Helene	B.S.	1940	Da Costa, Esther	Dr.	4010 B
Cori, C. F.	Dr.	4320	Dade, Emil B.		1750
Corman, Geraldine		940	Daft, Floyd S.		4040 C
Corman, L. B.	B.S.	240	Daggs, Ray G.	Ph.D.	4010 C
Cornatzer, W. E.	Ph.D.	4270	Dahl, Bernice	B.S.	3100
Cornell, F. D., Jr.		4400	Dahl, O. J.	B.S.	3480
Cornwell, Ralph T. K.		210	Dahlberg, A. C.	Ph.D.	850
Correll, J. T.	Ph.D.	4090	Dahlberg, H. W.	B.S.	1370
Corrente, Anthony M.	B.S.	2990	Dahle, C. D.	Ph.D.	3040
Corwin, J. F.	Ph.D.	650	Dale, Anna	Ph.D.	1650
Coryell, Margaret	Ph.D.	730	Dale, J. K.	Ph.D.	800
Cosens, Kenneth W.		3890	Daley, Doris	B.S.	2670
Cotterill, Owen	B.S.	2870	Damron, Charlotte M.	M.S.	1260
Co Tui, Frank	M.D.	2770	Dance, D. L.	B.S.	1490
Couch, R. de S.	B.S.	1240	Danehy, J. P.	Ph.D.	840
Coughlin, F. J.	Ph.D.	1840	Daniel, Louise	Ph.D.	850
Coull, James	Ph.D.	3120	Daniels, Elna	M.S.	40
Coulson, Roland A.	Ph.D.	1980 A	Dann, Margaret	M.D.	850
Coulter, S. T.	Ph.D.	2360	Dann, William J.	Ph.D.	1010
Cover, Sylvia	Ph.D.	3850	Darby, William J.	M.D.,Ph.D.	4125
Cowan, J. C.	Ph.D.	4020 G	Darling, H. M.	Ph.D.	4490
Cowden, Lloyd		1590	Darrah, L. B.	Ph.D.	850
Cowell, Catherine		810	Darrow, G. M.	Ph.D.	4020 E
Cowgill, George R.	Ph.D.	4540	Dashner, F. J.		80
Cown, W. B.		1280	Dauben, W. G.		600
Cox, James A.	Ph.D.	3040	Daubert, B. F.	Ph.D.	3120
Cox, L. G.	Ph.D.	390	Daughenbaugh, P. J.	Ph.D.	2260
Cox, M. J.	M.A.	4020 G	Daum, Kate	Ph.D.	1660
Cox, R. F.	Ph.D.	1740	David, Jean	Ph.D.	600 A
Cox, Warren M., Jr.	Ph.D.	2200	David, M. L.	B.S.	80
Craft, A. B.	B.S.	390	Davidheiser, Bolton	Ph.D.	1700
Crafts, Roger C.		457	Davidson, James A.	B.S.	2280
Crandall, Lathan A.	Ph.D.,M.D.	2320	Davidson, O. W.	Ph.D.	3370
Crane, J. C.	Ph.D.	3690	Davies, Dean F.	Dr.	4040 C
Cranston, H. A.	Ph.D.	3150	Davies, J. R.	M.S.	1240
Crapple, G. A.		4470	Davies, Vivian	B.S.	2160

Davis, C. F.	B.S.	2490	Doherty, J. J.	B.S.	80
Davis, D. C.	B.S.	960	Doisy, E. A., Jr.	M.D.	3410
Davis, George K.	Ph.D.	1150	Dolan, Patricia	B.S.	1660
Davis, Gorton	B.S.	450	Donelson, Eva	Ph.D.	2870
Davis, Joseph S.	Ph.D.	3700	Dorfman, Ralph I.		4420
Davis, L. D.	Ph.D.	600 A	Dorin, Harold	B.S.	3240
Davis, L. L.	M.S.	4020 E	Dorn, Herman W.	Ph.D.	1210
Davis, M. E.	Ph.D.	4020 I	Dorsey, L. M.	M.S.	2050
Davis, Margaret V.	Ph.D.	710	Doty, D. M.	Ph.D.	3220
Davis, P. R.	M.S.	580	Doudera, J. J.	B.S.	80
Davis, R. E.	Ph.D.	4020 B	Doudoroff, Michael	Ph.D.	600 A
Davis, Ruth M.	B.S.	4350	Doudoroff, Rita W.	Ph.D.	600 A
Dawson, C. R.		790	Dove, Robert		1580 CC
Dawson, Elsie H.		4020 D	Dow, G. F.	Ph.D.	2050
Dawson, Lawrence	M.S.	3220	Downes, Jean	B.A.	2310
Dawson, R. F.	Ph.D.	790	Downing, Jean F.		1560
Day, Harry G.	Sc.D.	1630	Downs, D. E.	B.S.	670
Day, Paul L.	Ph.D.	270 A	Doyle, Christina	B.S.	40
Dayno, Marvin	B.S.	870	Doyle, L. P.		3220
Dean, G. R.	Ph.D.	840	Drabkin, David L.		3050
de Beer, Edwin J.		4370	Dragiff, David A.	D.D.S.	850 A
de Bodo, Richard C.	M.D.	2770	Dragstedt, Lester R.	M.D., Ph.D.	710
Deck, J. F.	Ph.D.	3330	Drain, Brooks D.	Ph.D.	3830
DeEds, Floyd	Ph.D.	4020 I	Drake, Theo.		3920
Deem, A. W.	D.V.M., M.S.	770	Draper, C. I.		4110
DeFriez, A. I.	M.D.	1440	Dray, Sheldon	Dr.	4040 C(4)
Degering, E. F.	Ph.D.	3220	Dreisbach, Margaret B.	B.S.	4020 D
DeGraff, H. F.	Ph.D.	850	Drekter, Leon	B.S.	1530
Deitrick, John E.	M.D.	850 A	Drew, Donald E.	B.S.	1020
del Campillo, Alice	M.A.	3200	Drill, Victor A.	Ph.D.	4540
Delor, R. A.	B.S.	4090	Drrooyan, Irving	M.S.	3620
Del Vecchio, Henry W.	B.S.	1670	Drummey, Gladys. D.	B.S.	1580 W
Denkewalter, R. G.	Ph.D.	2260	Drury, Jim C.	B.S.	470
Denko, Chas. W.		4010 B	Dryden, C. E.	B.S.	2780
Dennis, Wayne	Ph.D.	3120	Dryden, E. C.	B.S.	4020 A
Denton, Chas. A.	B.S.	4020 B	Dubach, Reubenia	Ph.D.	4330
Derby, James V., Jr.		4030	DuBois, Clarence W.	B.S.	3930
Derby, T. H.	B.S.	2150	DuBois, Eugene F.	M.D.	850 A
DeRitter, Elmer	B.S.	1530	Duffee, F. W.	B.S.A.	4490
DeTurk, E. E.		1610	Dugan, L. R., Jr.	Ph.D.	180
Deuel, H. J., Jr.	Ph.D.	3620	Dulaney, E. L.	Ph.D.	2260
Dewey, Virginia C.	Ph.D.	220	Dull, Malcolm F.	Ph.D.	3120
Dexter, Stephen T.	Ph.D.	2280	Dumm, Mary	Ph.D.	2770
Dick, W. A.	B.E.	80	Duncan, Clifford W.	M.S.	2280
Dicke, Robt. J.	Ph.D.	4490	Duncan, James	M.S.	1350
Dickins, Dorothy	Ph.D.	2380	Dundas, B.	M.S.	320
Dickson, James G.	Ph.D.	4490	Dungan, T. A.	A.B.	1160
Dieckmann, William J.	M.D.	710	Dunham, E.	M.D.	4540
Diehl, Helmut C.		3290	Dunkelberg, G. H.	M.S.	750
Dietz, Max		1310	Dunkley, W. L.	Ph.D.	1350
Dill, David B.	Ph.D.	4010 A	Dunlop, Stuart G.	Ph.D.	780 A
Dillon, Florence	B. A.	1940	Dunn, Cecil G.	Ph.D.	2110
Dills, L. E.	Ph.D.	3040	Dunn, K. M.	M.S.	2280
Dilsaver, Ester M.	M.S.	3850	Dunn, Max S.	Ph.D.	600 C
Dirks, Marlo B.		1740	Dunning, W. F.		4350
Dirstine, P. H.	Ph.D.	1160	Duran-Quevedo, Tomas	Ph.D.	1456
di Sant 'Agnese, Paul A.	M.D.	790 A	Durfrey, Mary L.	B.S.	910
DiTonno, Frank A.	B.S.	2990	Durgin, Clara I.	B.S.	2110
Dittmer, Karl		780	Durham, R. K.		2340
Ditzler, Lorraine	M.S.	2870	Durrun, E. L.		4010 C
Dixon, Maloisse S.		3040 A	Duryee, A. W.		1580 CC
Dju, M.	B.S.	980	Dutcher, R. Adams	D.Sc.	3040
Doan, F. J.	M.S.	3040	Dutton, H. J.	Ph.D.	4020 G
Dobbins, T. E.	B.S.	80	Du Vigneaud, V.	Ph.D.	850 A
Dobriner, K.		1580 BB	Dyar, Eliz.	Ph.D.	770
Dochterman, Elsie F.	M.S.	4040 C(4)	Dye, Richard W.	B.S.	2540
Dodds, Mary L.	Dr.	3040			
Dodge, Wm. W.	B.S.	1740			

Dye, W. B.	Ph.D.	4020 I	Engels, W. H.	Ph.D.	2260
Dyniewicz, J.		1610 A	Engle, J. B.		4030 A
	E		Engle, R. W.	Ph.D.	30
			Enright, J. J.	Ph.D.	3120 A
Eads, Miriam	M.S.	4040 C(4)	Ensminger, M. E.	Ph.D.	4320
Eagle, E.		3800	Entner, Bernard J.	B.S.	2580
Earle, I. P.	Ph.D.	4020 B	Eppell, Norman S.	B.S.	1200
Easter, Ross A.	B.S.	3100	Eppright, Ercel S.	Ph.D.	1650
Eastman,	B.E.	1940	Epstein, Joseph		4010 A
Frederick B., Jr.			Erb, Carl	M.S.	2760
Eastman, N. J.	M.D.	1580 U	Erdman, Henry E.	Ph.D.	600
Eastman, P. J.	B.S.	2050	Erdsiek, Audrey		2390
Eastmond, E. J.	Ph.D.	4020 I	Erickson, A. E.	Ph.D.	2260
Easton, Esther W.	B.S.	2160	Erickson, E. M.	B.A.	1660
Easton, N. R.	Ph.D.	1880	Erickson, Lambert C.		1590
Eater, L.		4130	Erikson, Statie E.	Ph.D.	1770
Eaton, A. C.	B.S.	3130	Erisman, Rose		3890
Ebaugh, Frank	M.D.	850 A	Ershoff, Benj. H.	Ph.D.	3910
Ebeling, W.	Ph.D.	600 D	Esh, G. C.	M.S.	2870
Eberhard, Milton F.	B.S.	1590	Eskew, R. K.	M.S.	4020 F
Eberman, A. H.		2160	Eskwith, Natalie J.	B.S.	2540
Ebert, M. S.	Ph.D.	440	Espe, Dwight	Ph.D.	2810
Ebertz, C. D.	D.V.M.	380	Esplin, A. L.	M.S.	770
Ecklund, O. F.	B.S.	80	Esselbaugh, M.	Ph.D.	4320
Eckstein, Henry C.	Ph.D.	2290	Esselen, Gustavus J.	Ph.D.	1090
Edelston, Harold C.	M.S.S.	3190	Esselen, W. B.	Ph.D.	2120
Edgar, A. C.	B.S.	4470	Estrada, Robert	M.D.	3050
Edgington, B. H.	D.V.M.	2870	Etchells, John L.	Ph.D.	4020 A
Edman, Marjorie		1610	Eue, Ellsworth	B.S.	2370
Edmondson, Joseph E.	M.A.	2390	Evans, Earl A.	Ph.D.	710
Edmondson, Yvette	Ph.D.	1440	Evans, H. M.	M.D.	600 A
Edwards, B. G.	Ph.D.	4020 I	Evans, Marshall	M.S.	2370
Edwards, P. C.	Ph.D.	3630	Evans, R. J.	Ph.D.	4320
Effler, Marie	B.S.	2030	Evans, Robert J.		4320
Eheart, James F.	M.S.	4180	Eveleth, D. F.	Ph.D.	2810
Ehmke, Dorothy A.	Ph.D.	40	Evenden, Wm.		600 A
Ehrenkranz, F.		1650	Everitt, E. L.	Ph.D.	1270
Eisele, C. Wesley	M.D.	710	Everson, C. A.		1650
Eke, Paul A.	Ph.D.	1590	Everson, G.		1650
Elder, Albert L.		840	Ewalt, Jack R.	M.D.	3890 A
Elder, L. W.	Ph.D.	1240	Ezekial, Sarah R.		4010 E
Eliel, Leonard	Ph.D.	1440	Ezell, D. B.	M.S.	4020 E
Ellisberg, Elise	M.S.	3620		F	
Ellenberger, Gertrude	R.N.	2260			
Elliker, P. R.	Ph.D.	3220	Fabian, F. W.	Ph.D.	2280
Elling, Homer R.	B.S.	1740	Fagan, F. N.	B.S.	3040
Ellingson, R. C.	Ph.D.	2200	Fahs, F. J.		2520
Elllott, E. W.	B.A.	1660	Fain, J. Mitchell	Ph.D.	3590
Elllott, R. B.	B.S.	80	Fairbanks, B. W.	Ph.D.	120
Ellis, C. F.	M.S.	3970 B	Fajans, Ruth S.	M.S.	2290
Ellis, Mary	M.A.	790	Falco, Elvira	M.S.	4370
Ellis, N. K.	B.S.	3220	Falkenheim, Marlene		1580 D
Ellis, N. R.	M.S.	4020 B	Falkman, A. B.	B.S.	80
Elman, Robert	M.D.	4330	Fallgatter, F.		1650
Elmslie, W. P.	Ph.D.	2440	Fang, S. C.		2910
Elow, Ruth	B.A.	1390	Farber,	Dr.	1440
Elvehjem, C. A.	Ph.D.	4490	Farber, Lionel	Ph.D.	600 F
Ely, R. E.	M.S.	2280	Fardig, O. B.		3040
Embree, Norris D.	Ph.D.	980	Farinacci,	Ph.D.	3470
Emerson, Gladys A.	Ph.D.	2260	Nicholas T.		
Emerson, Kendall, Jr.	M.D.	1580 D	Farkas, Lillian D.	B.S.	3930
Emery, Cora	B.A.	1940	Farmer, C. J.		2830
Emery, Ruth M.	B.S.	2110	Farnsworth, Helen C.	Ph.D.	3700
Emmons, Frances	B.A.	730	Farr, C. L.		4490
Eng, Erling		2830	Farrall, Arthur Wm.	M.S.	2280
Engel, Floyd		1350	Farrell, M. A.	Ph.D.	3040
Engel, Frank L.		1010	Fasolas, James E.	M.S.	3620

Favor, Henry H.	M.S.	4124	Fohrman, M. H.	M.A.	4020 C
Fawcett, H. S.	Ph.D.	600 D	Folkers, K. A.	Ph.D.	2260
Fawcett, K. I.	B.S.	3220	Follis, Richard H.	M.D.	1010
Fawkes, Chas. E.	B.S.	3230	Folsome, C. E.	M.D.	2920
Fay, A. C.		1540	Foltz, V. D.	M.S.	1740
Feaster, J. F.	Ph.D.	80	Fong, C. T. O.	Ph.D.	100
Fehlmann, Hazel	M.S.	780	Foote, H. E.	Ph.D.	3690
Feldman, J. R.	Ph.D.	1240	Foote, James M.	B.S.	4126
Felker, M. W.	B.S.	3940	Forbes, G. B.		4330
Fellers, C. R.	Ph.D.	2120	Forbes, J. C.	Ph.D.	2220
Felton, G. E.	Ph.D.	1460	Forbes, W. H.	Ph.D.	1440
Fenton, Faith	Ph.D.	850	Ford, Hamilton	M.D.	3890 A
Fenton, Paul F.		4540	Ford, Kenneth D.	B.S.	2810
Ferger, Martha F.	B.A.	850 A	Foreshoe, Audentia		2680
Ferguson,	Ph.D.	4390	Forsythe, Maxine	B.S.	1660
Frederick P.			Fortier, R. I.	B.S.	80
Ferrari, Charles G.	Ph.D.	3690	Fortuna, Rose	R.N.	4040 C(4)
Ferrebee, J. W.		1440	Fosdick, L. S.	Ph.D.	2830
Ferrel, Robt. E.	B.A.	420	Foster, Jackson W.	Ph.D.	3890
Ferren, R. P.	B.A.	80	Foster, S.	B.S.	3020
Fetherston, T. R.	B.S.	1380	Foster, Wm. C.	M.S.	1410
Fevold, Harry	B.A.	4020 I	Fountaine, F. C.	Ph.D.	1740
Fiala, Grace	B.A.	850	Fouts, E. L.	Ph.D.	1150
Fiala, O. J.		1330	Fox, A. L.		880
Fieger, E. A.	Ph.D.	1980	Fox, Beverlee J.	B.A.	2030
Field, Crosby		1120	Fox, Helen W.	B.A.	530
Field, Dorothy H.	B.S.	1120	Fox, Herbert J.	M.D.	1010
Fields, Max		3620	Fox, S. W.		1650
Fifield, C. C.	M.S.	4020 D	Foy, John R.	Ph.D.	2780
Figueroa, W. G.		4010 B	Frahm, Robert	M.S.	730
File, A. F.		3680	Fraker, J. E.	Ch.E.	1490
Filinger, G. A.	Ph.D.	1740	Fralin, Florence G.		3040 A
Finberg, Laurence	Dr.	4040 C(4)	Fram, Harvey	M.S.	2110
Finch, Clement A.	M.D.	1580 D	France, W. G.	Ph.D.	2870
Fincke, Margaret L.	Ph.D.	2910	Frankhouser, Keith H.	Dr.	4040 C(4)
Finley, Hester	B.S.	3890	Frankl, Willi	B.A.	600 C
Finley, R. D.	B.S.	3060	Franklin, A. L.	Ph.D.	100 A
Finn, L. A.		1170	Franklin, D. F.		1590
Flinney, Karl F.	M.S.	1740	Franklin, D. L.	B.S.	1590
Finucane, T.	B.S.	1240	Frantz, F.	M.S.	1060
Fischer, H. O. L.		3920	Fraps, G. S.	Ph.D.	3850
Fischer, R. A.	B.A.	3690	Frary, Guy G.	M.S.	3710
Fisher, A. W., Jr.	D.Sc.	1940	Fratzke, W. E.		600 A
Fisher, C. D.		600 A	Frazer, Ruth M.	B.S.	2030
Fisher, Harold H.	B.S.	3570	Frazier, Ernestine I.	Ph.D.	30
Fisher, Henry E.	Ph.D.	600	Frazier, J. C.	Ph.D.	1740
Fisher, Kathryn		3040 A	Frazier, W. C.	Ph.D.	4490
Fisher, Marjorie	M.S.	2770	Frear, D. E. H.	Ph.D.	3040
Fisher, Walter D.	Ph.D.	600	Fredericksen,	Ph.D.	2260
Fishman, William H.	Ph.D.	710	James M.		
Fisk, Henry G.	Ph.D.	4530	Free, Alfred H.	Ph.D.	2320
Fitch, J. B.	M.S.	2360	Freedman, Louis	Ph.D.	4080
Fitch, Natalie K.	Ph.D.	790	Freese, M. R.	B.Ch.	80
Fitzgerald, Gerald A.	B.S.	1200	Freiberg, G. W.	Ph.D.	230
Fitzhugh, Mary	A.B.	270 A	Freilich, J.	B.S.	3690
Fitzpatrick,	M.A.	3510	French, C. E.	Ph.D.	3040
Florence K.			French, R. B.	Ph.D.	1150
Fitzpatrick, Wm. H.		4010 B	Freund, Ernest H.	Ph.D.	2540
Fix, J. E.	B.A.	80	Freund, Oswald	B.S.	3280
Flannery, Mary C.		4010 A	Freundlich, Leo	Ph.D.	1570
Fleck, Henrietta	Ph.D.	2770	Frey, Paul	Ph.D.	770
Fleming, H. K.	M.S.	3040	Freyer, D. M.	B.A.	80
Fletcher, G.	M.S.	980	Friar, H. F.		600 A
Flore, Klaus		3050	Fricke, Howard H.	Ph.D.	20
Flynn, Laura M.	M.S.	2390	Friedemann,		2830
Foa, Piero P.	M.D., Ph.D.	705	Theodore E.		
Fogler, Benj. B.	B.S.	1940	Frieden, Alexander		2960

Frieden, Earl	M.S.	3620	Gatz, Arthur J.		2010
Friedman, Meyer	M.D.	1580 AA	Gay, William	B.S.	4100
Fries, Karl W.		3310	Gaylord, F. C.	B.S.	3220
Friesen, Stanley	Dr.	2360	Gebhardt, H. T.	Ph.D.	2690
Friesner, Ray C.	Ph.D.	3770	Geddes, W. F.	Ph.D.	2360
Frisch, Eleanor	B.S.	240	Gehman, Harry	Ph.D.	840
Fritz, M. F.		1650	Geissman, T. A.	Ph.D.	600
Fritz, Milo	M.D.	270 A	Gelman, George		4010 B
Froker, R. K.	M.S.	4490	Gemeroy, Douglas	Ph.D.	3370
Frollich, Per K.	Ph.D.	2260	Geraci, A. J.	B.S.	3520
Frost, Douglas V.	Ph.D.	20	Gerber, Marian P.	A.B.	2030
Frost, H. B.	Ph.D.	600 D	Gerlaugh, Paul	M.S.	2870
Frye, Alfred H.	M.A.	3170	Germain, L. G.	B.S.	80
Fudge, J. F.	Ph.D.	3850	Germann, Albert F. O.	Sc.D.	2860
Fuhrman, F. A.	Ph.D.	3700	Gersdorff, C. E. F.		4020 D
Fukul, Tomoko	B.A.	3620	Gerson, L.	M.S.	4140
Fuller, Carol	B.A.	220	Gettemans, John		1600 A
Fuller, L. P.	M.S.	3760	Getz, Horace R.	M.D.	3050 A
Fuller, R. Glenn	M.A.	360	Geyer, Robert P.	Ph.D.	1440
Fullhart, L.	Ph.D.	1020 A	Gholson, James H.	M.A.	2390
Fulton, Geo. P.	Ph.D.	1940	Gibbons, Janis	M.S.	1980
Fulton, R. R.	Ph.D.	290	Gibson, R. B.	Ph.D.	1660
Funk, C. S.	B.S.	880	Gibson, Sam T.	M.D.	1580 D
Funk, Casimir	Ph.D.	4080	Gilbert, Frank A.	Ph.D.	360
Funk, Ernest M.	M.A.	2390	Gilbert, Madge		3040 A
Furchgott, Robt. F.	Ph.D.	850 A	Gilby, Eliz.	M.S.	710
Furse, Robt. J.	B.S.	1340	Gilda, J. E.		3340
Furst, Arthur	Ph.D.	3430	Gill, L. O.	M.S.	3680
Furst, Valentine	M.D.	4010 B	Gill, Robt. F., Jr.	B.S.	2970
G			Gillett, E. C.		580
			Gilligan, G. M.	M.Sc.	950
Gabaldon,	Dr.	570	Gillis, M. B.	Ph.D.	850
Gabby, J. L.	Ph.D.	1330	Gillum, Helen L.	Ph.D.	600 A
Gabuzda, Geo. J.	M.D.	4010 B	Gilmore, Bernard H.	Ph.D.	550
Gaddis, Robert S.	B.S.	4100	Gilmore, Eleanor	M.S.	2920
Gaddis, A. M.	B.S.	4020 B	Gilpin, Gladys L.	M.S.	4020 D
Gaebler, O. H.	Ph.D., M.D.	1580 O	Gimbel, Nicholas	M.D.	3050
Gaede, Stanley E.		600 A	Glabe, Elmer F.		1170
Gaffron, Hans	Ph.D.	710	Glantz, P. J.	B.S.	3040
Gaines, Irving	B.S.	2900	Glaser, Kurt	M.D.	1610 A
Gakenheimer, W. C.	Ph.D.	2260	Gleim, Ella	M.S.	850
Gale, R.	B.S.	1240	Glickman, Nathaniel		1610 A
Gall, Lorraine	Ph.D.	2870	Glusman, Murray		790
Gallaher, Hazel		2000	Gobble, J. L.	M.S.	3040
Gallup, Harriet	M.S.	1660	Godar, E. M.	B.S.	80
Galtsoff, Paul S.		4030 A	Godbey, E. G.	M.S.	750
Galvin, J. A.	B.S.	4020 A	Godchaux, Leon, II		1340
Galyen, L. O.		2390	Goddard, Julia	B.S.	1690
Gamble, James L.	Ph.D.	1580 G	Goddard, V. R.	Ph.D.	600 C
Garcia, Evaristo		3260	Godshall, Frances R.	M.S.	790
Grisolia-Garcia,	M.D.	710	Goertz, Grayce	M.S.	1740
Santiago			Goettsch, Marianne	Ph.D.	3210 C
Gardner, M. E.		2790	Goetzl, Franz R.	Ph.D., M.D.	1580 EE
Gardner, V. R.	M.S.	2280	Goldblatt, Harry		1580 F
Gardner, W. U.		4540	Goldblith, Samuel A.	S.B.	2110
Garey, J. C.	Ph.D.	3040	Golding, N. S.	Ph.D.	4320
Garfinkel, Arlene		1580 C	Goldman, L.	M.D.	741
Garland, Fred	M.S.	2870	Goldman, Milton	B.S.	280
Garnatz, Geo.	Ph.D.	1840	Goldman, P.		1170
Garner, Raymond L.	Ph.D.	2290	Goldsby, Alice I.	B.A.	2810
Garrett, O. F.	Ph.D.	2030	Goldsmith, D. P.	Ph.D.	2260
Garrison, O. B.	Ph.D.	750	Goldsmith, Grace A.	M.D.	3950
Garton, L. M.	B.A.	80	Goldwater, Leonard J.	M.D.	790
Gassner, F. X.	Ph.D.	770	Gollub, Miriam C.	B.A.	710
Gastoneau,	Dr.	2170	Gomez, Amparo	B.S.	1660
Gates, A. I.		790	Gomez, Lucille W.	B.S.	2360
			Good, B. H.	M.S.	2280

Good, Mary K.	B.S.	2280	Griffith, Carroll L.	Ph.C.	1380
Goodhart, Robert S.	M.D.	2660	Griffith, Wendell H.	Ph.D.	3410
Gooding, C. M.		410	Griggs, Ethel Mae	M.S.	970
Goodman, Irving	Ph.D.	780	Grimm, Madelon R.	M.A.	220
Goorley, John T.	Ph.D.	400	Griswold, Ruth M.	Ph.D.	710
Gordeuk, Stephen, Jr.	D.V.M.	3040	Grob, Otto	M.D.	730
Gordon, Edgar S.	M.D.	4490	Grodecki, Edward	B.S.	1690
Gordon, Harry H.	M.D.	780 A	Grollman, Arthur	Ph.D.,M.D.	3650
Gordon, Ruth		1750 A	Groody, Mary	M.S.	600 A
Gordon, Samuel M.	Ph.D.	1080	Groschke, A. C.		4020 B
Gordy, H. C.	B.S.	390	Gross, C. E.	Ph.D.	2450
Gortner, Ross A., Jr.	Ph.D.	4390	Gross, Paul	M.D.	790 A
Gortner, W. A.	Ph.D.	850	Grosse, Shirley		710
Goss, Harold	Ph.D.	600 A	Grossi, B.		1310
Goss, Warren H.	B.S.	3100	Grossman, M. I.		1610 A
Gotsch, L. P.	Ph.D.	80	Grossnickle, Katherine	B.S.	710
Gottesman, E.	M.S.	1080	Grover, Hazel F.	M.S.	1400
Gottlieb, Howard	M.S.	2160	Groves, K.	Ph.D.	4320
Gottlieb, R. J.	B.S.	3520	Gruber, Emil F.	Ph.D.	2120
Gould, David L.	Ph.D.	2780	Grummer, Robt. H.	M.S.	4490
Gould, Eva P.	M.S.	3620	Grundy, Walton E.		4010 B
Gould, I. A.		2100	Gschwend, P.	B.S.	310
Gould, Jack U.	B.S.	1400	Guadagni, D. G.	B.S.	4020 I
Gould, Wilber	M.S.	2870	Gucker, Frank T., Jr.		1630
Gourley, C. O.	B.S.	380	Guerrant, N. B.	Ph.D.	3040
Goyco, José A.	M.S.	3210 C	Guerriero, William F.	M.D.	3650
Grab, E. G., Jr.	M.S.	3970 B	Guest, George M.		741
Graber, L. F.	Ph.D.	4490	Guggholz, J.	B.A.	4020 I
Graff, Morris M.		4010 A	Guilbert, H. R.	M.S.	600 A
Graff, S.		790	Guild, Louise P.	B.S.	2110
Grafflin, Allan L.	M.D.	2770	Guiteras, Albert F.	Ph.D.	3590
Graham, Bruce	M.D.	2290	Gullickson, T. W.	Ph.D.	2360
Graham, C. E.	Ph.D.	4470	Gunderson, Frank L.	Ph.D.	3100
Graham, L. J.	B.S.	4020 I	Gunderson, Millard F.	Ph.D.	2680 A
Graham, W. E.		870	Gunsalus, I. C.	Ph.D.	850
Graham, W. R., Jr.	Ph.D.	680	Gunther, J. K.	Ph.D.	670
Gram, Mary Rose	M.S.	2680	Gurley, Martin H., Jr.	B.A.	1090
Grant, Helen	B.S.	1600 A	Gustafson, Gordon E.	M.D.	4010 B
Grant, J. G.		1650	Gustafsson, R. H.	B.C.	4020 G
Grau, C. R.	Ph.D.	600 A	Guthrie, James E.	Dr.	1510
Graul, E. J.	M.S.	4490	Guthrie, Robert		4040 C
Gray, E. Le B.	Ph.D.	1440	Gutman, George E.		1580 C
Gray, James S.	B.S.	4122	Gutsell, J. S.		4030 A
Gray, M. G.	Ph.D.	1940	Guyer, R.		4280
Gray, Seymour J.		1580 D	Guyer, R. B.	B.S.	2100
Greaves, J. D.	Ph.D.	4020 I	Guymon, J. F.	Ph.D.	600
Green, Charlia C.	M.S.	1930	Gwen, James M.	B.S.	2100
Green, David E.	Ph.D.	790 A	Gyorgy, Paul	Dr.	3050
Green, J.	M.S.	1240			
Green, Margaret		1980			
Green, Ted	B.A.	560		H	
Greenberg, David M.	Ph.D.	600 A	Haag, J. R.	Ph.D.	2910
Greenberg, Louis D.	Ph.D.	600 F	Haagensen, C. D.		790
Greenberg, S.	M.S.	3620	Haagen-Smit, A. G.	Ph.D.	590
Greene, Alice J.	B.S.	2280	Haakinson, Aline	B.S.	780 A
Greene, John W.	Ph.D.	960 A	Haas, Erwin	Dr.	1580 F
Greene, Laurenz	Ph.D.	3220	Haas, L. W.		1950
Greensmith, Roberta	B.S.	2280	Haas, Victoria	Ph.D.	600 A
Greenwald, Isidor		2770	Habegger, W. E.		670
Greenwood, Delbert A.	Ph.D.	4110	Hagberg, Elroy C.	B.S.	4490
Greenwood, Mary L.	Ph.D.	810	Hagen, Charles W., Jr.	Ph.D.	1630
Gregg, D. E.	Ph.D.,M.D.	4010 C	Hahn, Paul F.	Ph.D.	4125
Gregory, Paul W.	Ph.D.	600 A	Haines, W. T.		1610
Gresock, Mary K.	B.S.	730	Hainline, Adrian	M.S.	960
Gribkoff, George	B.S.	450	Haldi, John	Ph.D.	1070
Griffin, Clark	Ph.D.	3700	Hale, Fred		3850
Griffin, Grace E.	M.S.	1970			

Hale, Mary		2930	Harris, R. H.	Ph.D.	2810
Hale, W. S.	Ph.D.	4020 I	Harris, Robert	Ph.D.	1940
Hall, C. M.		4020 H	Harris, Robert S.	Ph.D.	2110
Hall, Geo. O.	B.Sc.	550	Harris, S. A.	Ph.D.	2260
Hall, Harlow H.	Ph.D.	4020 A	Harris, Sarah	M.A.	2930
Hall, J. L.	Ph.D.	1740	Harris, Stanley C.		2830
Hall, Lloyd A.	D.Sc.	1380	Harris, Titus	M.D.	3890 A
Hall, R. A.	B.S.	1280	Harris, W. D.	Ph.D.	2670
Hall, Victor E.		3700	Harrison, Ann	B.S.	730
Halleday, Evelyn G.	Ph.D.	710	Harrison, Dorothy	Ph.D.	1740
Hallman, Elam Tandy	D.V.M.	2280	Harrison, R. W.	M.S.	470
Hallman, Lois F.	A.B.	4020 D	Harrison, Tinsley R.	M.D.	3650
Halpin, J. G.	B.S.	4490	Harston, C. B.	Ph.D.	360
Halvorson, H. O.	Ph.D.	2360	Hart, Ann		3890
Ham, Wendell E.	M.S.	4320	Hart, E. B.	B.S.	4490
Hamil, B. M.	Dr.	1580 O	Hart, G. H.	D.V.M., M.D.	600 A
Hamilton, S. W.		380	Hart, J. F.	Dr.	2730
Hamilton, T. S.	Ph.D.	1610	Hart, T. V.	M.S.	3020
Hamner, K. C.	Ph.D.	850	Hart, William M.	Ph.D.	3825
Hamor, Wm. A.		3120 A	Harte, Robert A.	B.S.	280
Hamra, Helen	B.S.	1660	Harte, Walter H.	B.S.	4121
Hanahan, D. J.	Dr.	600 A	Hartley, W. C.		1750
Hand, David B.	Ph.D.	850	Hartman, Arthur M.	M.S.	4020 C
Handler, Philip	Ph.D.	1010	Hartman, Henry	M.S.	2910
Handwerk, R. L.	Ph.D.	1650	Hartman, John	Ph.D.	3220
Hanke, Martin E.	Ph.D.	710	Hartmann, Alexis F.	M.D.	4330
Hankins, O. G.	B.S.	4020 B	Hartmann, H. T.	Ph.D.	600 A
Hanks, John H.		1440	Hartmann, Miner L.	Dr.	350
Hanna, G. C.	B.S.	600	Hartsell, S. E.		3220
Hanning, Flora	Ph.D.	4490	Hartwell, R. R.	M.S.	80
Hansen, Arild E.	Ph.D.	3890 A	Hartzler, Eva	M.S.	1480
Hansen, Elmer	Ph.D.	2910	Harvard, Elizabeth	B.A.	1070
Hansen, Henry C.	Ph.D.	1590	Harvey, E. W.	Ph.D.	2910
Hanson, A. M.	Ph.D.	4410	Harvey, L.		4010 B
Hanson, Helen L.	Ph.D.	4020 I	Harwood, B. H.	B.S.	4124
Hanson, Wilbur		3000	Harwood, Paul D.		1510
Hanze, A. R.	Ph.D.	4090	Harwood, Theodore	M.D.	4126
Hardin, R.	M.D.	1660	Haskell, W. H.		1780
Harding, Eliz. R.		2390	Haskin, Harold H.		3370
Harding, H. Gordon	Ph.D.	2540	Haskins, A. L.	M.S.	3040
Hardy, James D.	Ph.D.	850	Hassenin, John	B.S.	4520
Hardy, Martha C.		2190	Hassett, C. C.	Ph.D.	4010 A
Hare, W. W.	Ph.D.	4490	Hassid, W. Z.	Ph.D.	600 A
Harford, Charles G.	B.Sc.	1940	Hassler, W. S.		890
Harkness, David M.	M.S.	1970	Hastings, A. Baird		1440
Harland, H. A.	M.S.	2360	Hatch, Miles B.		2910
Harman, Mary T.	Ph.D.	1740	Hathaway, I. L.	M.S.	2680
Harnik, G. W.	M.S.	80	Hathaway, Millicent L.	Ph.D.	4020 D
Harp, R.	B.S.	1380	Hathorn, S.		1610
Harper, Carl S.	M.D.	4490	Hattox, Fay		3880
Harper, Claude	M.S.	3220	Hauck, B. C.		80
Harper, D. H.	B.S.	80	Hauck, Hazel M.	Ph.D.	850
Harper, Harold A.	Ph.D.	3430	Haugaard, Gotfred	Ph.D.	2540
Harrell, Chastain G.	M.S.	3100	Hauge, S. M.	Ph.D.	3220
Harrell, George T.	M.D.	4270	Haut, I. C.	Ph.D.	2100
Harrell, Ruth		790	Havens, Richard A.		3770
Harriman, L. A.	Ph.D.	290	Hawes, J. E.	B.S.	2100
Harrington, A.	Ph.D.	4320	Hawes, J. R.	A.B.	4020 I
Harrington, V. F.	Ph.D.	60	Hawes, Martha Jo		2890
Harrington, W. O.	B.A.	4020 I	Hawks, O.	B.S.	980
Harris, E. S.		370	Hawley, Robt. Lee		780 A
Harris, Hurbert		30	Haynes, R. D.	B.S.	3970 B
Harris, J. S.	M.D.	1010	Hays, G. L.	M.S.	80
Harris, Katharine W.	M.A.	850	Hays, Rene M.	M.S.	3850
Harris, Lewis E.	M.S.	1430	Hayward, J. W.	Ph.D.	240
Harris, Lorin E.	Ph.D.	4110	Hazaleus, M. H.	M.S.	770
Harris, Marvin	Dr.	1580 F	Heal, R. E.	Ph.D.	2260
Harris, Philip L.	Ph.D.	980	Heard, R. D. H.		2195

Heberlein, D. G.	B.S.	820	Higbee, H. W.	M.S.	3040
Hebert, Jeanne	B.S.	560	Higbie, Howard	M.A.	3120
Hedgecock, L.	M.S.	230	Higgins, Elmer	Ph.D.	4030 A
Hedrick, Leslie R.		1600	Higgins, George M.	Ph.D.	2170
Heerd, Martin, Jr.	B.S.	4030 A	Hilbert, G. E.	Ph.D.	4020 G
Hegsted, David M.	Ph.D.	1440	Hildebrand, Annie Mae		750
Hehre, Edw. J.	M.D.	850	Hildebrand, John G.	Ph.D.	1090
Heid, J. L.		1140	Hildebrand, Samuel F.		4030 A
Heidt, L. J.	Ph.D.	2110	Hildreth, A. C.	Ph.D.	4020 E
Heinemann, Burdet	B.S.	3180	Hildreth, Arthur G.	M.S.	2120
Heitman, Hubert	Ph.D.	600	Hileman, J. L.	M.S.	910
Heizer, E. E.	Ph.D.	4490	Hill, Carl M.	Ph.D.	3827
Heizer, Harold K.	B.S.	4020 E	Hill, Charles W.	Ph.D.	1810
Heilbaum, A. A.	Dr.	2890	Hill, D. L.		4010 A
Heller, Christine A.	M.S.	3840	Hill, F. W.	Ph.D.	4410
Heller, M. E.	B.S.	4020 F	Hill, Harvey H., Jr.		1560
Heller, Thelma		3040 A	Hill, J. A.		4530
Hellerman, Leslie		1700	Hill, L. L.	A.B.	4450
Helsel, Paul E.	B.S.	320	Hill, R. G., Jr.	B.S.	2100
Hemingway, W. C.	B.S.	320	Hill, Robert M.	Ph.D.	780 A
Hemphill, P. V.	M.S.	2810	Hill, Thomas M.		70
Hendel, C. E.	B.S.	4020 I	Hill, Vincent R.	Dr.	4010 B
Henderson, Charles R.		4010 B	Hillier, Frances W.	Ph.D.	710
Henderson, Howard J.		3050 A	Hills, C. H.	Ph.D.	4020 F
Henderson, J. L.	Ph.D.	1350	Hilston, N. W.	Ph.D.	4530
Henderson, M. T.	Ph.D.	3040	Himwich, H. E.		3995
Henderson, Richard	B.S.	2110	Hiner, R. L.	M.A.	4020 B
Hendrick, Cornelia		3620	Hines, H. M.	Ph.D.	1660
Hendrickson, Rudolph	B.S.	1150	Hinman, Winifred F.		710
Hendrix, B. M.	Ph.D.	3890 A	Hinshaw, E. B.		600 B
Henick, A. S.	Ph.D.	180	Hirata, Toshio	M.S.	3590
Henkel, J. H.		1240	Hirsch, Renate R.		3370
Hennessy, D. J.		1180	Hirschmann, D. J.	B.S.	4020 I
Henney, Homer, J.		770	Hitchcock, Fred A.		2870
Henry, C. L.		380	Hitchings, George H.	Ph.D.	4370
Henry, Dorothy L.	B.S.	1300	Hites, B. D.	M.S.	2680
Henry, R. E.	Ph.D.	820	Hitz, C. W.	Ph.D.	2050
Henschel, Austin	Ph.D.	2360	Hivon, Katherine J.		3220
Hensley, Geo. W.	B.S.	3240	Hixon, R. M.	Ph.D.	1650
Hensley, James W.		4490	Hjermstad, E. T.	M.S.	3020
Hepnar, Joseph	B.A.	3890	Hoadley, A. D.	Ph.D.	610
Herb, S. F.		4020 A	Hoag, L. E.	Ph.D.	80
Herman, Harry A.	Ph.D.	2390	Hoagland, C. L.		2770
Herndon, L. K.	Ph.D.	2870	Hoagland, Ralph	B.A.	4020 B
Herrick, C. A.	Ph.D.	4490	Hoberman, Henry D.	Dr.	4540
Herrington, B. L.	Ph.D.	850	Hobson, Merk		2830
Herrington, Wm. C.		4030 A	Hochbert, M. H.	M.S.	2780
Herrmann, George R.	M.D.	3890 A	Hockett, Robt. C.		3750
Herro, Alex C.	B.S.	2540	Hodler, P. W.	Ph.D.	1840
Hess, W. C.	Ph.D.	1270	Hodge, Harold C.		3340
Hesse, C. O.	Ph.D.	600 A	Hodgson, C. W.	Ph.D.	1590
Hession, Charles		500	Hodgson, R. E.	Ph.D.	4020 C
Hester, Jackson B.	Ph.D.	610	Hodson, A. Z.	Ph.D.	3060
Hetrick, John H.	Ph.D.	930	Hoefler, J. A.	Ph.D.	3220
Heuser, G. F.	Ph.D.	850	Hoffman, Conrad E.	M.S.	100
Hewetson, F. N.	M.S.	3040	Hoffman, E. J.	Ph.D.	4020 I
Hewitt, Eric J.	Ph.D.	1100	Hoffman, H.	M.S.	230
Hewitt, G. S.		2910	Hoffman, Henry I.	M.S.	1670
Hewston, Eliz. M.	M.A.	4020 D	Hoffman, Kenneth R.	M.A.	2300
Heyl, Dorothea	Ph.D.	2260	Hoffman, O. L.	M.S.	2670
Heyl, Edgar G.	B.S.	2540	Hoffman, R. A.	Ph.D.	2260
Hibbard, Aubrey D.	Ph.D.	2390	Hoffman, Richard	M.D.	1580 C
Hibbs, J. W.	Ph.D.	2870	Hofman, Klaus	Ph.D.	3120
Hickey, F. D.	B.S.	1160	Hogan, A. G.	Ph.D.	2390
Hickey, R. J.	Ph.D.	800	Hohl, Leonora A.	Ph.D.	600 A
Hickman, C. W.	Ph.D.	1590	Hoisington, L.		260
Hickman, K. C. D.	Ph.D.	980	Holben, F. J.	M.S.	3040
Hicks, Ruth S.	B.S.	1200	Holcomb, Helen	B.S.	40

Hollander, Franklin	Dr.	1580 Z	Hughes, J. P.	B.S.	3940
Hollenbeck, C. M.	Ph.D.	2260	Hughes, J. S.	Ph.D.	1740
Holley, Howard H.	M.D.	40 A	Hultz, Fredric S.	Ph.D.	4530
Hollinger, Martha E.	M.S.	1980	Hummel, J. P.	M.S.	1660
Hollis, F., Jr.	B.S.	1240	Hummel, Merrilyn		4520
Holly, F.	Ph.D.	2260	Hummel, Miriam E.	M.S.	770
Holman, Ralph T.		3850	Humphery, Mary J.	B.S.	710
Holman, Russell L.	M.D.	1980 A	Humphries, Jane	B.A.	3620
Holmes, Elza O.	Ph.D.	2300	Hundley, James M.		4040
Holmes, Julia O.	Ph.D.	220	Hungerford, C. W.	Ph.D.	1590
Holmstrom, C. D.	B.S.	230	Hunt, C. H.	Ph.D.	2870
Holt, James		2110	Hurd, Chas. D.	Ph.D.	2830
Holt, L.		3370	Hurley, Lucille	B.S.	600 A
Holt, L. Emmett, Jr.	M.D.	2770	Hurst, Victor		2390
Holt, Matthew L.	Ph.D.	4490	Hurt, Wilbur	B.A.	3620
Holt, R. F.	B.A.	1050	Huss, George		890
Homberger, A. W.	Ph.D.	1990	Hussemann, Dorothy	Ph.D.	4490
Homberger, Robert E.	M.S.	2540	Hussong, R. V.		1610
Honess, Ethel M.		3040 A	Huston, Robert		600 A
Hoobler, Icie G. Macy	Ph.D.	730	Hutchens, John O.	Ph.D.	710
Hood, Maude Pye	Ph.D.	1300	Hutchings, I. J.	Ph.D.	1490
Hoogerheide, J. C.	Ph.D.	2960	Hutchings, L. M.		3220
Hoos, Sidney S.	Ph.D.	600	Hutchins, Ardelia	B.S.	2110
Hoover, R. D.	B.A.	680	Hutner, S. H.	Ph.D.	1450
Hopkins, E. W.	Ph.D.	290	Huyck, Marqueta	M.S.	4350
Hoppe, P. E.		4490	Hyatt, George, Jr.	M.S.	4400
Hoppert, Carl A.	Ph.D.	2280			
Horan, Francis E.	Ph.D.	2300		I	
Horlick, L.	M.D.	1580 FF			
Horn, Millard J.	Ph.D.	4020 D	Iliff, Alberta	Ph.D.	780 A
Horner, J. W.	Ph.D.	240	Imes, Paul V.	M.A.	630
Horowitz, N. H.	Ph.D.	590	Ingalls, Ruth	M.S.	2280
Horrall, B. E.	Ph.D.	3220	Ingram, G. R.		30
Horwitt, M. K.	Ph.D.	1580 L	Irvine, W. S.	M.S.	80
Horwood, R. E.	M.S.	2280	Irving, George W., Jr.		4020 H
Hosberger, Lloyd	B.A.	3330	Irwin, M. R.	Ph.D.	4490
Hoskins, Walter	Ph.D.	2080	Isaacs, Leonard	M.S.	3980
Houchin, O. Boyd	Ph.D.	1990	Ishler, N.H.	M.S.	1240
Houchins, Raymond		270 A	Itter, Stuart	Sc.D.	3690
Houck, A. E. H.	Ph.D.	1490	Ives, M.	Ph.D.	80
Houghton, Ben C.		2870	Ivy, A. C.	Ph.D., M.D.	1610 A
Houghton, Dorothy	Ph.D.	790			
House, Frances	B.S.	270		J	
House, H. L.		850			
Houston, Chester W.	Ph.D.	1150	Jack, E. L.	Ph.D.	600 B
Hove, E.	Ph.D.	980	Jackson, Blanche	Dr.	3920
Hove, E. L.	Ph.D.	30	Jackson, H. C.	Ph.D.	1580 W
Howard, John E.		1700	Jackson, J. M.	Ph.D.	4490
Howard, Louis B.	Ph.D.	4020 A	Jackson, Lois E.	M.S.	80
Howard, Nelson	B.S.	2370	Jackson, R. W.	Ph.D.	2280
Howe, E. E.	Ph.D.	2260	Jackson, Robt. L.	M.D.	4020 G
Howell, Carroll E.		600	Jackson, Ruby	B.S.	1660
Hower, R. K.		2490	Jackson, S. M.	Ph.D.	1940
Howes, D.		1610 A	Jacob, H. E.	M.S.	3760
Howitz, Marilyn	B.S.	3100	Jacobi, Herbert P.	Ph.D.	600
Hoy, M. A.	L.L.M.	80	Jacobs, E. C.	B.S.	2680
Hoyt, E.		1650	Jacobs, Esther		80
Hubbard, Winchester	B.S.	2670	Jacobson, W.		1580 DD
Huber, L. L.	Ph.D.	3040	Jakel, O. W.	B.S.	20
Hucker, George J.	Ph.D.	850	James, D. E.	B.S.	4020 I
Huddlestun, B.	M.S.	1580 FF	James, J. W.		2030
Hudson, C. S.	Ph.D.	4040 C	James, Raymond	B.Ch.E.	4010 B
Huff, Jesse W.	Ph.D.	3510	James, W. H.	Ph.D.	1940
Huffman, C. W.	Ph.D.	2260	Jamison, G. W.		3040
Huffman, Carl F.	Ph.D.	2280	Janes, Ralph G.	Ph.D.	4010 B
Huggart, Richard L.	B.S.	1150	Janeway, Charles A.	M.D.	1660
Hughes, E. H.	Ph.D.	600	Jann, Philip E.	B.S.	1580 G
Hughes, H. M.		380			420

Janota, Joseph		860	Jones, Ivan D.	Ph.D.	2790
Jans, Loretta	M.S.	710	Jones, James H.	Ph.D.	3050
Jarvis, N. D.	M.S.	4030 A	Jones, Jenkin W.	M.S.	4020 E
Jasny, Naum		3700	Jones, John H.	M.S.	1600 A
Jatul, Bernard B.	Ph.D.	3510	Jones, R. E.	Ph.D.	2260
Javert, Carl T.	M.D.	850	Jones, Randall J.	Ph.D.	3970 A
Jeans, Philip C.	M.D.	1660	Jones, Segar	M.D.	1580 U
Jefferson, E. J.	M.S.	3960	Jones, W. W.	Ph.D.	600 D
Jeffrey, F. P.	Ph.D.	2120	Jones, William O.	Ph.D.	3700
Jeffrey, Isabelle A.	B.S.	1580 DD	Jordan, P. H., Jr.		4010 B
Jeffries, C. D.	Ph.D.	3040	Jordon, Ruth	M.S.	3220
Jeghers, Harold	Dr.	1270	Josephson, Donald V.	Ph.D.	2870
Jenkins, Sidney H.	B.S.	890	Joslin, Robert P.	B.S.	2110
Jenness, Robert A.	Ph.D.	2360	Joslyn, M. A.	Ph.D.	600 A
Jennings, B. H.		2830	Joyce, Gail	M.S.	40
Jensen, Theodore		4490	Jubb, Annanell C.	M.S.	2280
Jensen, Chris	Ph.D.	2810	Jue, D.		3620
Jensen, H. F.	Ph.D.	4010 C	Jukes, Thomas H.	Ph.D.	100 A
Jensen, J. M.	M.S.	2280	Julian, Percy L.	Ph.D.	1330
Jensen, Max	M.S.	1590	Jull, Morley L.	Ph.D.	2100
Jensen, Ruth	B.S.	1610	Jung, Elbert L.	M.S.	3590
Jensen, S. F.	B.S.	80	Jungeblut, Claus	M.D.	790 A
Jerome, Dorothy W.	B.S.	600 A	Junkins, S. C.	B.S.	2050
Jersey, Vernon	Ph.D.	2860	Jutten, E. M.	B.S.	80
Jobes, Charles E.	B.S.	630			
Johannes, E. H. L.		610		K	
Johnsen, V. L.	B. S.	4020 G	Kaczka, E.	Ph.D.	2260
Johnson, A. Leroy		1440	Kadavy, Joan L.	M.S.	710
Johnson, Aldula	M.S.	780 A	Kaeser, H. E.	B.S.	2870
Johnson, Alonzo	B.Sc.	1700	Kagan, B. M.	M.D.	1580 FF
Johnson, Arnold H.	Ph.D.	2540	Kalar, S. B.		1650
Johnson, B. C.		1610	Kalen, June K.	M.S.	1740
Johnson, D. Gale	Ph.D.	710	Kallio, R. E.	B.S.	1660
Johnson, Garth	Ph.D.	2920	Kalnitsky, George	Ph.D.	1660
Johnson, Howard C.		4010 B	Kalogereas, Socrates	Ph.D.	1980
Johnson, J. J.	Ph.D.	2540	Kaltenback, J. P.	B.A.	1660
Johnson, John A.	M.S.	1740	Kaminsky, Daniel	M.S.	2710
Johnson, Louis E.	Ph.D.	3770	Kamlet, J. A.	B.Sc.	2320
Johnson, M. J.	Ph.D.	4490	Kanapaux, Margaret		2390
Johnson, Martha	B.A.	3240	Kaplan, Hattie	B.S.	4126
Johnson, Martha	Ph.D.	1230	Karjala, S. A.	Ph.D.	670
Johnson, Mary Louise	M.S.	4340	Kark, R. M.	M.D.	4010 B
Johnson, Paul E.	Ph.D.	3970 A	Karow, E. O.	Ph.D.	2260
Johnson, Phil		1310	Karpenko, Vasily D.	B.S.	2540
Johnson, Richard M.	M.D.	3620	Karshan, Maxwell	Ph.D.	790 A
Johnson, Robt. E.	M.D.	4010 B	Kascher, H.	M.S.	980
Johnson, Ronald	B.S.	4100	Kaser, Margaret M.		4125
Johnson, Willis H.	Ph.D.	4250	Kashdan, Ruth	B.A.	2400
Johnston, Frances A.	Ph.D.	850	Kasoff, Herbert	B.S.	2280
Johnston, Joseph A.	M.D.	1580 O	Kass, J. P.	Ph.D.	330
Johnston, Kathleen A.	Ph.D.	4340	Katainen, Violet O.	R.S.	2280
Johnston, N. F.	B.A.	4124	Katz, L. N.	M.D.	1580 FF
Johnston, W. R.	Ph.D.	3690	Katz, Morris H.	B.S.	2097
Johnstone, G. R.		3620	Kaucher, Mildred	M.S.	730
Jolliffe, Norman	M.D.	2723	Kauffman, W. R.	B.A.	4020 B
Jones, Anna M.	B.S.	910	Kaufman, C. W.		1240
Jones, Chester	M.D.	1580 W	Kaufman, V. F.	M.A.	4020 I
Jones, D. Breese	Ph.D.	4020 D	Kaunitz, Hans	M.D.	790 A
Jones, E.	B.S.	1060	Kayan, Carl F.		790
Jones, E. O.		4010 B	Kays, W. R.		2885
Jones, Edgar	M.D.	4125	Keane, Kenneth		930
Jones, Eliz. L.	B.S.	1230	Keating,	M.D.	2170
Jones, F. P.		3830	F. Raymond, Jr.		
Jones, F. R.		4490	Keats, Arthur S.		4040 C(4)
Jones, F. T.	Ph.D.	4020 I	Keeper, W. E.	Ph.D.	3040
Jones, G. Ivor	Ph.D.	4030 A	Keeton, Robt. W.	M.D.	1610 A
Jones, George		1310	Keifer, H. H.	B.S.	2460
Jones, Helen		4380			

Keighley, Geoffrey	Ph.D.	590	King, Florance B.	Ph.D.	4126
Keiles, Elsa O.	Sc.D.	4020 D	King, G. D.	B.S.	880
Keipper, C. H.	Ph.D.	3280	King, J. E.		3850
Keith, Cecilia	M.S.	270 A	King, R. R.		3940
Keith, T. B.	Ph.D.	1590	Kinsell, Lawrence W.		600
Kelez, Geo. B.		4030 A	Kinsella, Ralph A., Jr.	M.D.	3410
Keller, Margaret	Ph.D.	1650	Kirby, Geo. W.	B.Ch.E.	3690
Keller, Rudolph	Ph.D.	425	Kirkpatrick, M.	M.S.	4020 D
Keller, W. C.		4124	Kirsner, J. B.	Ph.D.	710
Keller, Warren F.	B.S.	1740	Kitchen, J. B.	B.S.	3370
Kelley, E. G.	Ph.D.	4020 F	Kitzes, A. S.	M.S.	2360
Kelley, Patricia H.	A.B.	3590	Kitzes, Geo.	Ph.D.	4430
Kelly, Anna Louise	M.S.	2280	Klages, Karl H.	Ph.D.	1590
Kelly, Eunice	M.S.	2810	Klee, L.	B.S.	1380
Kelly, Harriet	Ph.D.	730	Kleiber, Max		600 A
Kelly, R. A.		1610	Klein, J. Raymond	Ph.D.	1610 A
Kelsay, June	M.S.	2820	Klein, R. E.	B.S.	870
Kelso, C. D.	Ph.D.	2830	Kleinberg, Jacob		1750
Kemmerer, Arthur R.	Ph.D.	260	Kletzien, Seymour W.	Ph.D.	1580 DD
Kemmerer, K. S.	Ph.D.	2200	Kline, O. L.	Ph.D.	4040 B
Kemp, Albert R.	M.S.	930	Kline, R. W.	Ph.D.	290
Kemp, W. B.		2100	Kline, Richard H.	Ph.D.	3120
Kempf, C. A.	Ph.D.	1350	Klinger, J. H.	B.S.	880
Kempner, W.	M.D.	1010	Kloos, Mary Eliz.		2890
Kendrick, J. B., Jr.	Ph.D.	600 D	Klopp, A.	M.S.	1380
Kennard, D. C.	B.S.	2870	Kloppenburg, Dale		560
Kennedy, Barbara M.	Ph.D.	600 A	Klose, A. A.	M.S.	4020 I
Kennedy, C. A.	M.S.	1240	Klosterman, Earle W.	Ph.D.	2810
Kennedy, Cornelia	Ph.D.	2360	Klotz, I. M.	Ph.D.	2830
Kennedy, Francis		520	Klotz, L. J.	Ph.D.	600 D
Kennedy, J. G.	B.S.	4520	Knapheide, M. D.	B.S.	2440
Kennedy, M. H.	Ph.D.	3690	Knapp, Eliz. L.	Ph.D.	1660
Kennedy, Norman F.		830	Knapp, H. B.		1960
Kennedy, W. V.	M.S.	4520	Kneeland, K. E.	B.A.	80
Kensler, Charles J.	M.S.	850	Knodt, C. B.	Ph.D.	3040
Kent, G. C.	B.M.E.	80	Knoefel, P. K.	Ph.D.	1990
Kenworthy, Alvin L.	M.Sc.	950	Knott, Anne F.	S.B.	2110
Kenyon, Ernest M.	S.B.	2110	Knott, Eliz.	Ph.D., M.D.	3217 C
Kepner, S. K., Jr.		270 A	Knutti, Ralph E.	M.D.	1580 I
Kerchberger, V. H.		1650	Koch, F. C.		290
Keresztesy, John C.		1580 Z	Kochakian, Charles D.	Ph.D.	3340
Kern, Charles J.	Ph.D.	1670	Koehler, Dr.		3433
Kern, F. D.	Ph.D.	3040	Koehn, C. J.		30
Kertes, Z. I.	Ph.D.	850	Koenig, Louis		1600 A
Kesel, Robert G.		1610 A	Koepsell, H. J.	Ph.D.	4020 G
Kesler, C. C.	Ph.D.	3020	Kohler, G. O.	Ph.D.	680
Kester, E. B.	Ph.D.	4020 I	Kohman, E. F.	Ph.D.	610
Kester, Loretta	B.S.	3360	Kohnke, H.	Ph.D.	3220
Kesterson, James W.	M.S.	1150	Komarik, Steve		1380
Keston, A. S.	Ph.D.	2770	Kondritzer, A.	Ph.D.	4010 A
Kethley, T. W.	M.S.	1280	Kooreman, J.	B.S.	3020
Ketron, Katharine C.	B.S.	2770	Kopf, Kenneth		1460
Keys, Ancel	Ph.D.	2360	Korfhage, Roy F.	Ph.D.	1810
Kiang, Sarah Pon	M.S.	2770	Kornberg, Arthur		4040 C
Kidde, Gustave E.	B.S.	3590	Korsakoff, V. N. R.	M.S.	1200
Kidder, George W.	Ph.D.	220	Kortschak, Hugo P.	Ph.D.	2970
Kidman, Carlos	B.S.	4100	Koser, Steward A.	Ph.D.	710
Kik, M. C.	Ph.D.	270	Kotschevar, Lendal H.	M.A.	4340
Kilbuck, J. H.		600 A	Kountz, Wm. B.	Ph.D., M.D.	4330
Kilburn, R. W.	A.B.	1160	Kouten, Joseph W.		3570
Killian, J. A.	Ph.D.	2320	Kozloff, Lloyd M.	B.S.	710
Killinger, J. E.	Ph.D.	3020	Krafft, Carl	B.S.	2400
Kilpatrick, P. W.	B.S.	4020 I	Kramer, Amihud	Ph.D.	2100
Kimball, Charles N.	Sc.D.	3000	Kramer, B.	Ph.D.	1580 E
Kimball, Cyril S.	B.S.	3590	Krantz, John C.	Ph.D.	2100
Kimball, Mary H.	B.A.	3100	Krasnow, Frances	Ph.D.	1390
King, Chas. G.	Ph.D.	790	Krasso, O.	Ph.D.	2260
King, D. F.		30	Kratzer, F. H.	Ph.D.	600 B

Kraus, Ezra J.	Ph.D.	710	Larsen, Robert A.	Ph.D.	1020
Kraus, James E.	Ph.D.	1590	Larson, Frank	Dr.	4490
Krause, R. F.	Ph.D.	4126	Larson, R.		1170
Krauss, W. E.	Ph.D.	2870	Larson, R. H.		4490
Kravitz, Harvey	M.D.	1610 A	Lashbrook, W. L.	B.S.	380
Kraybill, H. R.	Ph.D.	180	Lasichak, A. G.	M.D.	4350
Krayer, Otto		1440	Laskowski, Michael	Ph.D.	270 A
Krehl, Willard A.	Ph.D.	4540	Lassen, S.	Ph.D.	4123
Krell, Marjorie		1580 DD	Lassiter, James T.	B.A.	1020
Kressler, R. J.	M.D.	1580 DD	Laster, R.	B.Ch.E.	1240
Krienke, W. A.	M.S.	1150	Later, E. R.		1580 FF
Kroc, Robert L.	Ph.D.	2080	Latham, Allen	M.S.	1940
Krukovsky, V. N.	Ph.D.	850	Latham, F.	B.A.	3690
Krupp, R.		1310	Latham, H. P.		3690
Kruse, H. D.	M.D.	2310	Latven, A. R.	B.S.	2470
Kubitschek, J.	B.S.	1380	Laubscher, A. N.	Ph.D.	80
Kuehl, F. A.	Ph.D.	2260	Laude, H. H.	Ph.D.	1740
Kuehl, S.		1650	Lauffer, Max A.	Ph.D.	3120
Kueneman, R. W.		600 A	Lauro, J. V.	B.A.	2740
Kuether, Carl A.	Ph.D.	4340	Lauro, M. F.	M.S.	2740
Kuiken, K. A.		3850	Lawhorne, Robt. K.	M.S.	10
Kulp, W. L.		810	Lawrence, James V.	M.S.	2870
Kummer, Mary B.	B.A.	2260	Laws, W. D.	Ph.D.	3870
Kummerow, Fred A.	Ph.D.	1740	Lawson,	Dr.	3620
Kunkel, R. W.	M.S.	2360	Lay, R. N.	B.S.	80
Kunsman, C. H.	Ph.D.	4020 I	Laymaster, Ruth M.	B.S.	2680
Kunze, C. T.	B.S.	80	Layton, J. M.	Dr.	1660
Kupferberg, Alfred B.	M.S.	2920	Layton, Laurence L.	Ph.D.	1700
Kurtz, Claude	M.S.	1500	Lazar, M. E.	B.S.	4020 I
Kusserow, Gerhard W.	Ph.D.	3300	Leake, C. D.	Ph.D.	3890
Kuyper, Adrian C.	Ph.D.	4350	Learned, Marion	B.S.	3040
Kuznets, G. M.	Ph.D.	600	Lease, E. J.	Ph.D.	750
Kydd, David M.	M.D.	4540	Leathem, James H.	Ph.D.	3370
Kyker, Granvil C.	Ph.D.	2800	Leathers, W. S.		4125
Kyrides, L. P.	Ph.D.	2320	Leber, Henry	B.S.	910
			Lebo, Ruth	B.S.	2680
L			Leduc, Elizabeth		4380
Labayen, S. D.	B.S.	1340	Lee, Clarence E.	B.S.	380
Lachele, C. E.	M.A.	80	Lee, F. A.	Ph.D.	850
Lakem, Bertram	B.S.	2770	Lee, Jordan G.	Ph.D.	1980
Lakritz, D. E.		1130	Lee, Royal		1870
LaLanne, G.		4010 B	Lee, S. B.	Ph.D.	2260
Lamb, A. R.	Ph.D.	1470	Lee, Virginia	M.S.	780 A
Lamb, Mina Wolf	Ph.D.	3880	Lee, Wayne, A.	Ph.D.	3040
Lambert, G. F.	Ph.D.	20	Legault, R. R.	Ph.D.	4020 I
Lamberton, C. D.		80	Lehninger, Albert L.	Ph.D.	710
Lambeth, Victor N.	B.S.	2390	Lehrer, W. P., Jr.	M.S.	1590
Lambooy, John P.	Ph.D.	3340	Leicester, Henry M.	Ph.D.	3080
Lamden, Merton P.	Ph.D.	2110	Leichenring, Jane M.	Ph.D.	2360
Lameck, Wanda	B.S.	730	Leinbach, L. R.	B. S.	4010 I
Lamer, Mirko	Ph.D.	3700	Leith, B. D.	B.S.	4490
Lamkin, John C.	M.S.	2300	Lemley, James D.		3040 A
Lampman, Shirley	B.S.	1660	Lemon, J. M.	M.S.	4030 A
Lancaster, E. B.	B.S.	4020 G	Lenane, D. J.	B.S.	80
Lance, Betty Gomez		2390	Leonards, Jack R.	Ph.D.	4420
Landauer, Walter		810	Leopold, A. Carl, Jr.	M.A.	1440
Landfried, B. W.		3000	Lepkovsky, Samuel	Ph.D.	600 B
Landrock, Arthur H.	B.S.	2110	Leser,	Dr.	600
Lang, Louis		2645	Leshner, Marjorie	M.S.	730
Langford, C. T.	Ph.D.	4020 G	Lesley, J. W.	Ph.D.	600 D
Langwill, Katheryn	Ph.D.	1000	Leslie, E. H.	Ph.D.	1890
Lanham, W. B., Jr.	M.S.	4030 A	Leslie, Stephen	M.D.	2770
Lantz, Edith M.	M.A.	2720	LeVeen, Harry H.	M.D.	2770
Lapham, Roger	M.D.	3590	Leven, Joy	B.S.	3620
Lardy, Henry A.	Ph.D.	4490	Levens, Ernest		340
Larney, Bernadette	A.B.	730	Leverson, Ruth M.	Ph.D.	2680
Larsen, Junius	Ph.D.	780	Levey, Stanley	Ph.D.	4350
			Levin, Deborah	B.S.	4020 B

McClung, L. S.		600 A	McNamara, Helen		850
McClurg, B. R.		1650	McNamee, Margaret	B.S.	780 A
McCollum, Ernestine B.	M.A.	1700	McNamee, R. B.	B.S.	4130
McConnell, J. E. W.	Ph.D.	2120	McNary, Robert R.	Ph.D.	1150
McConnell, K. P.	Ph.D.	4010 C	McPhee, H. C.	D.Sc.	4020 B
McCormick, Joseph H.	M.D.	1980	McPherson, D. G.		2680
McCoy, Elizabeth	Ph.D.	4490	McQuarrie, Irvine	M.D., Ph.D.	2360
McCoy, Richard H.	Ph.D.	3120	McShan, W. H.	Ph.D.	4490
McCoy, Wallace W.		590	McShew, M. H.		4530
McCullough, Norman B.	Ph.D.	710	McWhirter, LaVerne	M.A.	2380
McCune, Donovan J.	M.D.	790 A	McWilliams, H. B.	Ph.D.	3910
McCready, R. M.	Ph.D.	4020 I	M		
McCrorry, S. A.	M.A.	3600	Macaluso, Pat.	M.S.	3590
McDaniel, Ernest G.		4040 C	MacElroy, Laird W.	Ph.D.	600 A
McDaniel, Eugenia I.	A.B.	2280	MacFarland, Virginia	B.A.	3730
McDaniel, L. E.	Ph.D.	2260	MacGillivray, J. H.	Ph.D.	600
McDevitt, E.		1580 CC	Machella, Thomas E.		3050
McDonald, Sr. Eliz.		2465	Mack, Harold C.	M.D.	730
McDonald, F. G.	Ph.D.	2200	Mack, Pauline B.	Ph.D.	3040 A
McDonell, G. H.	Ph.D.	80	Mackay, E. M.	Ph.D.	3475
McDuff, Omer	B.S.	1150	Mackenzie, Cosmo G.	Ph.D.	850 A
McElvain, Norma	B.S.	2100 A	Mackinney, Gordon	Ph.D.	600 A
McElvain, S. M.	Ph.D.	4490	Mackintosh, D. L.	M.S.	1740
McEver, Truman G.	M.A.	780	MacLay, W. D.	Ph.D.	4020 I
McEvilly, F.	M.S.	50	MacLeod, Florence L.	Ph.D.	3830
McEwen, Currier	M.D.	2770	MacLeod, Grace	Ph.D.	790
McFarlane, V. H.	Ph.D.	4020 F	MacLeod, J. A.		3700
McFarren, Earl F.	B.S.	2540	Macleod, J. H.	B.A.	1520
McGarry, B. L.	B.S.	80	MacLinn, W. A.	Ph.D.	3370
McGavack, Thomas H.	M.D.	2730	MacMasters, M. M.	Ph.D.	4020 G
McGibbon, W. H.	Ph.D.	4490	MacMullen, Clinton W.	Ph.D.	860
McGill, Henry C.	M.D.	1980 A	Madsen, H. S.	B.S.	1240
McGinnis, J.	Ph.D.	4320	Madsen, Louis L.	Ph.D.	4110
McGregor, Margaret	B.S.	4320	Magalhaes, Hulda	Ph.D.	520
McHenry, E. W.	Ph.D.	3920	Magerlein, B. J.	Ph.D.	4090
McIntire, J. M.	Ph.D.	4410	Maglio, M. M.	M.S.	4130
McIntosh, Rustin	Ph.D.	790 A	Magness, J. R.	Ph.D.	4020 E
McKaig, A.	B.S.	4020 I	Magnussen, H. W.	B.S.	4030 A
McKay, Beula	M.S.	1610	Maguire, R. B.	B.S.	80
McKay, Eaton	Ph.D.	3475	Maharg, Leta	M.A.	2390
McKee, Marion	B.S.	270 A	Maher, Geo. G.	B.S.	2810
McKellar, E. K.	B.S.	770	Mahoney, J. F.	Ph.D.	2260
McKennis, Herbert, Jr.	Ph.D.	1700	Maisie, Michael	B.S.	1670
McKhann, Charles F.	M.D.	1580 JJ	Maizel, B. L.	Ph.D.	4140
McKibben, Glennadene	B.S.	2390	Makower, B.	Ph.D.	4020 I
McKibbin, J. M.	Ph.D.	3820	Malkin, H. H.		200
McKim, Elizabeth	M.S.	2410	Mallman, Walter L.	Ph.D.	2280
McKinstry, D. W.	Ph.D.	3040	Mallon, Marguerite G.		600 C
McKirahan, R. D.	B.A.	80	Maloney, Dolores	M.S.	1610
McKittrick, Eliz. J.	M.S.	4530	Mangelsdorf, Paul C.	S.D.	1440
McLaren, B.	Ph.D.	4320	Manhart, V. C.	M.S.A.	3220
McLaren, Barbara A.	M.S.	3850	Manley, Ralph H.	Ph.D.	1250
McLaren, James		4020 G	Mann, George V.	M.D.	1440
McLaughlin, Laura	Ph.D.	3860	Mann, Russell	M.S.	4430
McLaughlin, Margaret	R.N.	4040 C(4)	Manna, Louise	M.A.	3220
McLean, Franklin C.	M.D., Ph.D.	710	Mannering, G. J.	Ph.D.	2980
McLeod, J. B.	B.S.	2450	Mansfield, T.	M.S.	1160
McLester, James B.		40 A	Marchand, Margarita P.		3210 C
McLester, James S.		40 A	Marek, E.		4020 B
McMeans, Evelyn	B.S.	1660	Margolf, P. H.	B.S.	3040
McMillen, Warren N.	M.S.	2280	Marlatt, Abby	Ph.D.	1740
McNally, Edmund	Ph.D.	4020 B	Marnett, L. F.	B.S.	3000
			Maronde, Robert	M.D.	1580 V
			Marquette, Mona	M.S.	600 A

Marsh, Clyde	B.S.	2870	Meites, Joseph	Ph.D.	2280
Marsh, G. L.	M.S.	600 A	Melchior, Jacklyn	Ph.D.	2830
Marshall,	M.S.	4350	Melody, M.		2830
Lawrence M.			Melville, Donald B.	Ph.D.	850 A
Marshall, O. E.	M.A.	3690	Meng, Karl	Ph.D.	980
Marshall, Roy E.	Ph.D.	2280	Merchant, C. H.	Ph.D.	2050
Marten, E. A.	Ph.D.	2690	Meredith, Alla	B.S.	4040 C(4)
Martin, A. M.	B.S.	1050	Merkle, F. G.	Ph.D.	3040
Martin, Ethel A.		2530	Merriam, M. H.		1650
Martin, Gustav J.	Sc.D.	2560	Merrifield, B.	M.A.	600 C
Martin, J. Holmes	Ph.D.	3220	Merrill, A.	M.S.	4020 D
Martin, Jerome		800	Merriman, Daniel		4540
Martin, L. F.	Ph.D.	4020 A	Merritt, Paul P.	Ph.D.	3280
Martin, Sterling, Jr.		2450	Morrow, Susan	M.S.	4126
Martin, W. H.	M.S.	1740	Mertz, E. T.	Ph.D.	3220
Martini, Henry G.	B.S.	2580	Meserve, Emily R.	M.S.	3620
Marvel, J. P.	B.S.	1020 A	Meshew, Maurice H.	M.S.	4530
Marvin, Irene K.	B.S.	1200	Messersmith, W. G.	B.S.	3480
Marvin, James W.	Ph.D.	4126	Metcalf, Brooks	M.S.	3890
Marx, Walter	Ph.D.	3620	Metcoff, Jack	M.D.	1440
Marzocchi, Alfred	B.S.	860	Metz, L. M.	B.S.	80
Maskell, Kenneth T.	B.S.	2540	Metz, S.		1650
Maslow, Herman L.	M.D.	1580 E	Meyer, Bernadine	Ph.D.	3830
Mason, C. T.	Ph.D.	3960	Meyer, C. E.	Ph.D.	4090
Mason, Harold L.	Ph.D.	2170	Meyer, R.K.	Ph.D.	4490
Mason, K. E.		3340	Meyerhof, Otto	M.D.	3050
Mason, Leo S.	Ph.D.	3120	Meyers, E. W.		1500
Massengale, O. N.	Ph.D.	2200	Mezoff, Milton	B.S.	2110
Massey, Clem M.	B.S.	3890	Michael, L. W.	B.S.	680
Masterman, Nancy K.	M.S.	850	Michaelson, Joseph B.	M.S.	3620
Masure, M. P.	S.M.	4020 I	Michie, Jonnie McC.	M.A.	3880
Matchett, John R.	Ph.D.	4020 I	Micka, Jan	Ph.D.	4000
Matheson, R.		1650	Mickelsen, Olaf	Ph.D.	2360
Mathis, Eunice S.	B.S.	4020 I	Mickelson, Milo N.	Ph.D.	2300
Matrone, Gennard	M.S.	2790	Middleton, J. T.	Ph.D.	600 D
Matterson, L. D.	Ph.D.	810	Mider, G. Burroughs	M.D.	3340
Mattill, Henry A.	Ph.D.	1660	Miers, J. C.	M.S.	4020 I
Mattson, Fred H.	Ph.D.	600 C	Milhorat, A. T.	M.D.	850 A
Mattson, Harold	B.S.	2810	Millar, Charles E.	Ph.D.	2280
Mauer, J. Clarence	Ph.D.	2540	Miller, Byron S.	M.S.	1740
Maurer, R. H.	B.Ch.E.	3900	Miller, Carey D.	M.S.	1480
Maurer, Shirley	B.S.	730	Miller, Cora	Ph.D.	2880
Mautino, William J.		930	Miller, Dorothy	B.S.	1600 A
Maw, A. J. G.	Ph.D.	3040	Miller, E. V.	Ph.D.	4020 E
May, Charles D.	M.D.	2360	Miller, Edgar G., Jr.	Ph.D.	790 A
Mayerson, Hymen S.	Ph.D.	3950	Miller, Elroy J.	Ph.D.	2280
Mayfield, Helen L.	M.S.	2420	Miller, Erma	M.S.	2360
Maynard, Leonard A.	Ph.D.	850	Miller, G. D.	B.S.	1740
Maynard, W. E.	M.S.	3690	Miller, G. E.	B.S.	3690
Mead, Frank L.		730	Miller, H. J.	Ph.D.	3040
Mead, Morris W.	Ph.D.	2580	Miller, J. A.	Ph.D.	4490
Mead, S. W.	M.S.	600	Miller, J. L.	Ph.D.	850
Meads, P. F.	Ph.D.	580	Miller, John J.	B.S.	3230
Meany, Helen	B.A.	1940	Miller, Laura A.	M.S.	2890
Mecartney, J. L.	B.S.	3040	Miller, Lawrence	B.S.	1400
Medoff, S.	B.S.	820	Miller, Leslie H.		2870
Meek, Donald C.	B.S.	3040	Miller, Lila	Ph.D.	2290
Mehl, John W.	Ph.D.	3620	Miller, Mabel C.	B.S.	2110
Mehler, Alan H.	B.A.	2770	Miller, O. Neal	M.A.	730
Mehlretter, C.	Ph.D.	4020 G	Miller, R. C.	Ph.D.	3040
Mehner, Gertrude	R.N.	4040 C(4)	Miller, Ray		4490
Mehren, G. L.	Ph.D.	600	Miller, Sol	M.S.	730
Mehrhof, Thalia G.		3370	Miller, V. L.	M.S.	4320
Mehring, Arnon L., Jr.	B.S.	1920	Mills, Mary B.	M.S.	1260
Mehrlich, F. P.	Ph.D.	1460	Mills, W. Carlos		1300
Meiller, Ella Jane	M.S.	710	Mills, W. R.	Ph.D.	3040
Meisenbacher,		270 A	Millville, Howard P.	Ch.Eng.	3930
Meisner, D. F.	M.S.	3000			

Milner, Max	Ph.D.	1740	Morris, Vincent H.	Ph.D.	4020 E
Mims, Virginia		2980	Morrison, C. C.	M.S.	1260
Mingonet, Ruth		3120 A	Morrison, D. C.	A.B.	4020 I
Minkler, John	M.D.	2360	Morrison, F. B.	B.S.	850
Minnich, Virginia	M.S.	4330	Morrison, R. T.	Ph.D.	2830
Mirone, Leonora		1180	Morrow, Louise		3120 A
Mispley, R. G.	B.S.	880	Morse, A. H.		4540
Mitchell, Donald J.	M.S.	3710	Morse, Fred W., Jr.	M.D.	4040 C(4)
Mitchell, E. L.	B.S.	3330	Morse, G. H.	B.S.	2460
Mitchell, H. S.		3800	Morse, Lura M.	Ph.D.	600 B
Mitchell, Harold H.	Ph.D.	1610	Mortenson, W. P.		4490
Mitchell, J. H.	M.S.	750	Moser, Ada M.	M.S.	750
Mitchell, Jack H., Jr.	Ph.D.	3630	Moser, H. A.	B.S.	4020 G
Mitchell, Paul J., Jr.		2600	Moss, Henry V.		2410
Mitchell, R. M.	M.D.	1588 DD	Mott, G. O.		3220
Mitchell, W. A.	M.S.	1240	Mottern, H. H.	Ph.D.	1490
Mizuno, Wm. G.		1050	Mottley, Charles M.		4030 A
Mogg, Robert	B.A.	3330	Moulder, James W.	Ph.D.	710
Molnar, Julius	M.D.	2400	Moxon, A. L.	Ph.D.	3600
Molnar, Nicholas M.	M.S.	2400	Moyer, A. J.	Ph.D.	4020 G
Monaco, William	B.S.	910	Moyer, D. B.	M.S.	80
Monahan, E. J.	B.S.	2490	Moyer, Elsie Z.	M.S.	730
Monahan, E. P.		4010 B	Moyer, J. C.	Ph.D.	850
Monk, John		1350	Moyer, W. W.	Ph.D.	880
Monroe, C. F.	M.S.	2870	Moyer, Willard D.	M.S.	870
Monroe, Roberta A.	M.A.	2390	Moyle, Winifred J.	M.S.	4340
Montell, E. W.		610	Mozingo, R.	Ph.D.	2260
Montgomery, W.	B.S.	3020	Mrak, E. M.	Ph.D.	600 A
Montillon, G. H.	Ph.D.	3970 B	Muckerheide, M. A.	Ph.D.	2360 A
Moomaw, Leroy	M.S.	2810	Mudra, A. E.	B.S.	80
Mooney, Mary Jean	B.S.	3100	Mueller, J. Howard		1440
Moore, B. H.	Ph.D.	230	Mueller, W. S.	Ph.D.	2120
Moore, Carl V.	M.D.	4330	Mueller, William G.	B.S.	3510
Moore, Clark M.	B.Ch.E.	860	Muelling, Rudolph J.	B.A.	1980 A
Moore, Edwin L.	Ph.D.	1150	Muenzen, J. B.	S.J.	1180
Moore, F. D.		1580 W	Muenzinger, Karl F.	Ph.D.	780
Moore, L. A.	Ph.D.	4020 C	Muether, Raymond O.	M.D.	3410
Moore, Marian	M.S.	710	Muhr, G. R.	Ph.D.	2370
Moore, N. S.	M.D.	850	Muhrer, M. E.	Ph.D.	2390
Moore, P. R.	Ph.D.	1590	Mulholland, Wm. M.	M.D.	530
Moore, Raymond L.		2430	Mullins, Wm. R.	B.S.	4020 I
Moore, Ruth	M.S.	3830	Munch, James C.	Ph.D.	2470
Moore, R. G.	A.B.	1240	Munks, Bertha	B.S.	730
Moran, C. H.	M.S.	2050	Munro, James		1460
Morck, R. A.	Ph.D.	920	Munsell, H. E.	Ph.D.	2110
Morehouse, F. G.	B.S.	2490	Muntwyler, Edward	Ph.D.	1970
Morehouse, Margaret G.	Ph.D.	3620	Murer, H. K.	B.S.	1240
Morehouse, N. F.	Ph.D.	3420	Murlin, John R.	Ph.D., Sc.D.	3340
Morell, S. A.	Ph.D.	2960	Murneck, Andrew E.	Ph.D.	2390
Morey, G. R.		4010 B	Murphey, C. E.	M.A.	4020 B
Morey, Loren	Ph.D.	2300	Murphy, Eliz. F.	M.A.	2050
Morgan, Agnes F.	Ph.D.	600 A	Murphy, R. R.	Ph.D.	3040
Morgan, B.		1650	Murray, H.	Ph.D.	4320
Morgan, Walter R.	B.S.	870	Murray, H. C.	Ph.D.	4090
Morgareidge, Kenneth	Ph.D.	2780	Murray, Mary A.	Ph.D.	710
Morgulis, Sergius	Ph.D.	2680 A	Murray, W. Gail	B.Sc.	950
Moriarty, John H.	B.S.	2110	Murray, Wallace	D.Sc.	1940
Morick, Mary B.	B.S.	2260	Mushett, Chas. W.	Ph.D.	2260
Morita, Y.	M.D.	4350	Mustard, Margaret J.	B.S.	2270
Morrell, Elise	M.S.	3830	Myerhof, Otto		3050
Morrill, Elliott		410	Myers, Alfred T.	M.S.	4020 E
Morris, D. L.	Ph.D.	2200	Myers, D. R.	Ph.D.	4090
Morris, H. A.	B.S.	2360	Myers, Loraine	B.S.	1660
Morris, H. J.	M.S.	4020 I	Myers, Robt. P.	Ph.D.	2540
Morris, Leonard L.	Ph.D.	600 B	Myers, Victor C.	Ph.D., D.Sc.	4420
Morris, S. G.	Ph.D.	4020 F	Myerson, Alfred	M.D.	1580 E
			Mylne, Ann M.	S.M.	4020 I

N

Nalbandov, A. V.	Ph.D.	1610
Narod, Milton	M.S.	470
Nash, Emile C.	M.D.	2230
Nasset, Edmund S.	Ph.D.	3340
Nataf, Bertha	M.Sc.	2360
Natelson, S.	Ph.D.	1580 E
Navone, Remo	B.S.	450
Neal, N. P.	Ph.D.	4490
Neal, R. H.		410
Necheles, H.	M.D.	1580 FF
Nees, A. R.	M.A.	1370
Neiditch, O.	M.S.	4140
Neilands, J. B.		4490
Neill, James M.	Ph.D.	850 A
Neilson, Charles H.		3410
Neilson, Genevieve W.	M.A.	780
Nelmark, Geo.	Sc.B.	520
Nelson, C. I.	Ph.D.	2810
Nelson, Charles	B.S.	4520
Nelson, E. W.	M.A.	770
Nelson, Edward N.	M.D.	2360
Nelson, Elmer M.	Ph.D.	4040 B
Nelson, Erwin E.		4370
Nelson, Evelyn	B.S.	4420
Nelson, H. G.	M.S.	2360
Nelson, J. M.		790
Nelson, M. M.	Ph.D.	600 A
Nelson, O. M.	A.B.	580
Nelson, R. H.	Ph.D.	2280
Nelson, Richard G.	B.S.	1740
Nelson, Rudolph	B.Ed.	3100
Nelson, S.	B.S.	4320
Nelson, Thurlow C.		3370
Nelson, V.	Ch.E.	1160
Nelson, W. L.	Ph.D.	850
Nesbitt, Loyd L.	B.S.	1920
Neuberg, Carl	Ph.D.	2770
Neubert, A. M.	Ph.D.	4320
Neurath, Hans	Ph.D.	1010
Neuswirth, Doris	B.S.	2160
Neville, H. A.	Ph.D.	1880
Neville, John A.	B.S.	2970
Newe, Vincent E.	Ph.D.	3450
Newhall, C. A.	M.D.	4126
Newhart, I. G.	B.S.	80
Newland, Milla E.	M.S.	4126
Newlin, Harrison E.	Ph.D.	2300
Newman, M. S.		2870
Newman, Paul E.	Ph.D.	380
Nicholas, J. E.	M.S.	3040
Nicholls, William H.	Ph.D.	710
Nichols, Alice F.		4010 B
Nichols, P. L.	Ph.D.	4020 F
Nicholson, Jean		4340
Nicholson, L. W.	M.A.	3480
Nickerson, T. A.	B.S.	2360
Nickol, Gordon B.	M.S.	2550
Nicolet, B. H.	Ph.D.	4020 C
Nicoll, J. M.	M.S.	80
Nieft, Marie L.	M.S.	3620
Nielsen, Eliz.	B.S.	4020 I
Nielson, A. A.	B.S.	80
Nielson, E. K.	Ph.D.	1830
Nielson, Reed S.		3700
Nierenberg, M.	M.D.	1580 FF

Nierman, J. L.	Ph.D.	3855
Niesen, G. V.	B.S.	3480
Nightingale, Gertrude	B.S.	2110
Niles, Kathryn		3160
Nilson, Hugo W.		2100
Nimmo, C. C.	Ph.D.	4020 I
Nishimura, M.	B.S.	1380
Niven, C. F., Jr.	Ph.D.	180
Niven, William W., Jr.	M.S.	2300
Noble, Isabel T.	Ph.D.	2360
Nock, Alton E.	B.S.	870
Noecker, N. L.		2840
Norman, N. Phillip	M.D.	1870
Norris, L. C.	Ph.D.	850
Norton, L. J.		1610
Notter, G. K.	B.S.	4020 I
Novak, A. F.	M.S.	3220
Novak, L. J.	Ph.D.	670
Novick, Jules	M.S.	3530
Nowinski, Witkov	M.D.	3890 A
Nunheimer, T. D.	Ph.D.	2260
Nutile, G. E.	B.S.	320
Nyholm, Eliz. M.	M.A.	780

O

Oberg, E. B.		640
O'Brien, G. E.	M.S.	2670
O'Brien, Harold C.	Ph.D.	3120
Ochoa, Severo	M.D.	2770
Ocken, J. L.		1710
Oda, Uteana	M.S.	960
O'Dell, Boyd L.	Ph.D.	2390
Odland, M. L.	Ph.D.	3040
Odle, Doris	M.S.	780 A
Odum, E. P.		1300
Oelberg, James	B.S.	2870
Oestin, R. B.		3010
Ofelt, C. W.	Ph.D.	2960
Ogle, Jane	Ph.D.	1440
Ogur, Maurice		500
Ohl, Paul		2580
Ohlson, Margaret A.	Ph.D.	2280
Okey, Ruth	Ph.D.	600 A
Olcott, Harold S.	Ph.D.	4020 I
Oldham, Helen G.	Ph.D.	710
O'Leary, D. K.	Ph.D.	1020
Oleson, Eliz.	M.S.	1610
Oleson, J. J.	Ph.D.	100 A
Olmo, H. P.	Ph.D.	600
Olmsted, W. H.	M.D.	110
Olsen, A. G.	Ph.D.	1240
Olsen, Lloyd	B.S.	4100
Olsen, Robert W.	B.S.	1150
Olson, J. C., Jr.	M.S.	2360
Olson, Kenneth	Ph.D.	4090
Olson, Lillian	Ph.D.	600 B
Olson, R. L.	M.B.A.	600 A
Olson, Robert E.	Ph.D.	1440
Opie, E. L.		3355
Oppel, Theodore W.	M.D.	850
Ordal, Z. J.	Ph.D.	1050
Ordway, Nelson K.	M.D.	1980 A
Orgain, E. S.	M.D.	1010
Ornfelt, John	M.S.	140
Ornsdorff, Thomas	M.S.	2910
Oroshnik, William	Ph.D.	2920

Orr, Kathryn J.	B.S.	4020 I	Peet, L. J.		1650
Ort, John M.	Ph.D.	3570	Peet, Marguerite	B.A.	1440
Orton, James M.	Ph.D.	4350	Peffer, E. Louise	Ph.D.	3700
Osborne, Elton S., Jr.	M.D.	4040 C(4)	Pelletier, D. J.	M.S.	80
Osman, Elizabeth M.	Ph.D.	840	Pence, R. O.	M.S.	1740
Ostroff, Bernard		1580 DD	Pencharz, Richard	Ph.D.	600 B
Otero, P. Morales	M.D.	3210 C	Peng, Da-Hwei	M.S.	2280
Ott, Walther H.	Ph.D.	2260	Penn, Frank	M.S.	4121
Otto, John L.	M.D.	3890 A	Penner, L. R.		810
Overholser, O. L.	Ph.D.	4180	Penniston, V.		4010 B
Overman, Andrea J.	Ph.D.	2910	Pensack, Joseph	M.S.	2870
Overman, O. R.		1610	Pentzer, W. T.		4020 E
Owen, C. N.	M.S.	3020	Pepper, B. B.	Ph.D.	3370
Owen, R. F.		1610	Perdue, James	B.S.	600
Owens, H. S.	Ph.D.	4020 I	Perkinson, J. D.		1300
P			Perley, Anne M.	Ph.D.	4330
Paarlberg, Don	Ph.D.	3220	Perlzweig, William A.	Ph.D.	1010
Pack, Dean	Ph.D.	1380	Perritt, Richard	M.D.	2830
Paige, Harriet	B.S.	3790	Perry, Frederick B.	M.S.	1940
Palmer, C. M.	Ph.D.	540	Perry, N. A.	M.S.	3040
Palmer, K. J.	Ph.D.	4020 I	Perry, R. L.		600 A
Palmer, L. S.		2360	Perry, T. W.		3220
Palmer, W. L.	Ph.D., M.D.	710	Personius, Catherine J.	Ph.D.	850
Paltin, Gertrude S.	B.A.	3050 A	Petering, H. G.	Ph.D.	4090
Pancoast, H. M.	B.S.	1160	Peters, F. N.	Ph.D.	3240
Parent, Robert	B.S.	470	Peters, John P.	M.D.	4540
Parker, E. R.	Ph.D.	600 D	Peters, Matilda		2680
Parker, Janice	B.S.	600 A	Peterson, A. W.	Ph.D.	4490
Parker, Jean K.		4126	Peterson, C. F.	B.S.	1590
Parker, Leander C.		540	Peterson, D. W.		600
Parkins, W. N.	Ph.D.	2200	Peterson, G. T.	B.S.	820
Parkins, William M.	Ph.D.	3050	Peterson, Walter J.	Ph.D.	2790
Parkinson, L. R.	M.S.	2120	Peterson, William H.	Ph.D.	4490
Parks, Elliott H.	B.S.	870	Petterson, Olga	B.S.	2220
Parman, Vera		2890	Pettit, D.	M.D.	3620
Parrish, D. B.	M.S.	1740	Pew, Donald D.	B.S.	4520
Parsons, Helen T.	Ph.D.	4490	Pfau, K. O.	M.S.	3370
Partridge, Chester W.	B.S.	850 A	Pfiffner, J. J.		2980
Partridge, Stanley	Ph.B.	3100	Pfister, K.	Ph.D.	2260
Patrick, Homer	Ph.D.	3830	Pflaum, Virginia	B.S.	1580 DD
Pattee, E. C.		2550	Phaff, H. J.	Ph.D.	600 A
Patterson, R. E.	B.Agr. Engr.	3040	Phelan, R. K.		390
Patton, A. R.	Ph.D.	770	Phelps, H. Fisk	M.S.	600
Patton, Mary Brown	M.S.	2870	Phillips, Arthur M.		4030 A
Patton, Robert A.	Ph.D.	3120	Phillips, Arthur W., Jr.	Sc.D.	2110
Patton, Robert L.	Ph.D.	850	Phillips, C. A.	M.S.	600 B
Patton, Stuart		2870	Phillips, G.W.M.	B.S.	4020 F
Paul, Pauline	Ph.D.	2280	Phillips, George E.	Ph.D.	2080
Paul, W. D.	M.D.	1660	Phillips, Paul H.	Ph.D.	4490
Paull, W.		3900	Phillips, R. F.	Ph.D.	2260
Paulsen, Twila	M.S.	240	Phillips, Ralph		1630
Payne, John H.	Ph.D.	2970	Phillips, Ralph F.	Ph.D.	4120
Payne, Loyal F.	M.S.	1740	Phipard, Esther F.	Ph.D.	4020 D
Paynter, Camen R.		4010 B	Pickering, Carmel		2390
Peabody, W. A.	Ph.D.	4122	Pickett, B. S.		1650
Peacock, Andrew C.	M.S.	2110	Pieniazek, S. A.		3320
Pearce, E. L.		4490	Pierce, C. W.	Ph.D.	3040
Pearce, W. E.	M.S.	80	Pierce, Harold B.	Ph.D.	4126
Pearlman, Mary	M.A.	1680	Pierce, S. W.	B.S.	80
Pearson, Harold E.	M.D.	3620	Pierce, W. H.	Ph.D.	320
Pearson, Paul B.	Ph.D.	3850	Pierson, E. H.	Ph.D.	2260
Pearson, Paul E.		820	Pierson, K.	B.S.	2670
Pease, E. O.		4010 B	Pigg, Celeste M.	B.S.	4010 E
Pech, A. E.	B.S.	1160	Pike, Ruth L.	M.A.	710
Peck, R. L.	Ph.D.	2260	Pilcher, K. S.	Ph.D.	900
Pederson, Carl S.	Ph.D.	850	Pilcher, R. W.	Ph.D.	80
			Pilgrim, Francis J.	Ph.D.	3120

Pincus, Gregory		4505	Ptak, L.	B.S.	820
Pincus, Joseph B.	M.D.	1580 E	Puncochar, Joseph F.	B.S.	4030 A
Pinney, L. E.		1650	Purdie, Patricia	B.S.	240
Pipes, G. W.		2390	Purdy, Maud		1980
Pittman, D. W.		4110	Purinton, Helen J.	Ph.D.	2700
Plagge, H. H.	Ph.D.	1650	Purvis, Sarah E.	Ph.D.	3120
Plath, E.	M.S.	2810	Putnam, Frank W.	Ph.D.	710
Plentl, Albert A.	Ph.D.	1100	Putnam, H. W.	B.S.	670
Plews, W. J.	E.E.	425	Pye, Orrea F.	Ph.D.	790
Pliske, E. C.	Ph.D.	2290	Pyenson, H.		1610
Plog, Roy	B.S.	560	Pyke, W. E.	Ph.D.	770
Plough, Harold H.	Ph.D.	220	Pyle, M. P.	B.S.	3400
Plummer, B. E., Jr.	M.S.	2050			
Podas, Wm. M.	B.Ch.E.	1050		Q	
Poe, Charles F.	Ph.D.	780	Quackenbush, F. W.	Ph.D.	3220
Poe, Emily	M.A.	780	Quaife, Mary L.	Ph.D.	980
Poehlman, John M.	Ph.D.	2390	Quill, Laurence L.	Ph.D.	2280
Pohlman, F. W.	B.S.	80	Quisenberry, K. S.	Ph.D.	4020 E
Pollack, Herbert	M.D.	1580 Z			
Pollard, E. F.		4020 H		R	
Pollnow, F. J.	B.S.	4130	Raab, Walter	M.D.	1320
Pomerat, C. M.	Ph.D.	3890 A	Rabak, William	B.S.	4020 I
Poncher, Henry G.	M.D.	1610 A	Rabinowitch, L. M.	M.D.	2195
Pool, M. F.	A.B.	4020 I	Rachele, Julian R.	Ph.D.	850 A
Pool, W.		370	Radebaugh, Garnett	B.S.	2370
Porter, A. B.	B.S.	2780	Radford, Robert M.	B.S.	2540
Porter, Curt C.	Ph. D.	2260 A	Radov, Joseph	M.S.	1690
Porter, Donald R.	Ph.D.	610	Raffel, Sidney	Ph.D.	3700
Porter, J. R.	Ph.D.	1660	Rafsky, H. A.	M.D.	1580 S
Porter, John W.	Ph.D.	3220	Ragsdale, Arthur C.	M.S.	2390
Porter, Thelma	Ph.D.	710	Rahn, E. M.		950
Porterfield, Wesley	B.S.	4520	Raiman, R. J.	B.S.	1580 FF
Potgieter, Martha	Ph.D.	810	Rainer, William C.	B.S.	870
Poth, Edgar J.	Ph.D.,M.D.	3890 A	Rainwater, Frank		780 A
Pottinger, S. R.	B.S.	4030 A	Raleigh, S. M.	Ph.D.	3040
Poulin, Joseph L.		4010 B	Ralli, Elaine P.	M.D.	2770
Pouden, W. D.	D.V.M.	2870	Ralston, N. P.	Ph.D.	600 A
Powell, Lyle A.	M.S.	1690	Ramage, W. D.	Ph.D.	4020 I
Powell, Manly J.	M.S.	4520	Rand, William E.		3700
Powell, R. D.	Ph.D.	1650	Randolph, Margaret	Ph.D.	3860
Powell, Ruth H.	B.S.	4122	Randolph, Olivia	B.A.	3890
Power, Marschelle H.	Ph.D.	2170	Randolph, U. A.	M.S.	3850
Powers,	M.F.	4540	Rankin, D.	Ph.D.	3020
Powers, John J.	Ph.D.	1300	Rankin, D. R.		3000
Powick, C. W.	B.S.	4020 B	Rankin, J. C.	B.S.	4020 G
Prager, John W.	B.S.	2580	Rannells, Jessie M.		250
Pratt, Darrell b.	Ph.D.	1440	Ranzenberger, W. A.	M.S.E.	3480
Pratt, J. D.		1460	Rappaport,	M.D.	1580 Z
Pratt, J. J.		850	Rasmussen, R. A.	Ph.D.	4290
Pratt, J. P.	M.D.	1580 O	Rath, Charles A.	M.D.	1580 D
Pratt, Margaret	M.A.	3730	Ratner, Sarah	Ph.D.	2770
Pressly, Harriet	M.S.	2790	Ravdin, I. S.		3050
Price, Echo L.	M.S.	3830	Rawlings, Herbert W.	B.A.Sc.	980
Price, Walter V.	Ph.D.	4490	Reynolds, J. A.	Ph.D.	2780
Prickett, P. S.	Ph.D.	2200	Reamer, R. S.		2320
Prince, A. E.	Ph.D.	2050	Reardon, Helen		2290
Prince, R. N.	A.B.	580	Rector, Thomas M.		1240
Pritchard,		960	Reder, Ruth E.	Ph.D.	2885
Margaret H.			Redfern, S.	Ph.D.	3690
Proctor, Bernard E.	Ph.D.	2110	Redfield, Gail		3220
Promersberger, W. J.	M.S.	2810	Reece, R. P.	Ph.D.	3370
Prosser, Miriam	M.S.	1660	Reed, A. D.		600
Prouty, C. C.	M.S.	4320	Reed, C. I.		1610 A
Prouty, Lawrence R.		850	Reed, H. M.	B.S.	3850
Provasoli, Luigi	Ph.D.	1450	Reed, Harry J.		3220
Prudent, Inez	Ph.D.	1650			
Prudhomme, E. L.	B.S.	3330			
Pryor, Dean E.	Ph.D.	590			

Reed, J. Fielding	Ph.D.	2790	Riester, D. W.	B.S.	80
Reed, Lester J.	Ph.D.	850 A	Riggs, Lloyd K.	Ph.D.	2540
Reese, F. E.	Ph.D.	4090	Riker, A. J.	Ph.D.	4490
Reeve, Eldrow	Ph.D.	610	Riley, F. W.	B.S.	670
Reeve, R. M.	Ph.D.	4020 I	Riley, H. N.	B.S.	1490
Reeves, Grace G.		1420	Riley, M.		4010 B
Reeves, R. C.	M.E.	1240	Rinehart, E. F.		1590
Regan, E. L.	B.A.	80	Rinehart, James F.	M.D.	600 F
Regan, Margaret		100 A	Rist, C. E.	B.A.	4020 G
Regan, W. M.	M.A.	600	Ritchell, E. C.	Ph.D.	2370
Reich, Irving	M.S.	3590	Rittenberg, D.	Ph.D.	790 A
Reid, Russell	M.S.	4490	Rittenhouse, E. J.		3040
Reid, E. W.		840	Robbins, C. G.	B.S.A.	80
Reid, J. J.	Ph.D.	3040	Robbins, Wayne		610
Reid, J. T.	Ph.D.	3370	Roberts, A.	B.S.	3870
Reid, Margaret C.	Ph.D.	4020 D	Roberts, E.		1610
Reid, Mary E.		4040 C	Roberts, H.		1650
Reid, William H. E.	M.S.	2390	Roberts, H. L.	B.A.	80
Reinecke, R. A.		140	Roberts, L. T.	B.Ph.	80
Reinecke, Roger M.	Ph.D.	4120	Roberts, Lydia J.	Ph.D.	3210 A
Reineke, E. Paul	Ph.D.	2280	Roberts, R. H.	Ph.D.	4490
Reinhart, Robert		2930	Roberts, Roy E.	M.S.	3220
Reinhold, John G.	Ph.D.	1580 DD	Roberts, Vivian	Ph.D.	2880
Reiter, Tuly	M.S.	910	Robertson, E. I.	Ph.D.	850
Reithel, Francis J.	Ph.D.	2911	• Robeson, C.	B.S.	980
Rempel, Herman		3980	Robinson, Abner	M.S.	730
Renard, Marialice	B.A.	2680	Robinson,	B.S.	1090
Renfrow, Evanel E.	M.S.	1930	Arthur M., Jr.		
Rensloe, F. Claire	Ph.D.	4070	Robinson, Betty J.	B.S.	600
Reynard, G. V.	Ph.D.	610	Robinson, J. M.	Ph.D.	2260
Reyniers, James A.	M.S.	2840	Robinson, W. H.		670
Reynolds, H. J.	B.S.	290	Robinson, Willard B.	Ph.D.	850
Reynolds, Howard	Ph.D.	4020 D	Robison, W. L.	M.S.	2870
Reynolds, Lawrence	M.D.	730	Roboz, Elizabeth	Ph.D.	3750
Reynolds, May S.	Ph.D.	4490	Rocker, Lorene K.	B.A.	3770
Rhoads, C. P.		1580 BB	Rockland, L. B.	M.A.	600 C
Rhoads, Jonathan E.	M.D.	3050	Rodbard, S.	Ph.D.	1580 FF
Rhode, C. Martin	M.D.	3050	Roderick, L. M.	Ph.D.	1740
Rhodes, Helen	M.S.	1660	Roderuck, Charlotte	M.S.	730
Riblet, Lillian A.		4010 B	Rodgers, N. E.	Ph.D.	4410
Rice, Andrew C.		520	Roe, Joseph H.	Ph.D.	1260
Rice, C. W.	Ph.D.	2360	Roehn, Jack		525
Rice, Eugene W.	B.S.	1260	Rogers, E. F.	Ph.D.	2260
Rice, J. W.	Ph.D.	520	Rogers, Eliz.	B.S.	1580 DD
Rice, R. G.	Ph.D.	850	Rogers, L. F.	B.S.	440
Richard, Ellen H.		4010 B	Rohrbaugh, W.	Ph.D.	1840
Richards, Allen	B.S.	730	Rohse, Wayne G.	M.S.	1680
Richards, Florence	B.A.	1400	Roland, J. F.	B.S.	290
Richards, Ruth	M.A.	710	Rolfson, S. T.	Ph.D.	4090
Richardson, G. A.	Ph.D.	600 B	Rollins, Mabel A.	Ph.D.	850
Richardson, Jessie E.	Ph.D.	2420	Romans, Freeland	M.S.	270
Richardson, L. M.		4010 B	Rondestvedt, E.		2830
Richardson, L. R.	Ph.D.	3850	Roofe, P. C.		1750
Richer, A. C.	Ph.D.	3040	Rose, Catharine S.		3050
Richer, Archibald S.	B.Sc.	2400	Rose, R. S.		330
Richert, D. A.	Ph.D.	3820	Rose, W. C.	Ph.D.	1610
Richetts, Henry T.		710	Rosen, A. A.	Ph.D.	3480
Richey, F. D.	Ph.D.	3830	Rosenberg, H. R.	D.Sc.	1020 A
Richmond, Grace		2390	Rosenberger, Alice	M.S.	3600
Richmond, Julius B.	M.D.	1610 A	Rosenblum, Charles	Ph.D.	2260
Richter, Curt P.	Ph.D.	1700	Ross, E.	Ph.D.	4320
Ricker, M. O.	M.S.	1240	Rosseau, F. V.	B.S.	1240
Riegel, Byron		2830	Rosselot, Gerald A.	Ph.D.	1280
Riegel, Cecelia	Ph.D.	3050	Rost, Margaret B.		750
Rieman, G. H.	Ph.D.	4490	Roth, Jay S.	Ph.D.	3370
Riemenschneider,	B.S.	4020 F	Routh, J. I.	Ph.D.	1660
R. W.			Rowntree, Jennie I.	Ph.D.	4340

Roy, W. R.	Ph.D.	4121	Schaaf, Kurt H.	M.A.	2780
Royce, R.	Ph.D.	80	Schaars, Marvin A.	Ph.D.	4490
Rubenstein, B. B.	M.D.	1580 FF	Schade, Arthur L.	Ph.D.	2930
Rubin, Jean		1580 DD	Schaefer, A. E.	Ph.D.	30
Rubin, Louis C.		1760	Schaefer, H. C.	M.Sc.	3270
Rubin, Max		4020 B	Schafer, Mary L.	B.S.	790
Rubin, Mitchell I.	M.D.	530	Schafer, R. R.	M.A.	780
Rubin, Saul H.	Ph.D.	1530	Schaffner, L.	M.S.	2810
Rucker,	M.D.	2170	Schales, Otto		3950
Rucker, Robert R.		2910	Schalk, A. F.	D.V.M.	2870
Rudert, F. J.	Ph.D.	3280	Scharf, Albert	Ph.D.	170
Ruffin, Julian M.	M.D.	1010	Schaub, D. J.		2450
Ruggles, J. G.	B.A.	420	Schauble, Joyce		4340
Ruigh, W. L.	Ph.D.	2780	Scheer, Bradley T.	Ph.D.	600 C
Rundles, Wayne	M.D.	1010	Schermerhorn, G. R.	B.S.	140
Rupp, E. G.	M.S.	3240	Schick, Bela	M.D.	1580 Z
Rusch, H. P.	M.D.	4490 B	Schiele, Burtrum	M.D.	2360
Russell, Walter C.	Ph.D.	3370	Schilb, Theodore W.	M.S.	2410
Rutledge, Marjorie M.	B.S.	730	Schille, J. L.		410
Rutledge, Robert	M.D.	4330	Schilling, Alice	B.S.	1660
Ruyle, E. H.	Ph.D.	80	Schlamb, Kermit	B.S.	2870
Ryan, Anna E.	B.A.	1580 W	Schlaphoff, Doretta		2680
Ryba, C.		4010 B	Schleissinger, Ruth	B.S.	2670
Rygg, G. L.	Ph.D.	4020 E	Schlenk, Fritz	Ph.D.	1650
			Schlesinger, A. H.	B.S.	4130
			Schlichter, J. G.	M.D.	1580 FF
			Schlinkmann, P. E.		4130
			Schmidt, E. G.	Ph.D.	2100 A
			Schmidt, F. L.	M.S.	880
			Schmidt, William A.		610
			Schmitz, Jean	B.S.	3730
			Schmucker, M. L.	M.S.	2450
			Schnakenberg, G. H. F.	B.A.	1910
			Schneider, B. H.	Ph.D.	4400
			Schneider, H.	Ph.D.	600 D
			Schneider, Morris E.	D.V.M.	710
			Schneider, R. B.	S.B.	1940
			Schoch, T. J.	Ph.D.	840
			Schoen, A. M.	M.D.	1990
			Schoen, Karl	Ph.D.	1080
			Schoenfeld, W. H.	B.S.	80
			Schoenholz, Dan	B.S.	3590
			Scholes, John C.	Ph.D.	380
			Schomer, H. A.	M.S.	4020 E
			Schoonover, F. V.		3690
			Schott, H.	Ph.D.	600 C
			Schour, I. M.	Dr.	1610
			Schrader, A. L.	Ph.D.	2100
			Schreiter, O. M.		1610
			Schroeder, A. L.		2640
			Schroeder, Eleanor R.	B.S.	3200
			Schroeder,	Ph.D.	2390
			Raymond A.		
			Schuck, Cecilia	Ph.D.	3220
			Schuetz, Robt. D.	Ph.D.	2870
			Schuler, Martin N.	B.A.	2300
			Schuler, P. C.		680
			Schulman, John	Dr.	1580 D
			Schulte, Muriel	B.S.	3520
			Schultz, A. S.	Ph.D.	3690
			Schultz, J. A.		1650
			Schultz, R. D.	Ph.D.	2870
			Schultz, Robert C.	B.S.	3510
			Schultz, T. H.	Ph.D.	4020 I
			Schultz, Theo. W.	Ph.D.	710
			Schultze, A. B.	Ph.D.	2680
			Schultze, Max O.	Ph.D.	2360

S

Sabiston, Adelia	B.S.	600 A
Sachat, L. L.		3120 A
Sacks, J.	Ph.D., M.D.	490
Sadtler, Philip	B.S.	3380
Sadtler, S. S.	B.S.	3380
Saeger, A. E.	Ph.D.	3000
St. John, J. L.	Ph.D.	4320
St. John, John	B.S.	3000
Sair, Louis	Ph.D.	1380
Sallee, E. D.	B.S.	80
Salles, Joao Velga	M.D.	2770
Salmon, M. R.	Ph.D.	3030
Salmon, Robt. J.	M.S.	2360
Salmon, S. C.	Ph.D.	4020 E
Salmon, W. D.	M.A.	30
Salsbury, R. L.	B.S.	3370
Sampey, John J.	M.S.	10
Sampson, D. F.	B.S.	80
Sampson, G. O.	B.S.	80
Sampson, Myra M.	Ph.D.	3560
Samuels,	Dr.	3620
Samuels, C. E.	M.S.	2910
Samuels, Leo T.	Ph.D.	4120
Samuelson, George	Ph.D.	1970
Sanchez, Enrique	Dr.	2360
Sanders, E. R., Jr.	B.S.	3130
Sandholzer, L. A.	Ph.D.	4030 A
Sandstedt, R. M.	M.S.	2680
Sandza, J. G.	Ph.D.	1180
Sanford, F. Bruce	B.S.	4030 A
Sansum, W. D.	Dr.	3433
Sapienza, A.		1610 A
Sarett, Herbert P.	Ph.D.	3950
Sarett, L. H.	Ph.D.	2260
Saries, W. B.	Ph.D.	4490
Sarma, P. S.	Ph.D.	1440
Sattler, Louis	Ph.D.	500
Saunders, Charibel	B.S.	730
Sayre, J. D.	Ph.D.	2870
Scattergood, Allen	Ph.D.	2110

Schwab, A.	B.A.	4020 G	Shaw, A. O.	Ph.D.	4320
Schwartz, Charles	Ph.D.	3610	Shaw, James H.	Ph.D.	1440
Schwegman, Cletus	M.D.	3050	Shaw, T. M.	M.A.	4020 I
Schweigert, Bernard S.	Ph.D.	3850	Shaw, W. L.	M.A.	4020 I
Schwimmer, David	Dr.	2730	Shawcross, Roy	B.A.	420
Scofield, E. H.	Ph.D.	3480	Shear, S. W.	Ph.D.	600
Scott, A. A.		2690	Shearer, P. S.		1650
Scott, D. H.	B.S.	4020 E	Sheets, Olive A.	M.S.	2380
Scott, Edward M.	Ph.D.	3120	Sheft, Bernice	M.S.	710
Scott, G. M.		2810	Shelanski, H.	Ph.D.	3580
Scott, G. W.	Ph.D.	320	Sheldon, Ruth		4310
Scott, H. M.	Ph.D.	1610	Shellenberger, J. A.	Ph.D.	1740
Scott, Henry T.	Ph.D.	4490	Shemin, D.	Ph.D.	790
Scott, L. E.	Ph.D.	2100	Shen, Shu-Chin	M.A.	3560
Scott, M. L.	Ph.D.	850	Shepherd, A. D.	M.A.	4020 I
Scott, T. F. McNair	M.D.	1580 J	Shepherd, G. S.		1650
Scott, Walter M.		4020 H	Shepperd, Patricia	B.S.	3850
Scoular, Florence I.	Ph.D.	2820	Sherman, Franklin, III	M.S.	2280
Scrimshaw, Nevin S.	Ph.D.,M.D.	3340	Sherman, Henry	Ph.D.	2110
Scroggin, Phyllis A.	B.S.	270 A	Sherman, Henry C.	Ph.D.	790
Scruggs, C. E.	B.S.	80	Sherman, W. C.	Ph.D.	3270
Seagrave-Smith, H.		600 A	Sherrill, M. H.	B.S.	580
Sealock, R. R.	Ph.D.	1650	Sherwood, Frank W.	Ph.D.	2790
Seaman, M. L.	B.S.	80	Sherwood, R. M.		3850
Sears, Elsie	M.S.	710	Sheuring, J. J.		1610
Sears, O. H.		1610	Shevock, Veronica D.		3040 A
Seashore, Robert H.	Ph.D.	2830	Shields, J. B.	Ph.D.	1350
Seaver, S. K.		810	Shields, Mary	B.S.	1610
Sebrell, L. B.		1360	Shigley, J. F.	D.V.M.	3040
Sebrell, W. H., Jr.	M.D.	4040 C	Shildneck, P. R.	Ph.D.	3680
Seegmiller, C. G.	Ph.D.	4020 I	Shills, Maurice E.	D.Sc.	790
Seeley, R. D.	Ph.D.	230	Shimer, S. R.	M.S.	2700
Seeley, Robert D.		3370	Shimkin, Michael B.		600 F
Seely, C. I.		1590	Shimoda, Frank	B.S.	3620
Seem, B. L.	M.S.	3040	Shinn, B. M.	A.B.	290
Seestrom, H. E.	B.S.	3940	Shinn, L. A.	B.A.	4020 C
Segall, J. L.		4124	Shipstead, H.	D.Eng.	600 B
Segesseemann, Ernest	M.A.	2400	Shirky, Samuel B.	A.M.	2390
Segre, E. Lucile	M.S.	970	Shirley, Georgia	M.S.	3640
Selbert, Florence B.	Ph.D.	3050	Shirley, S. C.	M.A.	80
Seidler, F.	L.L.D	2150	Shock, N. W.	Ph.D.	4040 C
Seifter, Sam	Ph.D.	1970	Shorr, Ephriam	M.D.	850
Selle, W. A.	M.D.	3890 A	Shorr, Harold	M.D.	2770
Selman, Roland W., Jr.	B.S.	3000	Shortridge, Robt. W.	Ph.D.	2300
Selye, Hans	Dr.	2195	Showalter, Robt. K.		1150
Serr, E. F.	B.S.	600 A	Shrewsbury, Chas. L.	Ph.D.	2300
Sette, Oscar E.		3700	Shuart, C. E.	M.S.	3370
Settelmeyer, J. T.	B.M.E.	1240	Shuey, G. A.	B.S.	3830
Sevringhaus, Elmer L.	M.D.	1530	Shukers, Carroll F.	M.D.	270 A
Sexton, E. L.		410	Shulstad, Orris	B.S.	3100
Seymour, Keith	Ph.D.	540	Shultz, Nette	B.S.	3860
Seymour, Raymond B.	Ph.D.	695	Shuman, A. C.	Ph.D.	1240
Shackelford, John	B.S.	470	Shuman, C. K.		1330
Shafer, H. M.	Ph.D.	2260	Shutak, Vladimir G.	Ph.D.	3320
Shank, Robt. E.	M.D.	3200	Shwackman, Harry	Dr.	1580 G
Shankman, S.	Ph.D.	3500	Sibbitt, L. D.		2810
Shannon, Alice	B.S.	3620	Sica, A. J.	Ph.D.	1180
Shannon, W. J.	Ph.D.	2160	Sidhu, S. S.	Ph.D.	3120
Shantz, E.		980	Siebel, George E.		660
Shapiro, Rebecca L.	M.S.	3590	Siebers, Barton H.	B.Ch.E.	1810
Shapiro, Shepard	M.D.	2770	Sievers, F. J.		2120
Sharf, J. M.	Ph.D.	310	Silber, Robt. H.	Ph.D.	2260 A
Sharp, Paul F.	Ph.D.	1350	Silcox, H. E.	Ph.D.	2260
Sharpe, Leon M.	Ph.D.	2110	Silver, M. L.		4010 B
Shaver, Richard C.	M.S.	860	Silverman, Evelyn		1580 DD
			Silverstone, Herbert	B.S.	1580 FF
			Simeon, Goldie A.		4340

Siminovitch, David	Ph.D.	2360	Smock, R. M.		850
Simms, B. T.	Ph.D.	4020 B	Smyth, Charley J.	M.D.	4350
Simms, Ethan A. H.	Dr.	4540	Smyth, Irene M.	M.S.	3620
Simms, Helen D.		600 A	Smyth, J. R.	M.S.	2050
Simonson, Ernst	M.D.	2360	Snair, W. H.	M.S.E.	80
Simpson, Harold N.	B.S.	3540	Snel, Albert M.	M.D., Ph.D.	2170
Simpson, Henry A.	B.A.	780 A	Snell, C. A.	Ph.D.	3590
Simpson, Jean L.	Ph.D.	1200	Snell, Esmond E.	Ph.D.	4490
Simpson, V. E.		2680	Snell, Foster D.	Ph.D.	3590
Sims, Edith	B.S.	270 A	Snider, Geo. G.	B.A.	4020 B
Sinclair, Walton B.	Ph.D.	600 D	Snieszko, S. F.		4030 A
Singer, Beatrice	B.S.	600 A	Snyder, Grant B.		2120
Singer, Thomas P.	Ph.D.	2360	Snyder, R. S.	M.S.	1590
Singh, Gerbochan	B.S.	2870	Snyderwirth,	Ph.D.	3510
Singher, Heron O.	Ph.D.	2920	Herman J.		
Singsen, E. P.	Ph.D.	810	Sobel, Albert E.	Ph.D.	1580 E
Sinnhuber, R. O.	M.S.	2910	Sobotka, Harry H.	Ph.D.	1580 Z
Sinnott, E. W.		4540	Soderstrom, G. Fabian		3365
Sipple, H. L.	Ph.D.	1110	Sognefest, P.	B.S.	80
Sjostrom, L. B.	B.S.	1940	Sognaes, R. F.		1440
Skeggs, Helen R.	B.S.	3510	Sohns, V. E.	B.S.	4020 G
Skelley, William C.	M.S.	3370	Solomon, Robert D.	M.D.	1580 FF
Skiles, R. L.	A.B.	80	Solowey, Mathilde	Ph.D.	4020 F
Skinner, Ben L.	B.S.	1720	Soltis, John	B.S.	4430
Skipp, Mary	B.S.	2670	Somers, Lea M.		4010 A
Skipper, Howard E.	Ph.D.	3630	Somerville, A. A.	Ph.D.	4124
Skovholt, Oscar		3250	Sommer, H. H.	Ph.D.	4490
Sletziner, M.	Ph.D.	2260	Sondern, C. W.	Ph.D.	4430
Sloan, E. C.		2160	Soodak, M.	Ph.D.	1180
Sloan, Ralph		730	Sorber, D. G.	M.S.	4020 I
Sloane, A. B.	Ph.G.	2470	Sostman, Edna R.	M.S.	790
Sloane, Nathan H.	Ph.D.	1440	Souder, P. W.		610
Slobodiansky, Evelyn	Ph.D.	2770	Soule, Dorothy F.		3620
Sloman, K.	M.A.	1240	Soule, E. C.	B.S.	2140
Slosberg, H. M.		1650	Spannuth, H. T.	M.S.	4470
Slotter, R. L.	B.S.	4020 G	Sparks, Ruth	B.S.	1490
Slowick, Edmund F.	M.S.	2990	Sparks, W. C.	M.S.	1590
Small, J. D.	M.S.	2150	Spaugh, O. H.	B.S.	4020 I
Smith, A. H.		4350	Speaks, Charles		2330
Smith, A. K.	Ph.D.	4020 G	Speck, John C., Jr.	Ph.D.	2280
Smith, Allan	Ph.D.	2670	Speck, John F.	Ph.D.	710
Smith, Anna B.	B.S.	3850	Spector, H.		1610
Smith, Arthur H.	Ph.D.	4350	Spector, Samuel	M.D.	4420
Smith, Carl		1310	Speel, Harry C.	B.S.	60
Smith, Clement A.	Dr.	1440	Speer, Dallas		890
Smith, D. E.	M.S.	2360	Speh, Carl F.		4020 A
Smith, David T.	M.D.	1010	Spence, Harry Y.	M.D.	2220
Smith, E. D.	B.A.	3910	Spence, Jane B.	Ph.D.	1250
Smith, Eric	Ph.D.	3030	Spencer, Gene	Ph.D.	3890
Smith, F. R.	Ph.D.	3060	Sperling, Gladys	M.S.	850
Smith, Frank H.	M.S.	2790	Sperotto, J. J.	M.S.	80
Smith, G. S.	B.S.	4020 I	Spielman, L. A.		1330
Smith, George E.	Ph.D.	610	Spies, Newton E.	B.S.	2540
Smith, H. J.	Ph.D.	3270	Spies, Tom D.	M.D., Ph.D.	1580 R
Smith, H. S.		600 A	Spilman, Herbert A.	M.S.	1350
Smith Hazel		4340	Spinella, Jane R.		4010 B
Smith, Janice M.	Ph.D.	1610	Spitler, Clare	B.A.	2870
Smith, Jean T.	B.S.	1610	Spivey, M. R.		1650
Smith, Lillian	B.S.	710	Sprague, Edith	B.A.	3100
Smith, Lisette	B.S.	1680	Sprague, H. B.	Ph.D.	3870
Smith, Luther E.	M.D.	4040 C	Sprague, M. A.	Ph.D.	3370
Smith, O.	Ph.D.	850	Sprague, Randall G.	M.D., Ph.D.	2170
Smith, Ruth		2930	Sprince, Herbert	Ph.D.	2920
Smith, Sedgwick E.	Ph.D.	850	Sprinson, D. B.	Ph.D.	790 A
Smith, Susan G.	M.A.	1010	Sprunt, Douglas H.	M.D.	1010
Smith, W. H., Jr.	B.S.	3850	Spur, Bernhard	Ph.D.	1580 J
Smith, W. K.	Ph.D.	4490	Staats, Shirley	B.S.	2680

Stadie, William C.	M.D.	3050	Storrs, A. B.	M.S.	290
Stadtman, Earl	B.S.	600 A	Storvick, Clara A.	Ph.D.	2910
Stadtman, Floyd	B.S.	600 A	Stotlar, June	B.S.	2680
Stadtman, Thressa C.		600 A	Stotz, Elmer H.	Ph.D.	3340
Stafford, Earl	B.S.	1940	Stout, P. R.	Ph.D.	600 A
Stagmeier, A. F.		1240	Stover, E. C.	B.S.	1120
Stahl, Arthur L.	Ph.D.	2270	Stover, R. B.		2940
Stahlmann, M. A.		4490	Straka, R. P.	Ph.D.	4020 I
Stair, E. C.	M.S.A.	3220	Straub, Evelyn E.	B.A.	3620
Stakman, E. C.	Ph.D.	2360 A	Straube, Marian	B.S.	710
Staley, C. H.	B.S.	1240	Strecker, Herman		3000
Stallcup, Odie T.	A.M.	2390	Stribley, R. C.	B.S.	4520
Stamler, F. W.		1660	Strickler, Arnold P.	B.A.	1920
Stander, Henricus J.	M.D.	850 A	Stringfield, G. H.	M.S.	2870
Stanford, R. W.	B.S.	2150	Strommen, A. M.	M.S.	4490
Stansby, M. E.	M.S.	4030 A	Strong, F. M.	Ph.D.	4490
Staph, Horace E.	B.S.	3890	Strong, Laurence		1730
Stare, Fredrick J.	Ph.D., M.D.	1440	Strouss, Leo	B.S.	470
Starling, Dorothy	B.S.	3630	Strunk, D. H.	B.S.	3480
Starr, Paul	M.D.	3620	Stuart, Harold C.	M.D.	1440
Startzman, Viola	M.D.	4420	Stueber, Albert H.		2645
Stauber, Leslie A.	Ph.D.	3370	Stueck, Geo. H., Jr.	M.D.	2770
Stearns, Genevieve	Ph.D.	1660	Stumbo, C. R.	Ph.D.	1160
Stebbins, Robert B.	M.S.	2260 A	Sturdy, R. A.	B.S., D.V.M.	2440
Steele, H. K.	B.Ch.E.	3690	Sturgis, Cyrus C.	M.D.	2290 A
Steele, J. Murray	M.D.	2770	Stutzman, Leroy	Ph.D.	2830
Steenbock, Harry	Ph.D.	4490	Suárez, Ramón M.	M.D.	3210 C
Stefani, Rosa Luisa	M.S.	3210 A	Subbarow, Y.	Ph.D.	100 A
Stegman, Gebhard	Ph.D.	3120	Sugihara, James	Ph.D.	4120
Steggerda, F. R.		1610	Sugiyama, Hiroshi	B.A.	710
Steifel, J. R.	M.S.	2280	Sullivan, George H.	B.S.	1200
Stein, G. A.	Ph.D.	2260	Sullivan, Royal A.	Ph.D.	2540
Steinberg, Marvin	B.S.	2360	Sullivan, W.		600
Steiner, John	Ph.D.	2350	Sulzbacher, W. L.	M.S.	4020 B
Steinkamp, Ruth	M.S.	270 A	Summerbell, R. K.	Ph.D.	2830
Steinke, J.	B.S.	320	Summers, Katheryn		2390
Stephenson, J. T.	M.S.	1910	Summerson,	Ph.D.	4010 A
Stephenson, Richard		850	William H.		
Stern, Dora	Ph.D.	3750	Sumner, Clark A.	B.S.	870
Stern, Elizabeth	M.D.	1580 F	Sumner, J. B.	Ph.D.	850
Stern, M.	Ph.D.	980	Sumner, Robert J.	Ph.D.	160
Stetten, DeWitt, Jr.		1440	Sund, J. M.	M.S.	4490
Stevens, E. Irene	M.S.	850	Sundholm, N. K.	Ph.D.	2670
Stevens, H. P.	B.A.	80	Supplee, G. C.	Ph.D.	3780
Stevens, Henry	Ph.D.	4020 A	Surber, Eugene W.		4030 A
Stewart, Aubrey P.	Ph.D.	1350	Sure, Barnett	Ph.D.	270
Stewart, Earl D.		3460	Suter, C. M.	Ph.D.	3730
Stewart, Geo. F.	Ph.D.	1650	Sutton, C. C.	M.Ch.E.	1240
Stewart, H. A.	Ph.D.	2790	Sutton, Lee E.	M.D.	2220
Stewart, R. A.	Ph.D.	1310	Sutton, T. S.	Ph.D.	2870
Stiles, Mary K.	M.S.	790	Svolos, T. P.	B.S.	390
Stimpson, Edwin G.	Ph.D.	2540	Swaim, C. D.	B.S.	3940
Stimpson, R. H.		1490	Swanson, Arthur M.	Ph.D.	4490
Stipek, Robert	B.S.	2280	Swanson, C. O.	Ph.D.	1740
Stitt, Fred	Ph.D.	4020 I	Swanson, E. W.		2390
Stocking, Ralph	Ph.D.	600 B	Swanson, Marjorie A.	Ph.D.	4270
Stoerk, Herbert C.	M.D.	1440	Swanson, Pearl P.	Ph.D.	1650
Stoddart, L. A.	Ph.D.	4110	Swanson, W.	B.S.	980
Stodola, F. H.	Ph.D.	4020 G	Swartz, VeNona	M.S.	180
Stoecker, G. C.	B.S.	80	Swedberg, Mildred	B.S.	3100
Stokes, Joseph, Jr.	M.D.	1580 J	Sweet, Lewis K.		1260
Stokstad, E. L. R.	Ph.D.	100 A	Sweifach, Benj. W.	Ph.D.	850 A
Stoltz, Robt. B.	B.S.	2870	Swendseid, M. E.	Ph.D.	2980
Stolurov, Lawrence	Ph.D.	3120	Swenson, H. A.		4020 I
Stone, Leonard	Ph.D.	4290	Swenson, T. L.	Ph.D.	3700
Stone, P. V.	M.S.	4490	Swzey, H. R.	B.A.	310
Stone, R. W.	Ph.D.	3040	Swickard, Mary T.	M.S.	4020 D
Stone, W. K.		1610	Swift, R. W.	Ph.D.	3040

Swisher, Carl A.	Ph.D.	780
Swope, M. A.	B.S.	2440
Swope, W. D.	M.S.	3040
Sy, Albert P.	Ph.D.	530
Sydenstricker, V. P.	M.D.	1300 A
Szunski, S.		260

T

Tabor, Elbert C.	M.S.	4040 C(4)
Taebel, W. A.	Ph.D.	1060
Tainter, M. L.	M.D.	3730
Talbur, W. F.	M.S.	4020 I
Talley, P. J.	Ph.D.	3850
Tannenbaum, Albert	M.D.	1580 FF
Tanner, F. W.	Ph.D.	1610
Tanner, F. W., Jr.	Ph.D.	4020 G
Tarail, Robert	M.D.	4540
Taras, M. H.	B.Ch.E.	3790
Tarver, Harold		600
Tate, H. Douglas		2670
Tate, Mildred	Ph.D.	4180
Tatum, E. L.		4540
Tauber, F. Warren	M.S.	4200
Taussky, Hertha		850 A
Taylor, Clara M.	Ph.D.	790
Taylor, David L.	Ph.D.	710
Taylor, E. A.	M.E.	440
Taylor, Esther T.	M.S.	2100
Taylor, Henry L.	Ph.D.	2360
Taylor, Hugh S.		3170
Taylor, John W.	M.S.	4020 E
Taylor, M. C.		2140
Taylor, M. Wight	Ph.D.	3370
Teel, H. L.	B.S.	680
Teeri, Arthur E.	Ph.D.	2700
Telford, Ira R.	M.D.	1260
Temmer, Odette	B.S.	600 A
Terman, G. L.	Ph.D.	2050
Terrell, Margaret E.	M.A.	4340
Terry, H.	B.Ch.E.	3590
Tetrault, P. A.		3220
Tew, Kathryn A.	S.M.	1440
Thacker, E. J.		3040
Thielen, Lawrence		2830
Thienes, Dr.		3620
Thiessen, Emma J.	M.S.	4530
Thiessen, R., Jr.	B.S.	1240
Thimann, Kenneth V.	Ph.D.	1440
Thomas, B. H.		1650
Thomas, Bioletta	B.A.	3620
Thomas, C. A.	B.S.	3040
Thomas, E.	M.D.	1580 FF
Thomas, E. L.	M.S.	2360
Thomas, Edward D.	M.D.	1580 D
Thomas, G. Cullen		1250
Thomas, J. Earl	M.D.	1680
Thomas, Jessica	M.S.	3950
Thomas, Joseph J.	Ph.D.	4300
Thomas, Katherine	B.S.	3630
Thomas, Ruth U.	M.S.	730
Thomas, T.	B.S.	2740
Thomason, Mary M.		1740
Thompson, C. Ray	Ph.D.	710
Thompson, Jerome B.	M.S.	160
Thompson, John B.		3150
Thompson, Lester		600 A

Thompson, R. E.	Ph.D.	290
Thompson, R. J.	B.S.	80
Thompson, Richard	M.D.	780 A
Thomsen, Louis C.	B.S.	4490
Thor, C. J. B.		4200
Thorn, George W.		1440
Thornburg, Wayne	B.S.	450
Thornton, J. K.	B.S.	3040
Thornton, M. H.	Ph.D.	2300
Thorp, W. T. S.		3040
Thrift, Pinkie E.	M.A.	3640
Throckmorton, R. L.		1740
Thurston, E. W.		3910
Thurston, H. W., Jr.	Ph.D.	3040
Tidd, J. S.	Ph.D.	320
Tidwell, H.	Ph.D.	3650
Tieinan, Jesse W.		1560
Tietze, F.	M.S.	2830
Tiffany, Clyde C., Jr.	M.S.	860
Tilbury, Ross C.	M.D.	1980 A
Tillman, A. D.	M.S.	3040
Timoshenko, Vladimir P.	Ph.D.	3700
Tinkler, F. H.	B.S.	4520
Tinklin, Gwendolyn	M.S.	1740
Tinley, J. M.	Ph.D.	600
Tinsley, John C., Jr.	M.D.	4330
Tinsley, M.		1580 FF
Tischler, Nathaniel		3750
Tisdall, F. F.		3920
Tishler, M.	Ph.D.	2260
Titus, Harry W.	Ph.D.	1920
Titus, R. W.	Ph.D.	2690 A
Tobey, Helen	B.S.	2280
Todd, H. R.	Ph.D.	80
Todd, Wilbert R.	Ph.D.	2911 A
Todhunter, E. Neige	Ph.D.	40
Toepter, Ed. W.	Ph.D.	4020 D
Tolle, C. D.	Ph.D.	4040 B
Tolman, Bion	M.S.	4100
Tomarelli, Rudolph M.	Dr.	3050
Tomasseti, Madelyn R.		3040 A
Tompkins, M. D.	M.A.	80
Tompkins, Winslow T.	M.D.	1580 DD
Toof, F. Leslie	B.Ch.E.	3100
Torres, Rosa M.	M.S.	3210 A
Torrie, J. H.	Ph.D.	4490
Toscani, Vincent	B.S.	3365
Tosteson, D. C.		1440
Totter, John R.	Ph.D.	270 A
Tourtellotte, D.		1800
Touster, Oscar	Ph.D.	4125
Towler, M. L.	M.D.	3890 A
Tracy, Paul H.	Ph.D.	1610
Travers, Janet H.	B.S.	2280
Travers, John J.	M.S.	280
Treadwell, Carleton R.	Ph.D.	1260
Trebler, Henning A.	Ph.D.	2540
Trenner, N. R.	Ph.D.	2260
Trenton, John		2390
Tressler, D. K.	Ph.D.	3930
Trevett, M. F.	M.S.	2050
Trevorrow, Virginia	Ph.D.	780 A
Triebold, H. O.	Ph.D.	3040
Tripp, George	B.S.	4200

Troeschler, Cynthia	B.S.	2110	Vanselow, Albert P.	Ph.D.	600 D
Trolander, Elmer W.	B.S.	3230	Van Vleet, H. S.	Ph.D.	80
Trombold, C. D.		610	Van Wagenen, G.		4540
Trotter, Allen	Ph.D.	320	Van Wagendonk,	Ph.D.	2910
Troup, K. F.	B.S.	680	Wm. J.		
Trout, Geo. Malcolm	Ph.D.	2280	Vars, Harry M.	Ph.D.	3050
Truog, Emil	M.S.	4490	Vaughn, Reese H.	Ph.D.	600 A
Truscott, J. H. L.		2895	Vaupel, E. A.	B.S.	920
Tschaepe, V. T.	B.S.	4020 G	Vavich, M. G.	Ph.D.	260
Tsongas,	M.P.H.	1440	Velat, Clarence	M.D.	4040 C(4)
Andromache G.			Vennesland, Birgit	Ph.D.	710
Tsuchiya, H. M.	Ph.D.	2360 A	Verhagen, Dirk	M.S.	470
Tucker, Robert	B.S.	2360	Verner, Leif	Ph.D.	1590
Tucker, Ruth E.	M.S.	3320	Vestal, C. M.	M.S.	3220
Tuckey, S. L.		1610	Vestling, C. S.		1610
Tukich, Eliz.	B.A.	3620	Viall, G. K.		690
Tumerman, L.	B.S.	3520	Vibrans, F. C.	Ph.D.	180
Tuomy, J. M.	B.S.	4020 G	Vignet, Alfred J.	M.D.	850 A
Turk, Kenneth		850	Villarama, Antonio		3065
Turnbull, M.		1650	Vinacke, Winifred R.	M.S.	1480
Turner, Chas. W.	Ph.D.	2390	Vincent, J. F.		1290
Turner, Dorothea	M.S.	710	Vinson, L.		1180
Turner, R. E.	B.S.	2370	Vinson, Leonard J.	Ph.D.	1600 A
Turrell, F. M.	Ph.D.	600 D	Vinton, Catherine	M.S.	2450
Tutelman, Harriet	B.S.	1700	Virta, A. A.	B.S.	2050
Tuttle, W. W.	Ph.D.	1660	Visser, Donald W.	Ph.D.	3620
Tutton, W. R.	B.A.	80	Vogt, Byrnece	B.S.	550
Twining, Frederick W.		3980	Voight, Alvin		780 A
			Vojnovich, C.	A.B.	4020 G
U			Volk, N. J.	Ph.D.	3220
Udenfriend, S.	M.S.	2770	Volkerding, C. C.	Ph.D.	2810
Uhvits, Rachel	Ph.D.	4020 D	Volkmut, A. R.		410
Ullman, Phyllis		3700	Volwiler, Wade	M.D.	1440
Ulrich, John	Ph.D.	2360 A	Volz, Frances	M.S.	850
Umbreit, W. W.		850	von Goehde, H. L.	Ph.D.	4230
Underbjorg, G. K. L.	Ph.D.,D.V.M.	4490	Voorhies, E. C.	B.S.	600
Unger, E. D.	Ch.Eng.	3480	Vopicka, Edward	Ph.D.	3030
Utterback, T. W.	B.S.	3090	Vorhaus, Louis J.		4010 B
			Vosburgh, J. V.		390
V			Votaw, F. C.		4010 B
			W		
Vahlteich, H. W.	Ph.D.	410	Wachtel, L. W.	Ph.D.	4090
Vail, Gladys E.	Ph.D.	1740	Waddell, James	Ph.D.	1020 A
Vaile, J. E.	Ph.D.	270	Wade, W. H.	Ph.D.	80
Valentine, G. G.	B.A.	4122	Waelsh, Heinrich	M.D.,Ph.D.	790
Valletta, M. L.	B.S.	2740	Wager, Ralph W.	Ph.D.	2210
Van Arsdell, W. B.	B.S.	4020 I	Wahhab, A.		600 A
Van Biema, G.	M.S.	1240	Wahl, Manfred		4260
Van Blaricom, L. O.		750	Wainger, Charles K.	M.D.	1580 W
Van de Kamp, J.	Ph.D.	2260	Wainio, Walter W.	Ph.D.	2770
Van de Mark, Mildred		30	Waisman, Harry A.	Ph.D.	4490
Vandenbelt, J. M.		2980	Wakefield, Ray B.		1310
Van Denover, R. E.	B.S.	3020	Wakeley, R.		1650
Vander Linden,	M.S.	3230	Wakeman, Reginald L.		2900
Garrett			Wald, George	Ph.D.	1440
Van der Noot, George	Ed.M.	3370	Walden, George B.	D.Sc.	1910
Vander Wal, R. J.	Ph.D.	290	Waldron, Jerome M.	Ph.D.	1680
Vander Werf, C. A.		1750	Walker, H.		1650
Van Duyne,	Ph.D.	1610	Walker, J. C.	Ph.D.	4490
Frances O.			Walker, L.	B.S.	4020 I
Van Ermen, L.	M.S.	4020 G	Walker, Lester V.	A.B.	3590
Van Hook, Andrew	Ph.D.	4530	Walker, N. H.	B.S.	2490
Van Landingham, A. H.	Ph.D.	4400	Walkup, H. G.	B.S.	4320
Van Loon, Edw. J.	Ph.D.	1990	Wall, L.		1170
Van Oosten, John		2290	Wallace, Donald W.	B.A.	1040
Van Pilsum, J.	B.S.	1660	Wallace, J. M.	Ph.D.	600 D
Van Praag, Dina	M.S.	3450			

Wallace, Jessie	Ph.D.	1650	Weber, Maurice	B.S.	2710
Wallace, William M.	Ph.D.	1440	Weber, Paul	Ph.D.	1280
Waller, Ernest F.	Ph.D.	4126	Webster, Elizabeth M.	B.S.	2540
Wallerstein, James S.	Ph.D.	2930	Weckel, K. G.	Ph.D.	4490
Wallingford, V. H.		2060	Wedberg, S. E.		810
Wallis, Everett S.	Ph.D.	3170	Weddell, D. S.		2410
Wallis, E. P.	Ph.D.	2100	Weeks, David	Ph.D.	600
Walsh, M. A.	B.S.	3000	Weeks, O. B.	Ph.D.	2810
Walsh, Robert A.	Ph.C.	2990	Weese, S. J.	M.S.	4400
Walster, H. L.	Ph.D.	2810	Wegener, J. B.	B.S.	3970 B
Waltersdorff, Robt. H.	B.S.	870	Wegman, Myron E.	M.D.	1980 A
Walton, E.	Ph.D.	2260	Wegner, M. L.	Ph.D.	2200
Walton, Henry A.	Ph.D.	2540	Wegrich, Ohmer G.	Ph.D.	800
Waltz, Charles C.	Ph.D.	1540	Weick, George	M.D.	2290
Wanderstock, J. J.	Ph.D.	850	Weier, T. Elliot	Ph.D.	600 B
Wang, C. F.	M.D.	1440	Weil, B. H.	M.S.	1280
Wangensteen, Owen H.	Dr.	2360	Weimer, Henry E.	A.B.	3620
Wanner, R. L.	B.S.	3400	Weis, Adelia	Ph.D.	2390
Wantrup, Siegfried V.	D.Agr.	600	Weisberg, H.	M.D.	1580 FF
Ward, Arlin B.	B.S.	1740	Weisberg, Samuel M.	Ph.D.	2540
Ward, Fred C.	B.S.	2540	Weisblat, D. I.	Ph.D.	4080
Ward, G. M.	M.S.	3370	Weiser, H. H.	Ph.D.	2870
Ward, Mary M.	M.S.	40	Weisler, L.	Ph.D.	980
Ward, P. J.		2390	Weiss, Francis J.	Ph.D.	3750
Ward, Ruel E.	Ph.D.	1040	Welch, R. C.	Ph.D.	4450
Ward, Ruth B.	M.S.	3640	Weldon, Virginia	B.A.	2790
Warden, Henry F.		4125	Welker, Paul L.		1330
Ware, L. M.		30	Wellman, Harry R.	Ph.D.	600
Warkany, Joseph		741	Wells, D. G.	B.S.	4490
Warner, E. D.	M.D.	1680	Wells, B. B.	M.D., Ph.D.	270 A
Warner, P. G.		2870	Wells, C. H.		1460
Warner, Robt. M.	Ph.D.	560	Welsh, Bessie	B.S.	3480
Warnock, R. M.	M.A.	780	Welsh, John H.	Ph.D.	1440
Warren, G. F.	Ph.D.	4490	Wendler, Norman R.	Ph.D.	2260
Warren, Charles O.	Ph.D., M.D.	850 A	Went, F. W.	Ph.D.	590
Warren, D. C.	Ph.D.	1740	Wenzel, Frederick W.	Ph.D.	1150
Warren, Evelyn L.		2390	Wenzel, J.	M.S.	1380
Warren, R. M.	M.S.	80	Werkheiser,	B.A.	3620
Warwick, E. J.	Ph.D.	3220	William C.		
Washburn, Alfred H.	M.D.	780 A	Werle, Julienne		3910
Washburn, L. E.	Ph.D.	770	Werner, H. O.	Ph.D.	2680
Washburn, R. G.	B.A.	2870	Werner, Henry	M.A.	1750
Washko, J. B.	Ph.D.	3040	Wernham, C. C.	Ph.D.	3040
Wasser, C. H.	B.S.	770	Wertman, Kenneth	Ph.D.	3120
Wasserman, T.	B.S.	4020 I	Wertz, A. W.	M.S.	2120
Wasson, Arell J.	M.S.	1350	Wessel, D. J.	B.Ch.	80
Waters, L. L.		1750	West, Clark D.	M.D.	2290
Watkin, Donald,	M.D.	1440	West, Edward S.	Ph.D.	2911 A
Watrous, G. H., Jr.	M.S.	3040	West, Harold D.	Ph.D.	2230
Watson, E. H.	M.D.	2290	Westerfeld, W. W.	Ph.D.	3820
Watson, Gertrude I.	B.S.	2280	Westerlund, Bernice	Ph.D.	4010 E
Watson, James A., Jr.		1980	Westerman, Beulah D.	Ph.D.	1740
Watson, James L.	M.D.	3620	Westfall, Robert J.	Ph.D.	3510
Watt, Bernice K.	Ph.D.	4020 D	Westphal, R. E.	B.S.	80
Wawra,	Dr.	3620	Weswig, P. H.	Ph.D.	2910
Way, C. B.	B.S.	2370	Weybrew, Joseph A.	Ph.D.	2790
Wayman, W. R.	B.S.	80	Wharton, F. W.	B.S.	3940
Weakley, C. E., Jr.	M.S.	4400	Wharton, Marion	M.S.	4400
Wearn, J. T.		4420	Wheaton, L. E.	Ph.D.	80
Weatherwax, Paul	Ph.D.	1630	Wheaton, J. M.		2940
Weaver, Claire F.		3050	Whedon, G. Donald	M.D.	850 A
Weaver, Earl	Ph.D.	2280	Wheeler, Evelyn S.	B.S.	780 A
Weaver, Robert J.	Ph.D.	710	Wheeler, J.	M.D.	3050
Webb,	Dr.	3620	Wheeler, Norman C.		4010 B
Webb, T. J.	Ph.D.	2260	Wheeler, Robert S.	Ph.D.	1300
Weber, A. D.	Ph.D.	1740	Wheeler, S. S.	Ph.D.	770
Weber, Alvin F.	M.S., D.V.M.	4490	Whelton, Rita		600
Weber, M. G.	Ph.D.	4360	Whetzell, G. H.	B.S.	290

Whistler, Roy L.	Ph.D.	3220	Williams, Harold H.	Ph.D.	850
Whitacre, Francis M.	Ph.D.	3450	Williams, J. W.	Ph.D.	4490
Whitacre, Jessie O.	Ph.D.	3850	Williams, Mary	B.S.	2680
Whitacre, W. R.	B.S.	3040	Williams, O. B.	Ph.D.	3890
Whitaker, Randall	Ph.D.	2540	Williams, P. A.		4240
White, Edward A.	Ph.D.	1180	Williams, P. S.	M.S.	3040
White, E. G.	Ph.D.	2490	Williams, R. J.	Ph.D.	3890
White, H. D.	B.S.	1300	Williams, Robt. R.	Ph.D.	4460
White, J. W.	Ph.D.	4020 F	Williams, Robt. T.		3970 B
White, J. W.	M.S.	3040	Williams, V. C.	M.S.	2830
White Jean	B.S.	3480	Williams, Victor B.	A.M.	2390
White, Joan M.	M.S.	600 A	Williams, Virginia R.	M.S.	1980
White, Lloyd M.	B.S.	870	Williams, W. O.	Ph.D.	600
White, Locke, Jr.	Ph.D.	3630	Willingham, J. J.	Ph.D.	3940
White, V. E.		810	Willis, W. W.	A.B.	1740
White, V. M.	M.S.	1240	Willman, Wanda	Ph.D.	1650
White, Virginia B.	Ph.D.	3220	Willoughby, Betty L.	B.S.	3480
White, W. V.	B.S.	1240	Wills, L. A.		200
Whitehair, C. K.	Ph.D.	4490	Wilmot, Jennie	M.A.	3890
Whitehead, Eugenia		3950	Wilson, A. G.	Ph.D.	2260
Whitford, Corinne		2390	Wilson, Chase	M.S.	2810
Whiting, Geraldine	Ph.D.	710	Wilson, D. Wright		3050
Whitlock, G. P.	Ph.D.	1650	Wilson, E. H.	Ph.D.	2260
Whitman, Warren	Ph.D.	2810	Wilson, H. K.		3040
Whitmore, F. C.		3040	Wilson, Harry M., Jr.		800
Whitnah, C. H.	Ph.D.	960 A	Wilson, J. B.	M.A.	4490
Whitney, R. M.	Ph.D.	1610	Wilson, J. Walter		510
Whittier, C. P.		2940	Wilson, James G.		3340
Whittington, Virginia		3700	Wilson, James L.	M.D.	2290
Wick, Arne	Ph.D.	3475	Wilson, John L.		1050
Wickenden, Leonard		4440	Wilson, M. L.	Ph.D.	4020 L
Wickizer, Vernon D.	M.B.A.	3700	Wilson, Marjorie	Ph.D.	1660
Wichser, Frank W.	M.S.	1740	Wilson, Mildred R.	B.S.	2870
Wickson, M. E.		600 A	Wilson, P. W.	Ph.D.	4490
Widdoes, Lawrence C.	M.S.	2540	Wilson, Paul E.	M.D.	790 A
Widmer, C. M.	M.S.	3020	Wilson, W. Courtney	Ph.D.	3230
Wiegand, E. H.	B.S.A.	2910	Wilster, G. H.	Ph.D.	2910
Wiehl, Dorothy G.	M.A.	2310	Winchester, Burl	M.S.	2810
Wiese, Alvin C.	Ph.D.	1590	Wing, Shirley M.	M.S.	790
Wiese, Catherine E.	B.S.	3620	Wingert, Marcella	Sc.B.	520
Wigman, Helen		3120 A	Wink, Anna	M.S.	3040
Wildakas, Wm.	M.S.	2810	Winkler, M. O.	Ph.B.	80
Wilber, Charles G.	Ph.D.	1180	Winslow, Alice	B.S.	2160
Wilbur, J. S.	M.A.	4020 I	Winston, A. A.	B.S.	1240
Wilbur, Paul C.		1160	Wintenberg,	A.B.	3380
Wilcox, Ethelwyn B.	Ph.D.	4110	Howard D.		
Wilcox, I. L.		3490	Winter, A. R.	Ph.D.	2870
Wilcox, Paul W.	M.S.	3510	Winter, Floyd L.	Ph.D.	320
Wilder, C. J.	M.S.	2910	Winter, James D.	M.S.	2360
Wilder, O. H. M.	Ph.D.	180	Winter, Joseph W.	B.A.	600 G
Wilder, Russell M.	M.D., Ph.D.	2170	Winters, Jet C.	Ph.D.	3890
Wilder, Violet M.	Ph.D.	2680 A	Wintrobe, Maxwell M.	M.D., Ph.D.	4120
Wiles, G. D.	B.S.	80	Winzler, Richard J.	Ph.D.	3620
Wiley, James R.	M.S.A.	3220	Wiseman, H. G.	B.S.	4020 C
Wilgus, H. S.	Ph.D.	770	Wiseman, H. M.		1610
Wilkening, M. C.		3850	Wiseman, Helen	M.A.	2720
Wilkens, Shirley N.	B.S.	1660	Wissman, H. B.	M.B.A.	1940
Wilkins, Walter		1147	Withrow, Alice P.	Ph.D.	3220
Wilkinson, Philip D.		340	Witnah, C. H.	Ph.D.	960
Willaman, J. J.	Ph.D.	4020 F	Witt, N. F.	Ph.D.	780 A
Willard, H. S.	Ph.D.	4530	Wittenberger, W. W.	M.S.	3000
Willett, N. J.	B.A.	80	Witter, J. F.	D.V.M.	2050
Willey, A. R.	Ph.D.	80	Wittle, E. L.		2980
Williams, Delbert		600 B	Witzel, Stanley S.	M.S.	4490
Williams, Dorothy E.	Ph.D.	3830	Wobbe, D. E.	Ph.D.	80
Williams, E.		1650	Wodicka, V. O.	M.Sc.	3270
Williams, E. Clifford	Ph.D.	3440	Woehrle, Paul P.		2645

Wolbach, S. Burt	Ph.D.	1440	Yoder, Paul H.		3230
Wolf, D. E.	Ph.D.	2760	Youmans, John B.		1610 A
Wolf, F. A.	Ph.D.	1010	Young, Charlotte M.	Ph.D.	850
Wolf, F. J.	Ph.D.	2260	Young, F. E.	Ph.D.	4020 I
Wolf, M. J.	Ph.D.	4020 G	Young, H. N.		4180
Wolfe, J. Edward	Ph.D.	3510	Young, Helen	M.A.	220
Wolff, E. A.	Ph.D.	2260	Young, Paul T.	Ph.D.	1610
Wolford, E. R.	B.S.	4020 I	Young, William G.	Ph.D.	600
Wolford, Richard W.	M.A.	1150 A	Younkin, Stuart G.	Ph.D.	610
Wolfrom, Melville L.	Ph.D.	2870	Yung, F. D.	M.S.	2680
Wolfson, W. A.	M.D.	1580 FF			
Wollaeger, E. E.	M.D.	2170			
Wolman, Irving J.		1580 J			
Wolterink, Lester L.	Ph.D.	2280	Zaletel, J. N.		1650
Wood, G. B.	Ph.D.	3220	Zambito, A. J.	Ph.D.	2260
Wood, M. N.	B.S.	600 A	Zamecnik, P.		1440
Wood, Marta E.		4010 B	Zanetti, Mary	B.S.	2260 A
Wood, T. R.	Ph.D.	2260	Zehner, Ernest	B.S.	4490
Woodcock, Charles	M.S.	2870	Zellers, Dorothy	B.S.	240
Woodhouse, W. W., Jr.	Ph.D.	2790	Zemplen, Geza	Ph.D.	1270
Woodmansee,	M.Sc.	950	Zentmyer, G. A.	Ph.D.	600 D
Clinton W.			Zerban, F. W.	Ph.D.	2760
Woodroof, J. G.	Ph.D.	1300	Zevin, Solomon S.		4010 B
Woodruff, Calvin	M.D.	4125	Zief, Morris	Ph.D.	4020 F
Woodruff, H. B.	Ph.D.	2260	Ziegler, George E.	Ph.D.	2300
Woodruff, Sybil	Ph.D.	1660	Ziegler, Mildred R.	Ph.D.	2360
Woods, E. A.		680	Ziegler, P. T.	M.S.	3040
Woods, Ella	Ph.D.	1590	Ziskin, D.	D.D.S.	790 A
Woods, Lloyd L.		3390	Zscheile, P. F.		3220
Woody, V.	B.S.	1690	Zucker, L. M.		790 A
Wooley, A. D.		2950	Zucker, Theodore F.		790 A
Wooley, Jerald G.		4040 C	Zuill, Frances	M.A.	4490
Wooley, John C.	M.S.	2390	Zukel, J. W.	Ph.D.	2670
Woolley, D. W.	Ph.D.	3355	Zussman, H. W.	M.S.	60
Woolrich, W. R., Sr.		3890	Zuzuki, H. K.		2830
Woolrich, W. R., Jr.		3890			
Wooster, H. A., Jr.	Ph.D.	3120 A			
Working, Holbrook	Ph.D.	3700			
Worthington, Oliver J.	Ph.D.	2910			
Worthley, H. N.	Ph.D.	2260			
Wright, Andrew H.	M.S.	4490			
Wright, Howard		2830			
Wright, Lemuel D.	Ph.D.	3510			
Wrigley, P. L.	M.S.	3040			
Wrinkle, Carolyn	B.A.	2870			
Wuest, H. M.		3155			
Wulzen, R.		2910			
Wurtz, Bette	B.S.	2260			
Wyatt, Patricia	B.S.	2280			
Wyn garden, Herman J.	Ph.D.	2280			
Wynn, Winfrew	M.A.	1070			
Wynne, E.	M.S.	1060			
Wynne, E. Staten	M.A.	3890			
Wyss, A. P.	Ph.D.	780			
Wyss, Orville	Ph.D.	3890			

X

Xezones, Helen	B.S.	1490

Y

Yamaguchi, Mas	B.S.	600
Yamazaki, William T.	M.S.	4020 E
Yang, Ho-Ya	Ph.D.	2910
Yarnell, S. H.	Ph.D.	3850
Yaverbaum, A.	B.S.	3690
Yoder, L.		1650

Projects Received Too Late For Classification

<u>Number</u>	<u>Laboratories</u>	<u>Supporting Organization</u>
Role of carbohydrate in infant feeding, with special reference to respiratory quotient.	530	
Metabolism and disposal of casein administered intravenously.	530	
Conversion of carotene to vitamin A.	1580-E	2725
Improved absorption of vitamin A in infants by administering water soluble vitamin A. (Aqueous dispersion.)	1580-E	1080
Administration of water soluble absorbable vitamin A to patients having vitamin A deficiency - skin conditions.	1580-E	
The degree of vitamin A transfer that takes place from the pregnant mother to the newborn.	1580-E	
Vitamin A storage after thyroidectomy.	1580-E	
Bone composition; influence of calcium, phosphorus and vitamin D of the diet on the crystalline structure of the bone.	1580-E	3155
Composition of enamel and dentine of teeth during active growth influenced by the diet.	1580-E	
Relationship between glucose levels and citric acid levels in the normal human.	1580-E	
Difference between raw and pasteurized milk. Factor destroyed during pasteurization which is necessary to utilize the natural sugar of milk.	1580-E	
Western fruits and vegetables and their by-products: chemistry, technology, processing, and utilization.	4020-A	
New and improved uses of citrus fruits.	4020-A	
Chemistry of the volatile flavoring constituents of grapefruit juices.	4020-A	
Fate of citrate in complete blood exchange of children Rh positive and mothers Rh negative.	1580-E	
Vitamin A - new method using activated glycerol dichlorohydrin for serum levels of vitamin A.	1580-E	
Penicillin preparations which will prolong levels of penicillin in blood.	1580-E	
Magnesium levels in relationship to disease.	1580-E	
Levels of various factors in newborn children.	1580-E	
Effect of nutritive deficiencies on the endocrine system.	4120	
The role of choline as a source of labile methyl groups in detoxification mechanisms.	2910	
The availability of l (-) and d (+) tyrosine as a partial replacement for phenylalanine in the rat.	2910	
A comparison of the growth rates of rats when fed amino acid mixtures and native protein.	2910	
Trace elements in nutrition.	2910	
Relationships between vitamins and amino acids.	2910	
Blanching and defrosting foods with electrical energy.	2910	
Sterilization with electrical energy.	2910	
The use of mycostatic and bactericidal agents and refrigeration for the preservation of certain perishable products and beverages in refrigerated warehouse storage.	2910	
Development of new methods of food preservation.	2910	
Freezing bush varieties of snap beans.	2910	
Tomato varieties for canning.	2910	
Investigations on the production of methane gas from food processing waste.	2910	
Water-vapor permeability of frozen food packing materials and containers.	2910	
New varieties of berries for freezing and canning.	2910	
Study of dehydrated apples.	2910	

Projects Received Too Late For Classification

<u>Number</u>	<u>Laboratories</u>	<u>Supporting Organization</u>
The influence of various production and processing factors on the behavior of fats and oils when used in food products. Study includes the effect of: pH of batter or dough, surface active agents, oxidizing and reducing substances, fat composition.	2910	
Quality and palatability of meats as affected by freezing storage.	2910	
Standardization of food-scoring methods.	2910	
The antioxidant effect of edible flours derived from oil press cakes in fat-containing food mixtures.	2910	
Some factors affecting the quality of cakes made with fat.	2910	
A study of the relation of the viscosity of the batter and of the pH of the batter to (1) Heat penetrations in the batter, (2) Volume and quality of finished cakes.	2910	
The relationship between nutrition and dental caries.	2910	
Antibody response in patients with hypoproteinemia with special reference to the effect of protein hydrolysate supplementation.	1580	

Personnel Received Too Late For Listing

Adams, L. Ashby	M.D.	1580	Lindsay, Rex D.	B.S.	2910
Bubl, E. C.	M.S.	2910	Locher, Leonor	B.S.	2910
Butts, Joseph H.	Ph.D.	2910	Loewe, Leo	M.D.	1580-E
Case, Arthur C.	B.S.	2910	Lorant, George	M.S.	2910
Chapman, Eugene	M.D.	4120	Lorant, Jean	M.S.	2910
Charley, Helen	M.S.	2910	Miller, Ruth	B.S.	2910
Christensen, Bert E.	Ph.D.	2910	Naff, Benton H.	M.S.	2910
Clough, Josephine		1580	Nieisen, B. W.	B.S.	4020-A
Copson, G. O.	M.S.	2910	Nishi, H. H.	B.S.	2910
Crane, Herbert O.	M.S.	570	Nitchals, Ruth	M.S.	2910
Dally, Wallace	M.D.	4120	Niven, Tom	Ph.D.	2910
Davey, Bessie	M.S.	2910	Oliver, A. W.	M.S.	2910
Davis, W. B.	Ph.D.	4020-A	Orange, Michael	M.D.	1580-E
Devlin, K. A.	B.S.	2910	Parsons, Eleanor J.	B.S.	2910
Fankuchen, I.		3155	Raybin, Viola T.	M.D.	1580-E
Fels, Gordon	M.S.	2910	Robinson, Una		3210-C
Fox, Margaret M.	B.S.	4020-A	Rose, S. Brandt	M.D.	1580
Francis, Moses	M.D.	1580	Sather, Lois	B.S.	2910
Gittleman, Isaac F.	M.D.	1580-E	Snow, S. D.	B.S.	1580-E
Goldthorpe, Harold C.	Ph.D.	4120	Sullivan, June	M.S.	2910
Hadjimarkos, D.	D.D.S.	2910	Sweeny, Betty	B.S.	2910
Harvey, T. S.	M.S.	1580	Thompson, Ethel M.	Ph.D.	260
Hirschman, A.		1970	Tippit, Doris	B.S.	4120
Johnson, George		4120	Underwood, J. C.	Ph.D.	4020-A
Jones, J. S.	M.S.A.	2910	Walzer, A.	M.D.	1580-E
Keller, G. W.		4020-A	Welmar, Virginia	M.S.	2910
King, T. E.	M.S.	2910	Werbin, H.	M.Sc.	1580-E
Kirchner, J. G.	Ph.D.	4020-A	Wexler, A. E.	Dr.	1580-E
Kissen, B.	M.D.	1580-E	Wiener, Alexander	M.D.	1580-E
Labbe, Robert F.	B.S.	2910	Wohl, Michael G.	M.D.	1580
Lambrecht, W. A.	M.S.	2910	Young, Clara	B.S.	2910
Li, Jerome C. R.	Ph.D.	2910			

SUBJECT INDEX

Subject Index

Letters Refer To Sections*, Numbers Refer to Projects.

A

- Abnormalities**
in offspring in relation to maternal diet, P 64
- Abortion**
recurrent, nutrition in, P 62
value of vitamin E and progesterone in, P 866
- Absorption**
carotene from mineral oil, C 150
carotene, in animal organism, C 142
fat, effect of addition of monoglycerides and/or free fatty acids, P 440
vitamin A from mineral oil, C 150
vitamin A, in animal organism, C 142
following anastomatic operations of gastro-intestinal tract, P 1099
in operations, P 1100
in pancreatic fibrosis, P 1100
in sprue, P 1099
- Acceptance**
of food, Ps 1, Ps 16, Ps 17
by the aged, Ps 50
by consumer, of "main dish" in school lunches, Ps 13
by high school students, and adult extension groups, Ps 47
by population groups in Florida, Ps 28
by population groups in Rhode Island, Ps 32
by population groups in South Carolina, Ps 33
effect of food constituents on, Ps 12
effect of preparation on, C 914
in animals, review of psychological literature, Ps 6
in large scale feeding establishments, Ps 14
related to spoilage, Ps 18, Ps 19
under emotional stress, Ps 44
under physiological stress, Ps 36
of protein fortified candy bars, C 1080
of protein fortified hospital diets, Ps 15
- Acetaldehyde**
metabolism, role of diet, P 358
- Acetates**
in carbon metabolism, P 364
in synthesis of certain body constituents, P 361
- Acetic Acid**
formation by yeast, B 213
in intermediary metabolism, P 357
- Acetoin***
role in pyruvate metabolism, P 354, P 355
- Acetylcholine**
formation, relation to choline intake, P 557
relation to pantothenic acid intake, P 557
- Achromotrichia**
relation to pantothenic acid, P 838
- Acid (see also specific acids)**
dilute, treatment of inexpensive foods to improve digestibility, P 119
organisms in saliva, P 961, P 967
- Acid-base Balance**
significance of parathyroid, P 792
significance of plasma calcium in, P 792
- Adenine-pentose-phosphate**
from oats, isolation of, C 471
from soybeans, isolation of, C 455
- Addison's Disease**, P 867
- Adenosinetriphosphate**
in cell metabolism, P 362
in sea urchin muscle, P 363
preparation by phosphorylation of adenosine, C 25
- Adolescent**
ascorbic acid requirement for, P 86
iron requirements for girls, P 20
requirements, P 5
- Adrenal**
cortex activity related to riboflavin and pantothenic acid, P 543
cortex function, related to cold acclimatization, P 588
cortex relation of pantothenic acid deficiency to, P 771, P 772
glands, enzyme systems in, P 635
metabolism, translation of the more obscure foreign literature on, Ps 72
- Adrenalin**
dual influence with ascorbic acid, P 667
- Adrenalectomized Rats**
pantothenic acid necessary for survival, P 772
- Adrenalectomy**
carbohydrate metabolism and lymphocytic response to, P 772
- Adsorption**
chromatographic, C 86
- Agar-agar**
from gelidium cartilagineum, Ec 244
- Agava Pulp**
digestibility of, P 1265
- Age**
changes in basal and resting metabolism of various animals, P 156
effect on steroid hormone production in man, P 653
- Aged**
dietary requirements of, P 105
requirements of, vitamins, protein, and minerals, for women, P 108
- Agene**
use in bleaching flour, P 1119 - P 1121
- Age Test**
development and application of, C 73
- Aging (see processing)**

*P-Physiology, C-Chemistry, T-Technology, Ec-Economics, B-Bacteriology, Ps-Psychology

Subject Index

- Agricultural**
 - developments in Latin America, 1939-1948, a book, Ps 70
 - engineering research, Ec 1
 - markets and prices, Ec 249
 - mechanical development, Ec 2
 - resources in a developing economy, Ec 3
 - products, allergens in, P 870
 - enzyme action in storage, C 828
 - quick freezing of, T 448
 - use in candy, Ec 196
- Agriculture**
 - Soviet-Russian, in the interwar period, a book, Ps 81
- Alanine**
 - metabolism in pathological conditions, P 296
- Albumin**
 - human serum, effect on liver disease, P 1048
 - effect on nitrogen balance, P 345
 - for nutritional purposes, P 344
 - in milk whey, isolation of, C 386
- Alcohol**
 - isopropyl, metabolism of, P 378
 - produced by yeast, T 333
 - sugar compounds, C 103
- Alcoholism**
 - vitamin-hormone relationship in, P 868
- Aldehydes**
 - higher fatty, metabolic function of, P 442
- Alfalfa**
 - anti-rachitic value of, C 505
 - breeding and varieties, P 1551, P 1552
 - dehydrated, carotene in, methods of stabilizing, T 320
 - effect of different methods of dehydration and storage on nutritional value for chicks, C 996
 - dehydrators, survey and evaluation of, T 59
 - in relation to Michigan soil types, Ec 57
 - meal, dehydrated, carotene in, C 997
- Alginic Acid**
 - in frozen desserts, C 1165
- Alkaloids**
 - from plants indigenous to Southwest, Ec 242
- Allergens**
 - from agricultural products, P 870
 - histamine antagonists, P 872
 - of cottonseed glands and flour, P 873
- Allergy**
 - benadryl activity, P 869
 - new products for nutrition of patients with, T 349
 - problems with milk, P 871
- Almond**
 - hulls, utilization of, Ec 247
 - tropical, oil from, C 342
 - varieties, new, through breeding, P 1543
- Aluminum**
 - tri-stearate, as a cold test inhibitor, C 55
- Ambulation**
 - with dietary modifications, related to recovery rate of surgical patients, P 1096
- Amino Acid(s)**, B 126, B 127, C 32, C 81
 - added to meat, C 1087
 - analysis of broilers for ten essential, C 615
- Amino Acid(s)**
 - analysis of market turkeys for ten essential, C 615
 - antagonistic effects in nutrition, P 762
 - assay methods, C 31, C 35
 - adsorption, C 39
 - colorimetric, C 374
 - development of procedures, C 127
 - for specific, C 37
 - infra-red, C 48
 - rapid, C 36
 - bio-assays for, B 128, B 129
 - biosynthesis, using isotopes, P 219
 - with aid of induced mutant strains of micro-organisms, P 308
 - complex ions of, C 49
 - composition of proteins, C 10
 - crystalline, from distillery by-products, C 46
 - crystals in pharmaceutical preparations, C 45
 - deficiency, P 811
 - and excesses, effect of specific on incidence of induced cancer, P 910
 - effect of single, P 810
 - effect on blood and tissue proteins, P 809
 - in yeast proteins, P 268
 - ocular changes in, P 812
 - dicarboxylic, in beef muscle protein, C 380
 - effect on nitrogen balance, P 297
 - effect on viral resistance, P 1031
 - essential, concurrent feeding, advantage, P 285
 - in distiller's dried solubles for enrichment of foods, C 1090
 - in food and feeds, C 375
 - in varieties of soybeans, C 390
 - relation to vitamins, P 756
 - possible relation to vitamin A function, P 745, P 746
 - requirements for poultry, P 1413
 - nine, for tissue synthesis, P 238
 - utilization in tissue synthesis, P 673
 - from casein, utilization of, P 188
 - from distiller's dried solubles for enrichment of food, C 46
 - from distiller's dried solubles for pharmaceutical products, C 46
 - from fish protein, preparation and fractionation, C 366
 - hydro constituents in proteins, chemical reactions due to, C 23
 - hydroxy, in feed proteins, C 383
 - in milk proteins, C 383
 - identification of reaction products of, C 51
 - in animal protein, availability of, C 389
 - in animal tissue, P 671
 - in biological fluids, P 279, P 304
 - in blood, changes following protein injection, P 711
 - in blood, on rigidly controlled diets, P 283
 - in blood plasma, P 710
 - in blood and urine in idiopathic hypoproteinemia, P 1018
 - in blood and urine of rats developing liver tumors, P 935

Subject Index

Amino Acid(s)

- in body fluids, in body tissues, P 304
- in cells and extra-cellular fluids, P 672
- in cereal proteins, P 256, C 400
- in cereals, manufactured, effect of processing on, C 1073
- in chicken flesh, C 382.
- in citrus seed meal, Ec 229
- in diet, relation to metal poisoning, P 1132
- liquid, for nephrosis, P 1062
- purified, antagonistic effects of excess, P 740
- in disease, variation of level, P 813
- in feedstuffs, C 520
- in food products of a large meat packing business, C 363
- in food proteins, quantitative determination of, C 268
- in foodstuffs, natural, C 374
- in fruits and vegetables, C 414
- in infant nutrition, P 84
- in insect control, Ec 107
- in liver, pork, dried extracted, C 356
- in meat, by new microbiological methods, C 378
- in meat and meat products, C 379
- in meat, canned, for children, effect of processing, C 884
- in meat cuts, fresh and cooked, C 381
- in milk, cow's, C 385
- evaporated, C 968
- human, C 385
- powdered, C 968
- in milk products, C 385
- in nutrition of lactobacilli, P 671
- in parenteral feeding as exclusive source of protein, P 174
- short time feeding, P 100
- in pasture grass, C 510
- in peanut proteins, by newer micro methods, C 456
- in plant and animal products, B 97
- in pork, lean trimmings, effect of dehydration, autoclaving and boiling, C 983
- in protein, determination by gasometric ninhydrin procedure, C 34
- methods for determining, B 138
- in steepwater liquor, B 108
- in sweet potato meal, Ec 208
- in urine, on rigidly controlled diets, P 283
- in vegetable protein, C 389
- in vegetables, C 428
- in wheat, microbiological assay of, C 671
- relationship of environment to quantity of, C 671
- relationship of variety to quantity of, C 671
- in wheat proteins, C 491
- in yeast nutrition, B 215
- in zein, B 108
- interrelations, P 763
- with vitamins, P 761
- with vitamins and other nutrients, P 764
- intravenous feeding, P 334, P 337
- isolation of reaction products, C 51
- isotope studies, P 287
- liberated in ripening of Cheddar cheese, C 1053

Amino Acid(s)

- lipids from, P 411
- lipotropic action, P 392
- metabolism by genus *Proteus*, B 105
- in unicellular organisms, P 763
- of, P 277, P 278, P 279, P 281, P 282, P 288, P 290, P 292, P 293, P 296, P 297, P 298, P 300, P 302, P 303
- microbiological assay of, B 130, B 131, B 132, B 134, B 135, B 136, B 140, B 158, C 374
- mixtures, evaluation of, P 317
- separation by chromatographic adsorption C 40
- naturally occurring, synthesis of, P 314
- not occurring in nature, synthesis of and nutritional effect, P 305
- synthesis, reactions leading to, P 307
- nutrition of farm animals, P 1270
- optically active, synthesis of, C 42
- physical properties of, C 33
- physiological effect of specific, P 748
- preparation and evaluation by chemical and biological tests, C 11
- preparations, effect of rate of administration, P 341
- preparations for administration of, T 359
- purification of, C 41
- purified, as supplements to natural proteins, T 348
- racemic, synthesis of, C 42
- reactions with carbohydrates, stability of foods, C 708
- relation to, choline deficiency, P 755
- growth, P 294, P 223
- growth of strains of *Neurospora*, B 93
- menstrual disorders and deficiency spermatogenesis, P 1056
- niacin synthesis, P 747
- protein synthesis, P 672
- requirements for chickens, P 1423
- dog, P 43
- health and disease, P 8
- laying hens, P 1420
- man, P 7
- microorganisms, B 97
- poultry, P 1413, P 1418, P 1424
- poultry for growth, P 1439
- turkey poults, P 1419
- role of individual, P 25
- role in organism, P 286
- sparing effects of vitamin E on, P 760
- sulphur containing, P 289
- bacterial metabolism of, B 141
- chemical and nutritive properties, C 50
- effect on hormonal relationships, P 297
- effect on specific organs, P 297
- growth promoting values of, C 50
- in metabolism, C 50
- in proteins, chemical reactions due to, C 23
- nutritive properties of, C 50
- shortage of, in milk proteins, P 233
- supplements, effect on protein utilization, P 250
- for diet, P 324, P 330, P 331

Subject Index

Amino Acid(s)

- for infant nutrition, P 75
- for meat protein, C 1037
- for pea protein diets, P 254
- synergistic effects in nutrition, P 762
- synthesis, C 41
 - by intestinal bacteria in rat, B 181
 - in living organisms, B 109
- therapy, P 297
- toxicity of non-essential, P 763
- urinary excretion, P 280, P 282, P 283, P 284, P 299
 - of normal males and females, P 284
- utilization, P 198, T 351
 - in health and disease, P 332
 - in relation to appetite, to convalescence, to tissue synthesis, P 333

Amino-Sugar Systems

- models for carbohydrate interaction, C 710

Amylases

- in cereal grains, C 463
- in wheat kernel, changes during growth, C 476

Amylopectin

- fraction of starch, split by enzymes, C 110

Anacaquita Seed Oil, C 342

Analogues

- biotin, as potential antagonists, P 736
 - synthesis and effects, P 564
- pyridoxine, anti-vitamin effects of, P 734
- thiamine, anti-vitamin effects of, P 734

Anaphylactic Shock

- effect of rutin, P 606
- susceptibility, relation of nutrition to, P 874

Androgens

- with estrogens, use in metabolic disturbances, P 656

Anemia

- antiaactivity of newer vitamin B complex numbers, P 566
- antianemic substances from liver, C 180
- experimental, free and conjugated folic acid in prevention of, P 881
- folic acid treatment of, P 13
- hypoprotein, protein, intravenous for, P 880
- in trout, cause and cure, Ec 148
- iron absorption in, P 877
- macrocytic and vitamin B complex, P 875
- macrocytic, folic acid treatment of, P 876
- megaloblastic, infantile, relation to certain synthetic milk products, P 878
- microcytic iron deficiency, folic acid in, P 881
- pyridoxine for, T 326
- nutritional in man, P 875
- nutritional macrocytic, P 13
- pernicious, antipernicious activity of liver extract, C 179
 - effectiveness of folic acid, P 879
 - metabolism defects in, P 566
 - response to pteroylglutamic acid, vitamin M group and various liver fractions, P 565

Animal(s)

- farm, effect of goitrogenic thiopyrimidine on weight gain, T 369
- fats, composition of, C 327
 - nutritive value of, C 346
- feeds from vegetable wastes, Ec 205

Animal(s)

- phosphorus in feeds, C 568
- microorganism, Tetrahymena, C 200
- nutrition and feeding tests, on all types, T 243
- organisms, unicellular, vitamin requirements of, B 120
- products, nutritive value of proteins in, C 377
- protein concentrates to supplement vegetable proteins, P 255, P 260
 - factor, assays, P 615
 - to supplement soya products, P 260
- tissues, raw, process for dessication and defatting, T 406

Analogues of Pyridoxine, P 736

Analogues of Thiamine, P 736

Anoxia

- riboflavin deficiency in, P 833

Antagonistic

- effects of excesses of single amino acids in purified diets, P 740

Antagonists

- metabolic, P 725
 - isotope tracer studies, P 726
- molecular isosterism of, P 730
- of phenylalanine, P 733
- of pteroylglutamic acid, P 737
 - effect on deficiency, P 738
- of pyridoxine (desoxypyridoxine), effect on circulating antibodies, lymphoid tissue and serum proteins, P 735
- of thiamine, P 733
- of vitamin A, new, possible, P 733

Anti Amino Acids, P 741

Antibacterial

- action of inactivated ergosterol, B 241
- agents, B 496
 - action on growth and respiration of food spoilage organisms, B 242
 - mechanism of action, B 242

Antibiotics, B 231

- active plant and animal pathogens, B 237
- effect of penicillin on bacteria of milk, B 236
- finding new, B 234
- in foods, physiological effect and effect on nutritive values, B 240
- in normal and protein depleted animals, P 188
- manufacture from yeast extracts, B 238
- production of, B 233
 - as a therapeutic agent, T 328

Antigens

- chemistry of, P 712

Antimetabolites

- in tissue synthesis, study with isotopes, P 726
- microbiological studies of, B 157

Antioxidants, C 1124, C 1125

- effect on apples, peeled prior to canning, T 389
- effect on carotenoid retention in stored dehydrated carrots, C 1133
- effect on milk and milk products, C 1129
- effect on hydrogenated shortenings, C 1120
- effect on oils, C 744

Subject Index

Antioxidants

- effect on stability and utilization of vitamin A, P 511
- for animal fats, C 1117
- for butterscotch, C 1132
- for fats and oils, C 1126
- for food products, C 1176
- for food protection of vitamin A, C 1128
- for foods, C 1113
- for lard, improved preservation of, C 1118
- for meat, frozen sausage, control of rancidity in, C 1130
- for meats, C 1117
 - frozen, to prolong storage life, C 1119
- for nut products, to prolong life of, C 1119
- for pie crust mix, C 1123
- for potato chips, C 1121
- from plants indigenous to the Southwest, Ec 242
- in food products, C 1176
- metabolic functions of, P 596
- organic acids and their esters as, for meat fats and vegetable oils, C 1122

Antirachitic Value of Alfalfa, C 505

Antistaling

- agents in foods, esters of sorbitan and fatty acids as, C 1168

Antistiffness Factor, P 617, P 618, P 619

Antithiamine

- activity of plant materials, P 732

Antitubercular compounds, B 235

Antivitamins

- effect on blood, glycosuria, nitrogen balance and weight of depancreatized dogs, P 731
- effects of thiamine and pyridoxine analogues, P 734
- microbiological assay of, B 158
- molecular isosterism of, P 730

Appetite

- and intestinal flora, utilization of proteins correlated with, Ps 22
- and palatability, analysis of laboratory data on, Ps 6
- depressants, in relation to ration acceptability, Ps 37
- depressants and stimulants, mechanism of action, Ps 35
- effect of acuity of sense of smell, Ps 20
- effect of amino acid utilization, P 333, P 338
- effect of environmental and chemical factors on, Ps 35
- effect of estrogens and thyroid to, P 637
- effect of intravenous alimentation, P 338
- levels of food consumption in Iowa, Ps 25
 - in South Carolina, Ps 24
 - in Vermont, Ps 25
- mechanisms as determined by nutrition, Ps 21
- physiology of, Ps 2

Apple(s)

- ascorbic acid in, C 418, C 876
 - effect of ripening, storage and handling methods on, C 795
- canning methods for summer, T 389
- carbon dioxide prestorage treatment, C 1148
- carotene in, C 876
- dehydrated, improved methods, C 903

Apple(s)

- effect of fertilizers on yield, and quality of, Ec 61
- effect of refrigeration, ripening and handling methods on vitamin content of midwest varieties, C 871
- effect of soil covers on yield and quality of, Ec 61
- fertilizer, experiments with, Ec 60
- freezing of, T 462
- frozen, in bakery products, factors affecting quality, T 463
 - prevention of discoloration in, C 872, T 78
- in frozen pies, preservation of color and flavor, C 873
 - use of summer, Ec 194
- juice, improvement of processing methods, T 177
 - clarification and sterilization, B 79
 - concentrated, methods of preparing, T 178
- methods of processing McIntosh, T 464
- potassium needs of, C 583
- products, nutritive value of, C 417
 - use in confections, Ec 192
- products and concentrates, utilization of, Ec 191
- sirup, concentrated, methods of preparing, T 178
- sliced, prefreezing treatment of, T 465
- stored, action of food effluents on, C 765
 - effect of seasonal variations in rate of transpiration, C 797
- factors affecting keeping quality, C 796
- trees, soil covers in, Ec 63
 - growth and fruiting, effect of soil management practices on, Ec 62
- varieties, new, through breeding, P 1521, P 1525, P 1526
- vitamin B in, C 418
- waste products, salvage for useful by-products, Ec 192

Apricots

- canning of, T 386
- dried, browning of, C 717
- freezing of, T 457
- frozen, effect of various sugars on preserving qualities of, T 487
- packaging of whole untreated for freezing, T 457
- prefreezing treatment, C 1020
- varieties, new, through breeding, P 1521, P 1532

Army Rations

- chemical composition of, C 260
- effect on growth of experimental animals, P 131
- loss of B vitamins during cooking of meat in, C 929
- loss of thiamine during cooking of meat and potatoes together, C 931
- nutritional value of, C 259
- subsistence, fed at adequate and inadequate levels, nutritive value of, P 1220
- vitamin content of, C 260

Arsenicals

- organic, growth stimulating properties of for poultry, P 622

Arterial Disease

- relation of diet to, P 1149
- relation of diet and renal insufficiency to, P 1151

Arteriosclerosis

- experimental, cholesterol, P 1154
- experimental production of, P 982
- and hypertension, relation of dietary history and habits, P 1164
- relation of lipocaic and fat metabolism in diabetes, P 1153

Ascorbic Acid

- analysis in presence of diketogulonic acid and dehydroascorbic acid, C 184
- biochemical study, P 583
- biological method, C 183
- biosynthesis, effect of diet, P 585
- breeding of cannery tomatoes for higher content of, C 657
- browning, cause and prevention of, C 716
- carbohydrate type compounds related to, C 185
- chemical method for, C 183
- conservation of, in Ohio grown foods, C 412
- deficiency, ascorbic acid therapy for, P 822
- carbohydrate metabolism in, P 851
- effect of collagen stimulating substances, P 852
- effect on connective tissue, P 850
- in arthritides, chronic wasting, heart disease, metabolic disturbances, P 802
- dehydro, analysis of processed foods for, C 184
- in cantaloupes, changes in, due to standing, C 794
- in potatoes, effect of storage temperature on, C 802
- utilization of, P 578
- dual influence with adrenalin, P 667
- effect of age on requirement, P 19
- effect of quantity cookery, C 923
- effect of temperature on requirement, P 19
- effect of type of diet on requirement, P 19
- effect of weight, on requirement, P 19
- effect on albuminuria in nephritis, P 1063
- effect on amylolytic enzymes of barley, C 210
- effect on amylolytic enzymes of malt, C 210
- excretion of, by college women on self selected diets, P 541
- relation to that of creatinine and ribo-flavin, P 754
- for aging women, P 108
- d-iso, in canned foods, C 886
- in frozen foods, C 886
- in apples, C 876
- edible parts, C 418
- effect of ripening, storage and handling methods on, C 795
- in apricots, C 424
- in beans, lima fresh, cooked, and canned, retention of, C 897
- in beans, snap, fresh, dehydrated and stored, C 984

Ascorbic Acid

- in berries, frozen factors affecting, C 1021
- in blackberries, commercially canned, and home canned, C 901
- in blood, effect of salicylates, P 586
- effect of therapy on, P 688
- of college girls, P 577
- in blood plasma, influence of factors other than diet, P 689
- in cabbage, cooked, C 941
- fresh, C 941
- raw and cooked, C 944
- in cannery tomatoes, relation of maturity to, C 697
- in cantaloupes, changes due to standing, C 794
- in carrots, effect of different methods of cooking on, C 800
- effect of storage on, C 800
- in cherries, C 876
- in citrus products, factors affecting, C 684
- in cowpeas, cooked, C 942
- fresh, C 942
- raw and cooked, C 944
- in diets, of college women, C 411
- in foods, C 275, C 276
- cooked in institutional equipment, C 940
- frozen, effect of fluctuating storage temperature, C 793
- served in college dining hall, C 277
- stored samples, C 791
- tropical, C 270
- uncommon, by colorimetric method of Roe and Ruether, C 410
- in forages, dehydrated green, C 998
- in fruits and vegetables, effect of cracked ice on retention, Ec 309, Ec 311, Ec 312, Ec 338
- effect of cooking on, C 910
- effect of freezing on, C 910
- effect of reheating on, C 910
- effect of storage on, C 910
- frozen, C 1022, C 1023
- served in dining hall, C 411
- in fruits, frozen, effect of different storage temperature and periods, C 876
- in fruit juices, frozen, changes during storage of, C 875
- in garden vegetables, factors influencing, C 435
- in kale, factors affecting destruction, C 692
- varieties, raw and cooked, C 656
- in leukemia, P 1036
- in lima beans, factors affecting content, C 687
- in Louisiana fruits and vegetables, C 413
- in marmalade, orange, C 905
- in meats, C 876
- frozen, effect of different storage temperatures and periods, C 876
- in milk, market, C 305
- products, factors affecting stability of, C 977
- in mustard greens, C 437
- in nectarines, C 424
- in okra, C 438

Subject Index

Ascorbic Acid

- in peach varieties with high content, C 632
- in peaches, C 878
 - fresh, dehydrated and stored, C 984
- in peas, effect of blanching variables, C 1071
- in pea sprouts, C 398
- in peppers, C 647
- in plantain, C 503
- in plants, effect of electromagnetic radiation on, C 680
- in plant foods, of Puerto Rico, effect of seasonal variation, C 682
- in potatoes, effect of storage temperature on, C 802
 - prepared in different ways, C 945
 - russett Burbank, effect of maturity on, C 695
- in rose hips, Ec 245
- in rutabagas, prepared in various ways, C 945
- in spinach, fresh, cooked, and canned, retention of, C 897
- in sweet potatoes, factors affecting, C 407
 - effect of environment and storage on, C 696
- in sweet potato varieties, factors affecting, C 804, C 805
 - processed, factors affecting, C 808
- in strawberries, C 426, C 876
- in syrup, bland manufacture, Ec 197
- in tomato catsup, preserves and chili sauce, C 905
- in tomatoes, C 446, C 898
 - commercially canned, C 901
 - home canned, C 901, C 898
 - store canned, C 898
- in tuberculosis patients, P 1138
- in turnip greens, fresh and cooked, C 944
 - relationship of environment to, C 699
- in vegetables, canned, effect of commercial operations on, C 896
 - dried, C 986
 - factors affecting, C 688
 - frozen, factors affecting, C 1021
 - processed, C 648
- in vegetable varieties, green, effect of freezing, C 639
 - green, treatment for conserving, C 639
- in walnut hulls, Ec 246
- in white potatoes, during refrigeration, C 803
- intake, effect on animal body, P 587
- levels in blood in sprue, P 1091
- literature on, translations, Ps 72
- losses, in manufacture of tomato juice, factors affecting, C 900
- metabolism, P 19, P 575, P 576
 - change associated with exposure to cold, P 588
 - in newborn infants, P 169
 - of women, 50 - 70 years, P 580
 - related to cold acclimatization, P 585
- normal range in blood, P 701
- relation to dietary intake, P 19
- relation to thiamine in metabolism, P 744
- relation to vascular system, P 582
- requirements for children and adolescents, P 86
- research, in food processing, C 1043
- retention in canned citrus products, C 902

Ascorbic Acid

- retention in home canned vegetables, and after 6-12 months storage, C 893
- status of college women, P 579
- synthetic procedure for manufacture of, C 130
- utilization from leafy green vegetables, P 581
- utilization in oxidized and reduced forms, P 744
- utilization of pure, compared to that from food sources, P 584

Aspartic Acid

- relation of rate of administration to nausea, P 341
- relation of rate of administration to urinary wastage of nitrogen, P 341

Assays (See also individual nutrients)

- for animal protein factor, P 615
- microbiological, for niacin, P 548
- for serum iron, P 693
- phenolic bodies, P 206
- protein hydrolyzates by rat growth, P 318, P 319
- rapid, micro, for blood albumin, P 697
- vitamin D2 and D3 methods for detection, P 590

Atherosclerosis

- effect of diets, P 1152, P 1161
- effect of enzymes, tocopherol and thyroid activity, P 1155
- lesions in rat, relation of dietary metabolic and mechanical factors, P 1161
- relation of cholesterol to metabolism in, P 1155

Atomic Explosions

- effect on fishes, Ec 149

Avocado

- breeding for resistance to disease P 1564
- oil, C 342
- pears, biochemical studies of, C 420
- refrigerated storage of, C 874
- storage and handling problems, Ec 320

B

Bacillin and Antibacillin

- new biochemical factors, B 239

Bacon

- canned, bacteriology of, B 51
- curing of, T 150
- curing and smoking of, T 155
- spillage of, causes and prevention, B 50
- storage, moisture losses in storage, T 572

Bacteria

- acetic and lactic acid, of wines, B 216
- as etiologic agents in dental caries, P 960
- Clostridium botulinum in canned meat, B 41
 - in canned bread, B 87, B 88
- ecology in North Dakota soils, B 23
- heat resistance of spores, B 22
- cultures, dried, B 161
 - for developing flavor in bread and cake, B 224
- culture medium from fruit and vegetable wastes, Ec 188

Bacteria

- degradation of food by, B 8
- destruction by sterile lamps, B 183
- destruction by radio-frequencies, B 25
- effect of mycostatic, bactericidal agents and refrigeration on, B 10
- Escherichia coli*, possible resistance development to germicides, B 190
- fermentative, for food preservation, B 220
- vitamin production by, B 228
- growth, unknown factors involved in, B 122
- growth indicator, B 5
- in eggs, frozen whole, B 67
- in food spoilage, B 104
- in ice cream, chocolate and vanilla, B 33
- in milk, relation to farm equipment sanitation, B 185
- in pickling, cause of gaseous fermentation, B 221
- metabolism, effect of specific nutrients, P 816
 - in relation to vitamins, B 109
 - of sulfur containing amino acids, B 141
 - role of pantothenic acid in, B 104
- of colon during intravenous alimentation, P 336
- of foods, related to preservation, B 1
- pathogenic, in frozen foods, B 67
- Pseudomonas putrefaciens*, growth in butter, B 37
- research, B 4
- Salmonella* in poultry and products, B 54
- Salmonella* types and species, B 24
- spores, heat resistant putrefactive, in meat products, B 47
 - putrefactive anaerobic, in meat, prior to heat processing, B 46
- Staphylococcus enterotoxin*, B 39
- Staphylococcus* food poisoning, in relation to meat, B 40
- thermal death time of, B 20
- thermoduric, in raw milk supplies, microscopic detection of, B 28
- tubercle, chemistry of, C 29
- Bactericides and Bacteriostatic Agents, B 243
 - cationic, efficiency and effect of temperature, B 190
 - chlorine dioxide, treatment of vegetable and fruits, C 1140
 - effectiveness of various, B 199, B 200
 - efficiency of, B 182
 - for food sanitation, B 195, B 196
 - for preservation of whole citrus fruits, C 1150
 - new chemicals for use of, Ec 103

Baked Products

- batters, raw, frozen, preparation and storage of, C 834
- leavening agents, applied to, T 274
- methods for determining extraneous material in, C 501
- microbiology of, B 86
- nutritive value of, C 500
- oxidative deterioration of, C 817
- packaging of, T 584
- quality of, factors affecting, C 952
- riboflavin in, factors affecting, C 952

Baked Products

- rope and mold prevention in, C 1161
- shipping containers and folding cartons for, T 569
- soy flours in, T 256
- thiamine in, factors affecting, C 952

Baking

- alpha-amylase in, high level of, T 212
- electronic, T 33
- electronic moisture determination apparatus for, T 43
- enzymes, use in, T 213
- factors involved in, T 87
- flour mixtures, at high altitudes, C 925
- formulas for, commercial, T 86
- industries, use of western wheat varieties in, C 669
- mixes, deterioration of quality, causes and prevention of, T 224
 - development of, improved stability, T 226
- powders, effect of types on chemical reaction of batters and doughs, T 273
- formulation of, T 269
- keeping quality of, T 269
- new, wholesomeness of, T 270
- quick breads, effect on thiamine and riboflavin content, C 952
- use of pan glaze in, T 88
- wheat flour, alpha-amylase in, T 211

Barley

- improvement of by fertilizer treatment, C 585
- investigation of varieties, P 1549
- oxidases in, C 462

Bass

- black, physiology and therapeutics, Ec 143
- sea, abundance, migration, pollution, effect of, Ec 144
- striped, abundance, migration, effect of, pollution, Ec 144

Beans

- breeding of, P 1483, P 1488, P 1491
- dried, conservation of nutritive values of, C 990
- castor, chemical studies of, C 392
- enzyme inhibitors in, P 728
- green, home canned, measurement of heat penetration in, B 72
 - snap, canned at high altitudes, C 924
 - dehydration of, at high altitudes, T 413
- varieties, calcium in, effect of cooking on, C 946
- lima, ascorbic acid retention in fresh cooked, and canned products, C 897
 - carotene retention in fresh, cooked, and canned products, C 897
 - comparison of fresh cooked with canned products prepared for serving, C 897
 - effect of harvest date, variety, storage, and date of planting on vitamin content, C 653
 - frozen, effect of physical and chemical properties on quality of, C 1025
 - factors influencing microbiological numbers in, B 76

Subject Index

Beans

- objective tests for quality, C 434
- nutrient requirement of, Ec 76
- riboflavin in, factors affecting, C 687
- retention in fresh, cooked, and canned products, C 897
- thiamine in, factors affecting, C 687
- retention in fresh, cooked, and canned products, C 897
- vitamins in, factors affecting, C 407
- pinto type, relation of chemical composition to cooking quality, C 651
- relation of locality to cooking quality, C 651
- relation of strain to cooking quality of, C 651
- protein in, C 396
- snap, increased production by applications of hormones and related substances, Ec 114
- increased production by applications of insecticides, Ec 114
- dehydrated and stored, vitamin C in, C 984
- effect of processing on nutritive value, C 1040
- fresh, vitamin C in, C 984
- frozen pack, factors influencing microbiological numbers in, B 76
- string, vitamins in, effect of canning on, C 1017
- effect of quick freezing on, C 1017
- varieties, effect of storage on, C 1065
- vines, dehydrated, as poultry feed, Ec 215

Bee

- keeping, in Wisconsin, Ec 128
- repellent for, Ec 127

Beef

- aging, for freezing, time and temperature factors in, T 443
- effect on palatability, C 351
- connective tissues, chemical, physical and histological characteristics, C 351
- effect of freezing on palatability, C 351
- effect of mechanical treatment, cooking, on palatability, C 351
- effect of pressure canning on palatability of, C 351
- from steers fed different diets, comparison of quality and palatability of, C 608
- frozen, flavor in relation to temperature, C 848
- flavor and tenderness, in relation to duration of storage, C 848
- tenderizing effect influenced by original composition of, C 1008
- tenderness in relation to temperature, C 848
- in storage, action of food effluents on, C 765
- market grades for classifying carcasses, Ec 294
- muscle protein, dicarboxylic amino acid in, C 380
- evaluation of, P 235
- muscles, tenderness of as related to histological characteristics, C 350
- nutritive value, when finished for market, C 607
- palatability of, when finished for market, C 607
- post mortem changes in, C 1060
- relation of feed to the quality of, C 607
- riboflavin in, microbiological assay, B 150
- steaks, frozen, effect of storage time on quality, C 859

Beef

- effect of temperature on quality, C 859
- stew, frozen, improvement of, T 148
- storage, in freezer, changes during, C 850
- effect of air on, C 851
- stability of vitamins in, C 853
- tenderness, effect of "ripening" period on, C 1059

Beer

- brewing, flavor stability and shelf life, T 288
- effect of rubber and plastic materials on, C 1038
- effect of various metals on, C 1034

Beets

- by-products, Ec 212
- pulp, beet top as feed for steers, Ec 213
- sugar, by-products as livestock feed, Ec 214
- by-products, utilization, Ec 211
- effect of potash and magnesium on, C 582
- fertilization of, C 575
- processing, utilization of, Ec 209
- production of seed for hybrid breeding, P 1478

Beetles, nitidulid, control of, Ec 125

Benadryl activity, nature of, P 869

Beriberi, in Bataan Province, C 1093

Berries

- chemical composition of, C 633
- freezing adaptability of, C 633
- frozen, factors affecting ascorbic acid in, C 1021
- factors affecting quality, C 1021

Beta Carotene (See carotene)

Betaine

- a lipotropic factor, P 391

Beverages, T 290

- bacterial degradation of, B 8
- bottled, effect of varying degrees of carbonation, T 84
- carbonated, flavor development, T 293
- improvements in, T 291
- chocolate and coffee concentrates for, T 282
- fruit flavored, powdered, improvement of flavor and air stability, T 289
- gums as dispersing and suspending agents in, C 1171
- in refrigerated storage, use of mycostatic and bactericidal agents in, B 10
- milk base, technological development of, T 98
- non-alcoholic, development of new, T 291
- products for, T 292
- soft, new flavors for, T 294
- nutritional additives for, T 294

Bile

- pigments, methods for determination, P 129
- secretion, effect of lipotropic agents, P 128

Biology

- research on chemical problems related to, C 3

Biotin

- action, mechanism of, P 561, P 563
- analogues as potential antagonists, P 736
- synthesis and effects, P 564
- bound, characterization of compounds containing, C 167
- deficiency, clinical syndromes in man, P 843
- effect of choline intake on, P 787

Subject Index

Biotin

- effect on livers with high cholesterol diets, P 399
- relation to other members of B complex, P 841
- relation to protein level in diet, P 841
- effect, temporary, on deficiency paralysis in dogs, P 1073
- enzymes related to, attempt to identify, P 563
- fixation in liver, P 562
- growth stimulants in microbiological assays for, B 117
- in cheese, by microbiological and biological methods, C 321
- intake, effect on cholesterol in blood, P 787
- interrelation with choline and cholesterol, P 787
- with folic acid, P 570
- metabolism, P 559
 - in man, P 560
 - in rabbit, P 44
- method, for content of foods, C 166
- oxybiotin, studies on, C 168
- relation to carbohydrate metabolism, P 558
- requirement in man, P 17
- role of, P 558
- supplements for reproduction and lactation, P 32
- synthetic procedures for manufacture of, C 130
- therapy for ascending paralysis in dogs, P 842

Birds

- game, nutrition of, P 1456
- migration, relation to lipid metabolism, P 413

Biscuit(s)

- improvement of nutritional value with wheat germ, thiamine and yeast, C 1100
- mixes, T 228, T 232
- unbaked, frozen, storage of, T 494

Biuret reaction

- of proteins in presence of ethylene glycol, C 9
- measurement of amount of copper bound, C 9

Bleaching, C 1136

- agents, economical use of, C 1136
 - for flour, C 1134
- chemical, of vegetable oils, C 1139
- flour, use of gases, C 1135, P 1119, P 1121
- high temperature vacuum, C 1136

Blood

- albumin, human in treatment of disease, P 1058, P 1061
 - rapid micromethod for, P 697
- amino acid in, following protein injection in infants, P 711
- amino nitrogen level, relation to nausea, P 341
- analyses, methods, P 687
- antibodies, effect of desoxypyridoxin, P 735
- antigens, chemistry of, P 712
- ascorbic acid, effect of salicylates, P 586
 - in sprue, P 1091
 - normal range, P 701
 - of college girls, P 577
- cholesterol, effect of biotin in diet, P 787

Blood

- effect of cholesterol in diet, P 787
- effect of diet, P 690
- effect of diet and activity, P 691
- constituents, dietary factors in maintaining level of, P 686
 - in depancreatized dogs, effect of anti-vitamins P 731
- effect of desoxycorticosterone on, P 660
- effect of pork pregnancy disorder on, in rats, P 73
- flow, gastric, in relation to secretion, P 110
- folic acid in, of college women, P 549
- hemoglobin, low, iron therapy for, B 702
 - low, causes of, P 1207
 - normal range, P 701
- pigments, C 360
- rate of regeneration, P 202
- relation of low levels of physical status, P 700
 - synthesis, factors concerned, P 706
 - utilization of protein for formation of, P 699
- histology, P 587
- lactate, pyruvate relation in various physiological and pathological states, P 848
- leucocytes in nutrition and growth, P 707
- leukemic cells in bone marrow, P 714
- niacin content of college women, P 548, P 549
- phenolic bodies in, P 206, P 207
- phosphatase content of preadolescents and adolescents, P 682
- plasma, amino acids in, P 710
 - ascorbic acid, factors affecting, P 689
 - ascorbic acid in high school girls, P 1242
 - human fractions for nutritional purposes, P 344
 - human, glutamic acid in, method for determination, C 38
 - human, injections in hepatitis, P 1049
 - mucoprotein, P 214
 - peptides in intravenous administration, P 340
- protein, effect of chronic loss, P 201
 - exchange with liver, P 709
 - in high school girls, P 1242
 - in neoplastic diseases, P 922
 - regeneration, P 240
 - regeneration, in depleted dogs, P 188
 - synthesis, relation to liver impairment, P 1045
 - techniques for, P 694
 - serum tocopherols, in pregnancy, P 60
- proteins, effect of diet on in newborn calf, P 1308
 - effect of various deficiencies on, P 809
 - regeneration, P 248
 - as measure of nutritive value, P 241
- red cell, chemistry of, P 705
- red cells, factors concerned in production, P 706
 - of preadolescents and adolescents, P 682
- regeneration, P 686
- reticulocyte percent of preadolescents and adolescents, P 682
- riboflavin, related to intake and excretion, P 540
- serum, action on tissue respiration, P 674
 - globulins, P 695
 - human, glutamic acid in, method for determination, C 38

Subject Index

Blood

- human, clinical acceptability of mandelate and caprylate in solutions, P 1125
- iron microbiological method for, P 693
- iron related to dietary intake, P 692
- phosphate, P 488
- polysaccharides, P 695
- potassium in, P 488
- proteins, effect of desoxypyridoxine, P 735
- effect of surgery and intravenous feeding, P 203
- effect of varying amino acid intake in hypoproteinemia, P 1018
- rates of regeneration, P 202
- substitutes, P 684
- sugar levels, P 696
- sugars, techniques for, P 694
- uric acid, effect of sugar alcohols, P 205
- effect of high protein diets, P 205
- vitamin A, effect of subnormal temperature, P 516
- in sprue, P 1091
- of dairy cattle, P 704
- related to intake, P 517
- and carotene, effect of mineral oil, P 513
- normal range, P 701
- vitamin A and vitamin C, effect of therapy, P 688
- vitamin B complex, on restricted intake of B complex and tryptophane, P 823
- vitamin D in dairy cattle, P 703
- volumes in surgical patients, P 685
- white cell formation, relation to nutrients, P 708
- white cells of preadolescents and adolescents, P 682

Blueberries

- consumer preference of, C 419
- freezing qualities of, C 419
- increasing plant stand, P 1536, P 1537
- marketing qualities of, C 419
- varieties, new, through breeding, P 1533
- vitamin content of, effect of canning on, C 1017
- effect of quick freezing on, C 1017

Bone(s)

- analysis, chemical, microscopical and X-ray, P 716
- calcifying factor other than vitamin D, search for, P 620
- development, effect of mineral and vitamin deficiencies, P 859
- of infants and children, optimum vitamin D for, P 85
- effect of diet on response of, to endocrines, P 716
- formation, influence of hormones, P 798
- relation to gastric acidity, P 715
- fractures, healing of, effect of diet, P 883
- healing of, effect of strontium, P 884
- marrow, metabolism, nutritional aspects, P 714
- mineral content, relation of connective tissue, P 587
- phosphate and fluoride metabolism of, P 491

Bone(s)

- physiology of, P 713
- structure, histological, effect of vitamin A, P 820

Bottle

- caps, aluminum, rubber, plastics for, T 546
- testing, T 543

Burns

- juvenile, nitrogen balance during recovery, P 887
- nutritional status in, P 886
- testosterone propionate in treatment, P 885

Brain

- mouse, virus multiplication in poliomyelitis, P 718
- tissue, nutrition, P 717

Brandy

- quality of, effect of grape variety on, C 673
- effect of processing methods on, C 673

Broccoli

- deterioration, Ec 338

Bread(s)

- bacterial cultures for flavor development, B 224
- canned, browning in, C 815
- growth of *Clostridium botulinum* in, B 88
- inoculated with *Clostridium botulinum* spores, B 87
- stability of, C 908
- stability of thiamine chloride and other derivatives in, C 908
- stability of various shortenings in, C 907
- doughs, relation of bromate level and mixing time, C 670
- effect of shortening savers on keeping quality of, 816
- emulsifiers for, C 1167
- enriched, comparison with dried brewer's yeast, for pellagra reduction, C 1089
- nutritious loaf, composition of, C 1099
- nutritious loaf, containing recommended nutritional allowances in relation to calories, C 1098
- nutritious loaf, with calcium lactate, with and without cod liver oil, C 1099
- with non-fat milk solids, C 969
- from whole grain sorghums, T 235
- in storage, physical and chemical changes in, C 815
- manufacture of, on a large scale, T 234
- milk powder for, T 117
- mold development in, time required for, with and without inhibitors, C 1163
- non-yeast, baked, thiamine retention in, C 951
- physical changes during storage, C 815
- polyoxyethylene stearate, for use in, C 1159
- proteins of, C 404
- quick, preparation of, comparison of mixes and standard recipes in, T 230
- unleavened, quality of, riboflavin in, thiamine in, factors affecting, C 952
- rope development, time required for, with and without inhibitors, C 1163
- softeners, effect on properties and keeping qualities, C 1157

Subject Index

- Bread(s)
 - soybean flour added to wheat flour for, T 197
 - stabilizers for, C 1167
 - staling, effect of climatic conditions, C 813
 - inhibition of, C 814
 - products for use in, C 1156
 - retardation of, use of esters of sorbitan monostearate type for, C 1158
 - staling of, C 812
 - role of starch in, C 819
 - supplementary relation in combination with basic foods, C 484
 - tolerance of high percentage of milk solids, T 236
 - unrecognized nutritional factor in, C 498, C 1088
 - white, enriched, availability of the B vitamins and iron in, C 1106
 - yeast leavened, factors affecting staling of, C 818
 - whole wheat, non-fat dry milk solids added, for improvement of protein of, C 1085
 - yeast, quality of, riboflavin in, thiamine in, factors affecting, C 953
- Breed
 - of chickens, effect on vitamin content and quality of eggs, C 627
 - of dairy cows, effect on vitamin A potency of milk and butterfat, C 623
- Breeding, effect on induced cancer in animals, P 915
- Breakfast
 - effect of abstinence on physical performance, P 158
 - effects on midmorning hypoglycemic "lag" in college women, P 159
 - nature of, relation to carbohydrate-thiamine metabolism, P 383
- Broilers
 - amino acids in, C 615
 - effect of feeding on vitamin B content, C 615
- B T C
 - effectiveness as germicide, B 200
- Buckwheat plant
 - rutin content of, factors affecting, C 701
- Brown
 - discoloration, in dairy products, C 719
- Browning
 - of apricots, C 717
 - of ascorbic acid, C 716
 - of dried milk powder, chemical reactions involved in, C 718
 - of dry milk products, chemistry of, C 720
 - of food constituents, chemical factors involved, C 715
 - reaction, C 706
 - fundamental nature of, C 707
 - in foods, as factor in development of color and flavor in, C 714
 - in sugar-amino acid systems, C 709
 - role of hydroxymethylfurfural in, C 713
- Brussel sprouts
 - breeding of, P 1476
- "Burning Feet", syndrome in pantothenic acid deficiency, P 839
- Butter
 - carotene in, C 302, C 315, C 316
 - effect of storage, C 763
 - cost of distribution, Ec 286
 - deterioration, cheesy and putrid defects of, C 762
 - deterioration of, micro-organisms related to, B 36
 - flavor improvement and heat stability, T 131
 - improvement of quality and composition, T 130
 - market qualities of, factors affecting, C 317
 - mold mycelia content of commercial, B 35
 - nutritive value of, C 346
 - summer and winter types, C 605
 - packaging, effect on quality and cost, Ec 286
 - Pseudomonas putrefaciens*, growth in, B 37
 - shipping containers and folding cartons for, T 569
 - standardization of quality and composition, C 313
 - suitable for tropical use, Ec 170
 - versus margarine, comparative nutritive value, P 415
 - comparative stability of vitamin A in, C 761
 - vitamin A activity of, effect of season on, C 608
 - vitamin A in, C 302, C 314, C 316
 - effect of storage, C 763
 - method of estimation, C 333
- Butterfat
 - carotene and vitamin A potency of, C 301
 - cholesterol content of, effect of different breeds of cows and seasons on, C 624
 - cholesterol in, C 289
 - nutritive value of, C 328
 - production, carotene used as a source of vitamin A in, C 596
 - relation of diet to the vitamin A potency of, C 598
 - vitamin A potency, effect of breed on, C 623
 - effect of stage of lactation on, C 623
- Butter oil
 - pure dehydrated, processing of, T 132
 - use for reconstitution of milk with skim milk powder, T 107
- Buttermilk
 - alkalinity of dry solids in, neutralization of, T 402
 - fat analysis, comparison of methods, C 288
 - powder, improvement of, T 105
 - production of spray dried, T 403
- Butterscotch
 - antioxidants to improve shelf life, C 1132
 - packaging of, C 1132
- By-products
 - agricultural, Ec 202
 - value in animal and human nutrition, Ec 167
 - animal, for protein feeds, Ec 174
 - apple waste, salvage of, Ec 192
 - beet utilization, Ec 211, Ec 212, Ec 214
 - distiller's, in rations for cattle, Ec 239
 - for dairy calves, Ec 236 - Ec 238
 - for poultry, Ec 234, Ec 235
 - for swine, Ec 240
 - fish, Ec 177
 - fish cannery waste, Ec 178
 - as feed supplements, Ec 180

Subject Index

By-products

- milk, for poultry feed, Ec 163
- pear, cannery, Ec 198
- sugarcane, wax and fatty, Ec 172
- uses for, Ec 158
 - animal feeds from, Ec 205
- vegetable waste, edible food from, Ec 201
- vitamins from, Ec 203, Ec 204
- yeast, protein feeds from, Ec 241

C

Cabbage

- Chinese, vitamin B₂ in, C 432
- cooked, ascorbic acid in, C 941, C 944
- nutritive value, effect of processing, C 1040
- fresh, ascorbic acid in, C 941, C 944
- varieties, calcium in, effect of cooking, C 946

Cacao

- products, mixture of, sugars in, C 548

Cactus plant

- pectic materials and gums from, Ec 243

Cadmium

- a phosphatase inhibitor in dental caries, P 492

Caffeine

- chemical derivatives of, C 545
- in coffee by solvent methods, C 544
- by sublimation methods, C 543

Cake

- bacterial cultures for flavor development, B 224
- emulsifiers for, C 1167
- fats for, composition of, C 75
- high altitude adjustments for, C 926
- manufacture of, on a large scale, T 234
- mixes, T 229, T 232, T 233
- polyoxyethylene stearate for use in, C 1159
- stabilizers for, C 1167
- unbaked, frozen storage of, T 494

Calcification

- biochemistry and biophysics of, P 452
- decalcification, biochemistry and biophysics of, P 452
- skeletal, relation of citric acid to, P 451

Calcium

- and magnesium intake, effect on digestibility of fat, P 790
- balance studies with calcium citrate, P 458
- caseinate in supplementary diet for malnourished children, P 162
- citrate, calcium balance studies with, P 458
- concentration, effect on protein utilization, P 250
- conservation of in foods, C 412
- d-arabinate from dextrose, C 93
- deposition in arteries, joints, and muscles of guinea pigs, P 618
- effect on inhibition of succinic oxidase system by tocopherol phosphate, P 465
- enriched meat, C 1111
- enrichment of diet, P 143, P 144
- in Alaska field peas, C 452
- in cabbage, effect of cooking on, C 946
- in cane syrups, C 526
- in carrots, varieties, effect of cooking on, C 946
- in dairy products of Northwest area, C 291
- in green beans, varieties, effect of cooking on, C 946
- in hyperthyroid rats, effect of vitamin B complex, P 1102
- in molasses, C 526
- in okra, C 439
- in turnip greens, C 408

Calcium

- metabolism, disturbance, radioactive phosphorus in diagnosis, P 468
 - during intravenous administration, P 336
 - effect of amorphous complex NaPO₃(n) on, P 448
 - in guinea pigs, effect of sterols, P 619
 - inhibiting factors with ample calcium and vitamin D, P 460
 - of adolescent boys, P 463
 - of adolescent girls, P 464
 - possible effect of air temperature, P 459
 - pantothenate, synthetic procedures for manufacture of, C 130
 - phosphate, in soft tissues of herbivora, relation to nutrition and age, P 1282
 - phytate, C 169
 - plasma, significance in acid-base balance, P 792
 - poor foods, relation to growth, P 454
 - relation to phosphorus, vitamin D, and season to reproduction of dairy cattle, P 1286
 - requirements of adolescent girls, P 464
 - for aging women, P 108
 - retention, effect of methyl testosterone, P 659
 - role in calcium balance in lactation of cow, P 1375
 - sequestering compounds for sterilizing food handling equipment, B 197
 - supplements with protein, enrichment of diet, P 143
 - in nutrition of chicken, P 1449
 - utilization, effect of calcium to phosphorus ratio, P 461
 - effect of certain factors on, P 457
 - effect of phytates on radio-active, P 462
 - effect of type of protein, P 791
 - factors which may alter in adult, P 456
 - in humans, effect of certain dietary factors, P 455
 - search for unknown factors enhancing, P 620
- ### Caloric
- deficiency, effect on protein utilization, P 250
 - intake, effect of food dilution in rats, P 133
 - effect on interrelations and dietary requirements, P 729
 - effect on nitrogen metabolism, P 196
 - related to nitrogen requirements, P 335
 - requirement, in parenteral feeding, P 100
 - relation to environment, P 89
 - relation to protein utilization, P 251
 - restriction, effect of refeeding rats, P 134
 - effect on cancer formation, P 909
 - effect on certain infectious diseases, P 1029
 - effect on protein metabolism, P 193, P 197
 - effect on skeletal development, P 135
- ### Calories
- relation to recovery, rate of surgical patients, P 1096
- ### Calorimetry
- human, P 148
 - metabolism and heat loss in hibernation, P 150
 - of men and women, P 149
- ### Calves
- anemia in, P 1373
 - dairy, fats, and oils in nutrition of, P 1271
 - feeding with limited milk, P 1302
 - feeds as milk substitute, P 1305, P 1306
 - distillers' dried solubles in ration for, Ec 236, Ec 237, Ec 238
 - influence of winter rations on growth and fattening, P 1262
 - length of milk feeding periods for, P 1268
 - low percentage in range herds, causes of, Ec 35
 - newborn, effect of diet on blood and tissue proteins, P 1307

Subject Index

Calves

- requirements for, P 1256, P 1257
- vitamin, of, P 1274, P 1255
- utilization of lactose by, P 1273
- vitamin A and D studies, P 1276
- vitamin B complex requirements, P 1279

Cancer

- biochemistry, P 904
- biological and chemical characteristics of mammary, P 930
- blood plasma proteins, electrophoretic studies, in myeloma, P 928
- blood proteins, split products of, P 926
- blood proteose levels, P 927
- cells, chemical processes interfering with metabolism, P 921
- dietary induction of neoplasms, P 907
- effect on intake of radio-active phosphorus by gastric mucosa, P 469
- endocrine aspects of, P 932
- folic acid role in, P 929
- gastric, metabolic studies, P 924
- silent cancer of the stomach, P 925
- induced, attempt to produce by feeding heated fat to rats, P 911
- influence of caloric restriction on, P 909, P 910
- relation of dietary factors, choline deficiency, species, growth, aging and heredity in animals, P 915
- relation of high and low protein, calories and specific amino acids, P 910
- nutritional factors in, P 901, P 902, P 903, P 915
- physiology and chemotherapy of patients with, P 919
- prevention in animals, effect of high sugar and varying protein levels on induced liver cancer, P 905
- spontaneous, in mice fed different diets, P 908
- susceptibility, relation of nutrition in laboratory animals, P 906, P 907, P 908
- tissue, growth in vitro, P 920
- synthesis and degradation of protein, P 923

Candy

- deterioration of, T 588
- manufacture of, reactions involved in heating of sugars and N compounds, C 955
- packaging of, C 760, T 588
- storage life of, T 588
- use of agricultural products in, Ec 196
- use of dairy products in, Ec 162
- vitamin content of and its stability, C 760

Cane Juice

- processing of, ion exchange in, T 80
- value of, C 524

Cane Syrups

- ash constituents in, C 526
- calcium in, C 526
- copper in, C 526
- iron in, C 526
- phosphates in, C 526

Canning

- apples, summer, methods of, T 389
- apricots, T 386

Canning

- aseptic, T 384
 - bacteriological methods for, process evaluation of, B 14
 - cherries, T 386
 - citrus, juice and dry products, problems of, T 389
 - citrus products, loss of vitamin C, C 902
 - compilation of commercial methods of, T 372
 - foods, persistence of DDT and DDD in, C 1144
 - fruits and vegetables, C 644, C 645, T 378, T 381, T 382, T 387
 - effect on vitamin content, C 948
 - green snap beans at high altitudes, C 924
 - home, fruits and vegetables, B 75
 - fruits and vegetables, improved methods for, C 892
 - vitamin losses, C 892
 - meats, B 75
 - methods of, T 479
 - poultry, methods of, T 377
 - problems of, T 376
 - meat, amount of B vitamins retained after, C 885
 - operations, effect on B complex vitamins, C 887
 - meat products, development of processes for, C 888
 - nectarines, T 386
 - operation improvement, T 371
 - peaches, effect on vitamin content, C 894
 - peach varieties, freestone, C 646
 - plums, T 386
 - procedures, relation to microbiological agents of spoilage, B 15
 - processes which retain most food nutrients, T 370
 - steam pressure canners for food sterilization, T 24
 - vegetables, technology of, T 383
- ### Cantaloupes
- ascorbic acid in, changes due to standing, C 794
 - beta carotene in, availability of, P 518
 - dehydro ascorbic acid in, changes due to standing, C 794
 - relation of sugar content, waxing and pre-cooling to market value, Ec 333
- ### Carbohydrate(s)
- and enzyme systems, P 625
 - and fat, relative value in human diets, P 441
 - and protein interconversion, P 773
 - chemistry, C 79, C 81
 - Hudson, C.S., papers, publication of, Ps 66
 - chromatographic adsorption, analysis of, C 67
 - complex, of apple, banana, and pineapple, protein sparing effects, P 797
 - conversion to fat, P 384, P 385, P 386, P 387
 - dismutation, phosphate cycle of, P 365
 - effect of varying amounts on diabetes, P 994
 - from citrus fruits, isolation and identification of, C 421
 - in maize endosperm, effect of genetic character on, C 664
 - interaction, amino-sugar systems, models for, C 710

Subject Index

Carbohydrate(s)

- kojic acid formation from, C 534
- metabolism, in animal tissue, P 368
 - in scorbutic guinea pig, P 851
- purification of enzymes involved in, C 212
- relation of anterior pituitary, P 665
- relation of pantothenic acid and pyridoxine to, P 773
- relation to biotin and pantothenic acid, P 558
- relation to fatty acid metabolism, P 421
- study with carbon isotopes, P 217, P 389
- study with heavy hydrogen, P 390
- metabolism and lymphocytic response to adrenalectomy, P 772
- nutritive value of, C 80
- products, T 246
- ratio to potassium, significance in diet in familial periodic paralysis, P 1074
- reactions in animal tissue, P 353
- reactions with amino acids, inhibition of, C 708
- relation to inositols, P 775
- storage in turnip greens, effect of environment on, C 699
- synthesis, P 347
- synthesis and breakdown, related to tissue metabolism, P 676
- thiamine metabolism, effect of nature of breakfast on, P 383
- type compounds, related to vitamin C, C 185
- utilizable contents of foods, P 346

Carbon

- dioxide, fixation in liver, P 562
- prestorage treatment, for apples, C 1148
- radio-active, in study of iodine metabolism, P 494
 - in study of vitamin A function, P 521
- tagged, use in study of carbohydrate metabolism, P 389

Carboxylases

- oxalacetic, properties and distribution of, C 229

Carcinogenesis

- relation of choline and other dietary factors, P 913
- relation of labile methyl group to neoplasm formation in choline deficient rats, P 916
- steroid metabolism in relation to, P 912

Carcinogens

- effect on amino acid pattern of tissues, P 913
- use of in induction of cancer in rats, effect on liver, P 917

Cardiac

- disease, fat and cholesterol metabolism in, organic, relation of thiamine, P 889
- role of vitamin E in, P 890
- effects of thyroid preparations, P 888
- respiratory response of horses and mules as measure of work capacity, P 1310

Carotene

- absorption, from mineral oil, C 150
- in animal organism, C 142
- as source of vitamin A in production of milk and butterfat, C 596

Carotene

- beta, conversion to vitamin A, en, methods, P 627
 - effect of two isomers upon assay of, C 15
 - in cantaloupe, availability of, P 518
- blood levels, effect of mineral oil, P 513
- related to intake, P 517
- chemical method for the estimation of, in mixed feeds and foods, C 142
- concentrates, process for, T 320
- dry, methods of increasing keeping quality of, C 999
- conversion to vitamin A in animal body, P 508
 - in chicks, relation of thyroid gland, P 510
 - in pregnant rats, relation of thyroid glands, P 508
 - in rat, effect of antithyroid drugs, P 508
 - in rat liver, P 507
- in alfalfa hays, factors affecting, C 506
- in apples, C 876
- in apricots, C 424
- in beans, lima, fresh cooked and canned, retention of, C 897
- in biological materials, chemical method for potency, C 301
- in butter, C 302, C 315, C 316
 - effect of storage on, C 763
- in butterfat, chemical method for potency, C 301
- in carrots, effect of different methods of cooking on, C 800
- effect of storage on, C 800
- extraction of, T 319
- methods for recovery, T 323
- in cheese, C 316
- in cherries, C 876
- in corn silage, factors affecting, C 516
- in dehydrated alfalfa meal, C 997
- in dehydrated green forages, C 998
- in fruits, frozen, effect of different storage temperatures and periods, C 876
- in fruit and vegetable products, C 785
- in fruits and vegetables, C 413
- in kale, factors affecting destruction, C 692
- in meats, C 876
 - frozen, effect of different storage temperatures and periods, C 876
- in milk, C 302
 - chemical methods for potency, C 301
- in nectarines, C 424
- in pasturage, factors affecting, C 507
- in peaches, C 424, C 632, C 876
- in spinach, fresh cooked and canned, retention of, C 897
- in strawberries, C 876
- in sweet potatoes, factors affecting, C 407
- effect of environment and storage on, C 696
- varieties, factors affecting, C 804, C 805
- processed, factors affecting, C 375, C 394, C 442, C 808
- in timothy, factors affecting, C 504
- in tomatoes, cannery, relation of maturity to, C 697
- in turnip greens, relationship of environment to, C 699

Subject Index

Carotene

- in vegetables, dried, C 986
- raw and cooked, P 506
- liver storage, P 506
- losses in silage, C 823
- metabolism, effect of antioxidants on, P 512
- in animal organism, C 142
- intermediary, P 519
- stability, in dried forages, C 517
- in feed supplements, C 824
- transformation to vitamin A, site of, P 509
- utilization, effect of alloxan diabetes, P 987
- efficiency, affected by dietary conditions, C 596
- in animal body, P 505
- in rat, P 506
- in sheep, relation to trace elements, P 1317
- relation of vitamin E, P 742, P 743
- vitamin A balance, P 506

Carotenoids

- in alfalfa, C 997
- in carrots, dehydrated, effect of antioxidants on retention of, C 1133
- in fruits and vegetables, Hawaiian, P 504
- utilization by man, P 504

Carrots

- ascorbic acid in, effect of different methods of cooking, C 800
- effect of storage, C 800
- calcium in, varieties, effect of cooking on, C 946
- carotene in, effect of different methods of cooking, C 800
- effect of storage on, C 800
- improved methods of recovering, T 323
- dehydrated, antioxidants in, retention of carotenoids, C 1133
- pigment degradation during storage of, C 991
- dehydrated and stored, vitamin A in, C 984
- extraction of carotene from, T 319
- nutrient requirements of, Ec 76
- nutritive value of, C 430
- varieties, P 1479, P 1495
- vitamin A in, effect of low temperature on, C 1026
- fresh blanched, C 984

Cartons

- and plates, for pies, T 593
- for margarine, T 568
- paperboard, stiffness of, T 525

Casein

- adhesives, T 280
- biological value, heated and unheated, P 264
- devitaminized, T 357
- evaluation of protein in, P 235
- from milk whey, chemistry and nutritional properties, C 386
- heated, supplemented by lysine or methionine, P 264
- hydrolysis, effect of intravenous feeding, P 188
- hydrolyzate, P 315
- in control of gastric acidity, P 111
- in plasma protein regeneration, P 240

Casein

- in steatorrhea, P 1093
- hydrolyzed, in intravenous administration, P 339
- in control of gastric acidity, P 111
- in general dietary and therapeutic use, T 360
- in infant nutrition, P 84
- in maintenance of nitrogen balance, P 232, P 233
- in steatorrhea, P 1093
- iodinated, supplementing dairy rations, C 599
- effect on growth of pigs, P 1362
- nutritive values of commercial compared with highly purified, P 233
- phosphate group in proteins of, C 23
- proteins, fractionation of, C 14
- tryptic digest of, isolation of two or more labile components of, C 24

Casec

- tolerance in disturbances of fat metabolism in children, P 795

Catalase

- use in food production, with hydrogen peroxide, C 1153

Cataract

- riboflavin deficiency in, P 830

Cathepsin

- from fish flesh, isolation of, C 777
- relation to spoilage of fish, C 777

Cattle

- deficiencies produced by range vegetation Ec 35
- beef, digestibility of roughage, P 1263
- effect of feeding vitamin and hormones, P 1352
- grazing, Ec 26
- progeny performance, P 1246
- steer, influence of phosphorus, P 1290
- utilization of pasturage by, Ec 23
- vitamin A nutrition in Colorado, P 1275
- blood studies of, on different pastures, Ec 31
- dairy, blood and excreta of, P 1264
- breeding experiments, P 1245
- bulls, effect of rations on semen and blood composition, P 1269
- calves, marketing on grade-weight basis, Ec 297
- copper requirements and storage, P 1291
- digestibility of agava pulp, P 1265
- digestibility of rations, P 1260, P 1261
- effect of environment on metabolism and milk production, P 1254, C 595
- effect of nutrition in cow and bull, P 1300
- evaluation of grasses and legumes for feeds for, Ec 27
- feeding, practices, effect on cow and offspring, P 1304, C 513
- health, role of soil fertility on, C 589
- insect pests of, Ec 129
- irrigated pastures, Ec 17
- milk production, effect of method of milking, P 1298
- mineral interrelationships in reproduction, P 1286
- minerals, interrelationship in nutrition, P 1284, P 1285

Subject Index

Cattle

- pasture management for, Ec 29
- reproduction, effect of diet and environment, P 1299
- summer feeding, P 1258
- trace mineral elements in nutrition, P 1293, P 1294
- value of grain during lactation, P 1268
- vitamin A activity of blood, effect of vitamins and minerals, P 704
- vitamin A in colostrum, P 1303
- vitamin D in blood, P 703
- vitamin E nutrition and supplementation, P 1280, P 1281
- winter feeding, P 1259
- diethylstilbestrol function in, P 1356
- feeding, protein supplements for, P 1267
- requirements of cobalt, P 1297
- response to phosphorus in pasture, P 1285
- trials with defluorinated superphosphate, P 1288
- grain silage, in feeding of, Ec 25
- production, improved range practices for increased, Ec 13, Ec 14
- rachitic condition in, P 1376
- reproductive disorders of, P 1370
- supplementary food, distillery wastes for, Ec 239
- supplements, vitamin A concentrates, effect on milk production, C 1081
- supplements, vitamin E effect of, C 600, C 602

Celery

- breeding, for resistance to disease, P 1562

Cellac Syndrome

- and disease, P 896
- associated with pancreatic cystic fibrosis, absorption, and parental injection of fats, P 897
- gastro-intestinal absorption in, P 894
- lipid tolerance in, P 895
- vitamin A absorption and intestinal enzymes in, P 892
- water solubilized, fat soluble vitamins in infants, P 893

Cells

- and intracellular fluids, amino acids in, related to protein synthesis, P 672
- animal, effects of growth deficiencies and stimulants on proliferation, P 29
- effect of growth deficiencies and stimulants on survival, P 29
- requirements of, P 29
- normal and cancerous, chemical processes interfering with metabolism, P 921
- proliferation, function of lipoproteins in, P 680
- respiration and nutritive requirements, P 27

Cellulose

- absorption by intestinal micro-organisms, B 174
- decomposition, extent in various feeds, factors influencing, B 174
- in food products, form of, T 251

Cereal(s)

- breakfast, development of, T 221, T 222

Cereal(s)

- protein qualities of, as related to protein requirements of young adults, C 403
 - containers and cartons for shipping, T 569
 - diets, effect on growth, lactation, longevity, reproduction, P 382
 - effect of cooking on alkali number of, C 954
 - enrichment, nutritional significance of use of, C 1105
 - value of, C 1092, C 1095
 - enrichment with mineral compounds, effect on cooking and rancidity, C 1109
 - with vitamin mixtures, C 1107
 - with vitamins and minerals, C 1104
 - grains, amylases of, C 463
 - proteins in, comparative nutritive value of, C 464
 - vitamin content of, survey, C 465
 - manufactured, amino acids in, effect of processing on, C 1073
 - products, mineral enrichment of, C 1110
 - thiamine in, stability of, C 466
 - proteins, amino acids in, C 400, P 256
 - effect of environment on behavior and composition, C 700
 - effect of milling and manufacturing on, T 215
 - nutritive value, C 395, P 243
 - variety, selection of pedigreed lines, P 1549
- ### Cheese
- analysis of, C 318
 - biochemical change of fats and proteins of, during aging, C 764
 - biotin in, by microbiological and biological methods, C 321
 - carotene in, C 316
 - cheddar, calcium content of, C 291
 - dehydration of, C 981
 - rindless, packaging of, T 564, T 566
 - ripening, amino acids liberated, C 1053
 - control of mold growth in, B 32
 - cooking qualities of, as related to insoluble protein, C 320
 - cottage, calcium content of, C 291
 - improvement of, T 128, T 129
 - nutritive value of, C 322
 - preservation of, B 31
 - cream, factors relating to manufacture of, T 127
 - curing, factors in, T 124
 - mechanism of, T 125
 - farm dairy, C 323
 - fatty acids, volatile in, C 319
 - foreign varieties, manufacture of, T 126
 - improvement of quality and composition, T 130
 - manufacture and utilization of, T 122
 - natural, methods of packaging for retail market, T 565
 - nicotinic acid in, C 321
 - pantothenic acid in, C 321
 - process to lower moisture losses in storage, T 572
 - processed, improvements in, T 95
 - in storage, action of food effluents on, C 765
 - production of improved, T 121

Subject Index

Cheese

- pyridoxin in, C 321
- soft, frozen, T 437
- vitamin A in, C 316

Chemical Warfare Agents

- decontamination, P 1115
- in food and water, toxic effects, P 1114, P 1115

Chemotherapeutic Agents

- nutritional effects of, T 329
- nutritional status improvement to increase tolerance to, P 1116

Cherries

- ascorbic acid in, C 876
- breeding, for resistance to disease, P 1562
- canning of, T 386
- carotene in, C 876
- factors affecting set of, Ec 65
- improved varieties through breeding, P 1521
- maraschino, production of, T 181
- processed, in dry sugar, C 1065
- soil management in orchards, Ec 64

Chicken(s)

- amino acids in flesh of, C 382
- breeding for general farm use, C 625
- breeding for meat and egg laying, C 625
- breeding for superior meat quality, C 626
- canned, effect of new packing procedure on vitamin content, C 889
- niacin in, effect of method of preparation on, C 935
- pterolyglutamic acid in, C 358
- silage for, C 518
- thiamine in, effect of method of preparation on, C 935
- vitamin A in, effect of method of preparation on, C 935

Chicks

- growth factor, new, P 614
- nutritive value of forage crops for, C 512
- nutritive value of cottonseed products for, C 460

Children

- canned meats for, effect of processing on amino acid content, C 884
- comparison of meat and legumes in feeding, P 180
- development of, P 179
- development, publication of data, Ps 58
- diet histories evaluated, Vermont, P 1229
- diets, evaluated, Chicago, P 1227
 - of preschool, minerals and vitamins in, P 1226
- in institutions, effects of liberally adequate, P 183
- in rural South Carolina, related to height and weight, P 1228
- energy expenditure and efficiency in various activities, P 187
- energy requirements of, P 186
- food intake and habits from three months to six years, Ps 46
- growth and development, P 179
- immature, preparations for nutrition of, T 349
- learning ability and thiamine, P 533

Children

- malnourished, use of supplementary liquid diet, P 182
- nutrition of, P 181
- nutritional disturbances associated with disease, P 178
- parenteral amino acids as exclusive source of protein for, P 174
- physical fitness, comparison of Spanish-American and Anglo-American, P 1243
- pre-school, digestion and tolerance of foods considered unsuitable, P 120
- psychological development of, Ps 45
- requirements for at different age periods, P 84
- vitamin A absorption in normal and with cystic fibrosis of pancreas, P 184, P 185
- vitamin requirements, P 86

Chitin

- and glucose amines, P 625
- products, T 368

Chlorine

- dioxide bactericide, treatment of vegetables and fruits, C 1140
- use in food processing, C 1138
- use on commercial scale, C 1141

Chloroform

- toxicity in relation to protein intake and lipotropic substances, P 800

Chocolate

- and products, particle size determination, T 82
- bars, milk, non-melting in hot weather, T 265
 - sweet, packaging, C 760
 - sweet, vitamin content and stability, C 760
- bloom, C 768
- chemical composition of, C 546
- extraction and concentration of, T 282
- fat bloom, nature of, C 758
- fudge, with emulsified cocoa butter, T 264
- industry, nature of operations of, T 82
- like products, uses of, T 267
- milk, improvement of flavor, T 266
- products, effects of stabilizers on, C 1169
 - keeping qualities of, C 757
 - process improvement and development, T 263
- standards for quality control, T 262
- syrup, dry powdered, T 258

Cholecystokinin

- isolation of, C 234

Cholesterol

- dehydrocholesterol-7, synthesis of, C 187
- esterification, P 403
- in atherosclerosis in animals, P 1155
- in blood, effect of diet, P 690
 - and activity, P 691
- in butterfat, C 289
- in butterfat, separated, effect of different breeds of cows and seasons on, C 624
- in dairy products, C 289
- in diet, effect on blood cholesterol, P 787
- in fat, metabolism in cardiac cases, P 891

Subject Index

- Cholesterol**
 in hyperthyroid rats, effect of vitamin B complex, P 1102
 in milk, C 289
 effect of different breeds of cows and seasons on, C 624
 interrelationship with choline and biotin, P 787
 metabolism, P 398, P 399, P 400, P 401, P 403
 using deuterium, P 1155
 methods for estimation, C 289
- Choline**
 a lipotropic factor, P 391, P 414
 availability of, P 536
 deficiency, effect in rats, P 844
 effect on blood and tissue proteins, P 809
 effect on certain infectious diseases, P 1029
 fatty liver effect in guinea pigs, P 845
 in relation to amino acids and vitamins, P 755
 in relation to induced cancer, P 915, P 916
 in relation to other B vitamins, P 847
 phosphorus metabolism in, P 860
 renal damage, P 844
 renal lipids, relation to estrogens, P 846
 tissue lesions in, P 847
 effect on production of cobalt polycythemia, P 1076
 in foods, P 847
 intake, effect on biotin deficiency in rat, P 787
 intake related to tissue and urine content, P 556
 interrelationship with cholesterol and biotin, P 787
 metabolism, P 555
 in relation to methyl linolate, P 847
 in relation to other B vitamins, P 847
 in relation to sulfur amino acids, P 847
 nutritional role, P 555
 preparation of, use in human nutritional deficiencies, T 325
 requirement of poultry, P 1426
 structure, P 554
- Chromium**
 in biological tissues, P 496
- Circulation**
 effects of immobilization, P 152
- Cirrhosis, P 1037**
 adjustment of organism to diet, P 1038
 dietary treatment in, effect of liver extract, P 1050
 treatment with human albumin, P 1058
 utilization of methionine in, P 291
 value of lipotropic therapy in, P 1039
 vitamin A, carotene and fat in, P 1051
- Citric Acid**
 from ion exchange in manufacture of bland syrup, Ec 197
 metabolism, relation of steroid hormone to, P 654
 relation to skeletal calcification, P 451
 production by micro-organisms from cereal grain wastes, B 230
- Citrin**
 effect on capillary permeability, P 608
 in citrus fruits, C 422
- Citrinin**
 structure of, C 193
- Citrus**
 peel, methods of improving quality, T 172, T 174, T 175
 peel paste, manufacture of bland table syrup from, T 173
 peel products, methods of preparing new, T 174
 methods of lowering processing costs, T 175
 peel, washed, as feed protein or cellulose, Ec 228
 products, ascorbic acid in, factors affecting, C 684
 ascorbic acid in less common, C 410
 canned, enrichment by addition of vitamins, C 1084
 canned, retention of vitamin C in, C 902
 for animal feed, Ec 228
 for chemicals, Ec 228
 for human consumption, Ec 228
 process utilizing high vacuum techniques for, T 420
 translation of the more obscure foreign literature on, Ps 72
 pulp, ammoniated, feeding trials and growth studies, Ec 195
 seed meal, amino acid analysis of, Ec 229
 tissues, effect of environment on, C 685
 effect of rootstocks on, C 685
 trees, effect of soil treatment on growth of, Ec 66
- Clam(s)**
 farming, problems in New Jersey, Ec 122
 edible, commercial production and conservation, Ec 153
 toxicity of, due to certain foods in some areas, Ec 150
- Climacteric Syndrome**
 vitamin E in treatment, P 602
- Climatic Conditions**
 physiological effects of, P 95
- Closure of the Public Domain, a book, Ps 82**
- Clover**
 ladino, as a range for growing pullets, Ec 39
 sweet, study of causes of toxicity, P 1552
- Cobalt**
 deficient areas for cattle, P 1295
 growth with aid of, P 486
 in hemoglobin synthesis, P 706
 metabolism in cattle, swine, rabbits, rats, P 1296
 polycythemia, effects of certain amino acids, P 1076
 requirements and functions in livestock rations, P 1297
- Coccarboxylase**
 metabolism in normal and diabetic, P 538
- Cocoa**
 bean, composition of, C 547
 substances related to its color and flavor, C 547

Subject Index

- Cocoa
 - butter, composition, physical properties, C 344
 - concentrates of, water soluble, T 283
 - fats, rancidity in manufacture, methods for control of, C 743
 - flavors, volatile, composition of, C 549
 - with whole milk for malnourished children, P 182
- Cod Liver Oil
 - reference, compared with crystalline vitamin D, P 592
- Coffee
 - caffeine in, by solvent methods, C 544
 - by sublimation methods, C 543
 - chemistry of, C 540
 - composition of, C 542
 - concentrates of, use in beverages, T 282
 - water soluble, T 283
 - extract, dehydration of, T 422
 - flavor, constituents of, C 542
 - isolation of elements, C 85
 - volatile, composition of, C 549
 - powdered, improvement in, T 95
 - processing of, T 421
 - utilizing high vacuum techniques, T 286
 - soluble, T 284
 - identification of flavor and aroma elements, C 541
 - improved methods of manufacture for better quality, T 285
 - prevention of deterioration of quality, T 281
 - tea and cocoa in World War II, a book, Ps 76
- Colic
 - effect of atropine on, in infancy, P 899
 - physiology of gastro-intestinal tract in babies, P 898
- Colitis
 - ulcerative, nutritional relation to cause, P 900
- Collagen
 - properties of, C 22
- Collards
 - factors affecting mineral content, C 433
 - factors affecting mineral and vitamin content of, C 576
 - nutritive value of, C 576
- Colloid
 - exchange between liver and blood, P 709
 - milk as a, C 298
- Colostrum
 - vitamin E potency of, C 601
- Colpidium
 - synthesis of fats in sterile cultures, P 411
- Commodity
 - stockpiling, international, for economic stabilization, a book, Ps 79
- Confections
 - development of new, T 261
 - industry, use of syrups and starches in, T 260
 - nutritional value of, C 539
 - utilization of corn syrup in, T 256
- Consumption
 - economics, Ec 250
- Consumption
 - of flour in U.S. since 1940, a publication, Ps 64
- Container(s)
 - and closure research, T 504
 - for canned foods, materials for, T 519
 - for food, T 498
 - for infant foods, evaluation and improvement, T 576
 - for shipping, fiberboard, T 515
 - for shipping foods, corrugated and folding, T 514
 - gallon size, sectional, for ice cream, T 567
 - glass, corrosion in metal closures for, T 548
 - glass, hermetic and non-hermetic closures for, T 541
 - glass, process requirement for acid and non-acid foods, T 542
 - glass, research on packing in, T 540
 - hermetically sealed, for dried fruits, T 582
 - in relation to bacterial degradation of food, B 8
 - materials and methods for improvement, T 499
 - metal, solubility of tin and iron in, T 520
 - metal foil and glass, for frozen foods, T 544
 - paper, new types of, T 507
 - paraffin and waxes in, T 552
 - shipping, for food products, T 569
 - shipping, for fresh and frozen fish, T 575
 - testing, T 543
- Convalescence
 - acceleration by medical and nutritional methods, P 142
 - in relation to amino acid utilization, P 333
 - nitrogen and vitamin requirements in, P 103
 - protein metabolism in, P 198
- Cookie mixes, T 232
- Cooking
 - at high altitude, processes for, C 924
 - effect on rate of destruction of B vitamins, C 932
 - methods, improved for large scale, C 957
 - new, for cut up turkeys, C 934
 - for retaining nutritive value and palatability of foods, C 915
 - of beef, effect on, C 1060
 - of cabbage varieties, effect on calcium content, C 946
 - of carrot varieties, effect on calcium content, C 946
 - of cereals, effect on alkali number, C 954
 - of eggs, stability of niacin, C 927
 - of food, in institution, equipment and effect on nutritive value, C 913
 - of food specialties, effect on nutritive value, C 912
 - of frozen eggs, T 438
 - of frozen foods, C 917, C 918
 - of frozen meat, C 920, T 438
 - of frozen poultry, T 438
 - of fruits and vegetables, effect on nutritive value, C 947
 - effect on quality, C 947
 - effect on vitamin content, C 948
 - of fruits and vegetables, for freezing, effect on nutritive value, C 1066

Cooking

- of green bean varieties, effect on calcium content, C 946
- of lamb, effect on nutritive value, C 1009
- of pork trimmings, effect of long-time cooking on amino acids, C 983
- of rice, effect on nutritive value, C 950
- of starches, effect on alkali number, C 954
- of variety meat, effect of methods on vitamin retention, C 930
 - effect of methods on B vitamins, C 933
- of various food specialties, effect on nutritive value, C 912
- of vegetables, comparison of methods for vitamin retention, C 938
 - effect on vitamin content, C 1067
- of vegetables, in institution, effect on thiamine content, C 939
- of vegetables, in large quantity, effect on vitamin and mineral content, C 936
- time, pressure, amount of water, effect on vitamin retention, C 922

Copper

- catalysis, factors affecting, C 729
- in cane syrups, C 526
- in feed storage, requirements, function and interrelationships, P 1291
- in hemoglobin synthesis, P 706
- in molasses, C 526

Corn

- bread, enriched, availability of the B vitamins and iron in, C 1106
- breeding, P 1481, P 1483, P 1484, P 1487
- cannery waste, corn starch from, Ec 216
- chemical composition, as related to genetic constitution, C 661
- cobs, ground, utilization as roughage for beef cattle, P 1263
- effect of storage on, C 1065
- factors affecting pantothenic acid and niacin, C 662
- field, grown in South, iron in, C 407
- frozen, quality of objective tests for, C 434
- improvement in dry milling, utilization of products from, T 218
- grits, enriched, availability of the B vitamins and iron in, C 1106
 - enrichment, mixtures of vitamins, C 1107
 - enrichment with vitamins and minerals, C 1104
 - vitamin B values of enriched and unenriched, prepared for eating, C 1002
- insect investigations, Ec 115
- meal, enrichment with dried cultured food yeasts, C 1097, C 1101
 - products, nutrient retention in, C 949
 - products, thiamine content of, C 469
 - vitamin B values of enriched and unenriched, prepared for eating, C 1002
- nutrients of, genetic studies and oxidation procedures, C 114
- nutritive value of, C 529
 - effect of nitrogen levels in soils on, C 577
- nutritive values, as related to genetic constitution, C 661

Corn

- oil, methods of refining, T 67
- oil, in, C 114
- products, development of new, T 242
 - enrichment of, C 1103
- protein, nutritive value of, C 402
 - qualities of, C 401, C 403
- protein in, C 114, C 467
- protein in various portions of, C 468
- relation to pellagra, P 13
- silage as feed for steer, Ec 213
- starch, structure of, C 114
- storage of, C 801
- structure of, C 114
- study of Michigan soil types as related to, Ec 57
- sugars, nutritive value of, C 529
- sweet, breeding of, P 1480, P 1482, P 1485, P 1486
 - dehydrated and stored, vitamin A in, C 984
 - fresh blanched, vitamin A in, C 984
 - ice in marketing, Ec 338
 - niacin in, C 658
 - quality of, C 658
- syrups, in foods, utilization of, T 256
- varieties, niacin in, C 663
- thiamine in, C 663
- vitamins in various portions of, C 468
- white, breeding for high niacin content in, C 660

Corticosterone

- desoxy, effect on blood, muscle, skin, urine of protein depleted animals, P 660

Cost

- comparative, of fresh, frozen, and canned fruits and vegetables, Ec 327
 - of home and commercially frozen fruits and vegetables, Ec 264
 - of home freezing units and commercial lockers, Ec 265

Cottonseed

- as protein supplements in feeds, Ec 219
- flour as protein source, P 261
 - effect on rat growth, P 261
 - gland free, in diet of laying hens, C 621
 - gland free, nutritional properties of, C 461
- glands and flour, allergenic properties, P 873
- meal, gland free, as feed supplement for chickens, P 1414
- meal protein, effect of processing on biologic value, P 257
- oil, hexane extracted, C 336
- oil versus soybean oil salad oil, C 338
- pigment glands, effect on growth of chickens and hatchability of eggs, P 1414
 - effect on growth of rats, P 261
- pigment glands in, C 461
- pigments and pigment glands, toxicity of, P 1111
- products, nutritive value of, for chicks, factors affecting, C 460

Cowpeas

- comparative nutritive value of varieties, C 652

Subject Index

- Cowpeas**
 cooked, ascorbic acid in, C 942, C 944
 fresh, ascorbic acid in, C 942, C 944
 nutritive value of, grown in South, C 397,
 C 407, C 454
 riboflavin in, C 453
- Crab**
 blue, abundance, migration, effect of
 pollution, Ec 144
- Cracker**
 soda, fermentation, B 226
- Cream**
 acidity, neutralization, T 402
 composition of, factors affecting, C 293
 frozen, C 1005
 homogenization of, T 94
 improvement, for manufacturing purposes,
 T 101
 market qualities of, factors affecting, C 293
 mold in, B 35
 quick freezing of, machines for, T 52
 souring of, frozen culture for, T 102
 sterilized, T 96
 sweet, loss of fat in churning and methods
 of control, C 312
 vacreation of, T 94
- Creatine**
 and creatinine, metabolism, P 211
 metabolism, relation to adequacy of protein
 intake, P 173
 metabolism in premature infants, P 173
- Creatinine**
 excretion, relation to that of ascorbic acid
 and riboflavin, P 754
 metabolism in muscular dystrophy, P 1003
- Crops**
 canning, fertilization of, C 575
 diseases, insect vectors of, Ec 110
 farm and garden, storage and marketing,
 Ec 315
 fertilizers in relation to, Pennsylvania,
 Ec 48
 food and feed, essential trace elements on,
 C 565
 relation of soils to, C 564
 forage, nutritional value of, effect of soil
 qualities on, C 584
 nutritional value of, for chicks, C 512
 vitamin B complex content of, effect of
 fertilizer on, C 586
 horticultural factors affecting synthesis of
 certain vitamins in, C 678
 iodine in, Indiana, C 569
 potato, green manure for soils in Maine,
 Ec 79
 super yields of, by increase of humus
 content of soils, Ec 42
 yield, as affected by phosphate fertilization,
 Ec 54
- Cucumbers**
 breeding of improved varieties, P 1520,
 P 1568
 development for processing, in South, T 471
 effect of potash and magnesium on, C 582
- Cystathionine Cleavage**, P 311
- Cysteine**
 effect on production of cobalt polycythemia,
 P 1076
- Cystine**
 effect on rats on low protein, pyridoxine-free
 diet, P 778
 from methionine, P 310
 metabolism of, P 289
 relation to body reactions, P 289
 replaced in diet by sulfur-containing amino
 acids, C 50
- Cytochrome**
 C in metabolism of regenerating liver, P 629
 oxidase activity, P 628
- ## D
- Dairy**
 farmstead, economic use of electric power
 for, Ec 5
 food, new protein, as meat substitute, Ec 169
 products, analysis of C 282
 availability of nutrients in P 544
 bio-chemical composition of C 286
 brown discoloration of, C 719
 calcium in, C 291
 cholesterol distribution in, C 289
 consumer demand for, Ec 274
 developments in marketing, Ec 273
 flavor defects in, cause and prevention, C 721
 frozen, factors affecting composition and
 market qualities, C 1006
 industry in Maine, economic study of,
 Ec 281
 insect pests of, Ec 129
 laboratory methods for testing, C 284
 lactose in, by picric acid reduction, C 290
 lipid deterioration in, C 725
 manufacture of, T 99
 manufacture of, new methods, T 97
 marketing Ec 272
 marketing cost, Ec 275
 microorganisms in, effect of cold, B 11
 nutritive value of, C 286
 packaged, effect on nutritive value, keeping
 quality and palatability, C 1030
 shipping containers and folding cartons
 for, T 569
 sucrose in, by picric acid reduction C 290
 suitable for use in candy manufacture, Ec 162
 testing of, C 281
 utilization of corn sirups in, T 256
 use of metals in, T 563
- Dark Adaptation**
 related to vitamin A and carotene intake,
 P 517
- Dates**
 breeding for resistance to disease, P 1564
 packaged, methods for processing and
 preservation, T 183
 spoilage in relation to microorganisms, B 81
- DDT**
 effect on oysters and other shellfish,
 Ec 151

Subject Index

- DDD and DDT**
 persistence of, in canning and freezing of foods, C 1144
- Deficiencies (see also individual nutrients)**
 and rehabilitation after experimental starvation, P 808
 in school children, survey, P 1237
 nutritional, clinical manifestations, P 801
 displacement concept in recognition of, P 815
 in pregnancy, P 58
 respiration of heart muscle in, P 808
- Deficiency**
 diseases, intestinal absorption in, P 807
 nutritional, P 803
 symptoms of, P 843
- Defrosting**
 of frozen meats, methods, P 920
- Dehydration**
 drying of solids in falling rate period, T 57
 of beans, green snap at high altitudes, T 413
 of cheddar cheese, C 981
 of coffee extract, T 422
 of eggs, T 422
 of eggs, changes in lipids during, C 979
 of feeds, stock, T 424
 of foods, in home, T 379
 of foods and products, T 320
 of food products, T 395
 of fruits, T 418
 of fruits, use of sulphur dioxide in, T 417
 of fruits and vegetables, C 991
 of fruits and vegetables in home, C 984
 of fruits and vegetables, method improvement, T 382
 of fruit and vegetable varieties for, C 844
 of gelatin, T 422
 of gluten, T 422
 of milk, T 400
 of orange juice, T 422
 of pork, lean trimmings, effect on amino acids in, C 983
 of potatoes, white, discoloration during, C 993
 of prunes, C 994
 of sugar cane juice, retention of all vitamins and minerals, T 79
 of vegetables, C 988, T 412
 of vegetables, equipment for final drying, T 58
- Dehydration**
 process, time saved in drying of vegetables, fruits, brewery products, feeds, T 80
 spray drying, T 401
- Dental Caries**
 causes and prevention, P 961
 chewing gum ingredients in control, P 963
 control of diet, P 950, P 953, P 959
 control study with germ-free rats, P 960
 effect of carbohydrate degradation by enzymes of acid mouth organisms, P 967
 effect of certain foods on, P 964
 effects of diet composition, P 947, P 949, P 955
 factors producing, P 952
 in primates, relation to nutrition, P 966
- Dental Caries**
 milk in control of, P 962
 phosphatase inhibitors, P 492
 prevention of, P 492
 proteolytic bacteria in causation, P 969
 related to diet and growth, P 954
 relation of diet, protection by food oxalates, P 959, P 970
- Dental**
 condition, biological findings in relation to, P 948
 health, nutritional status as basis, effect of infections, P 943
 relation of fluorine, P 956, P 957, P 958
 related to general nutritional status, P 948, P 944, P 945
- Dermatosis**
 effect of vitamin A, P 819
 fat supplements and unsaturated fats for prevention in rat, P 973
- Desserts**
 frozen, T 188
 alginic acid and alginates in, C 1165
 gelatin, processing of, T 421
- Detergents (See also quaternary ammonium compounds)**
 bactericidal, field tests of effectiveness, B 203
 not effective, B 205
 efficiency of, B 182
 for dairy use, B 189
 sanitation of food industry plants, B 206
 protein - fatty acid wetting agents, B 204
 techniques for evaluating dishwashing, B 207
- Deterioration**
 of butter, microorganisms related to, B 36
 of candy, T 588
 of dairy products, lipids in, C 725
 of fat, evaluation of literature on, C 734
 of feeds, oxidative processes responsible, C 822
 of milk fat, oxidative, C 727
 of milk fat, trace metal contamination effect on, C 728
 of milk products, mechanism of, C 724
 of oils edible, oxidative, C 730
 of vegetables, of lipids in, C 756
 of vegetables, stored and dried, C 988
 of vegetable pigments, during storage, C 877
 pectin, C 1002
- Dextrins**
 Schardinger, metabolism of, P 381
 studies on, C 106
- Dextrose**
 degradation, C 93
 preparation with protein hydrolyzate, T 355
 rearrangement, C 93
- Diabetes**
 B complex deficiencies in relation to, P 984
 change in fat metabolism by high niacin, P 985
 clinical and experimental research, P 978
 effect of thiamine deficiency, P 827
 effect on nutritional requirements, metabolism of vitamin A and carotene in, P 983
 glycogen content of liver, P 979

Subject Index

Diabetes

- potassium metabolism in, P 490
- relation of nutrition to growth and development of children with, P 981
- relation of specific nutrients to metabolism, P 980
- thiamine metabolism in, P 538

Diabetes Alloxan

- carbohydrate metabolism in effect of inorganic phosphate, P 991
- effect of deficiency of riboflavin, P 989
- effect of high fat diets, P 990
- effect of hypervitaminosis B₁ on, P 988
- effect of utilization of carotene, P 987
- vitamin requirements in, P 986

Diabetes Mellitus

- carotene and vitamin A metabolism, P 996
- control, close and loose, P 993
- degenerative complications, effect of varying fat and carbohydrate, P 994
- effect of ovarian activity, P 997

Diarrhea

- intravenous feeding of fat in, P 1000
- mineral losses in, P 999
- parenteral feeding in, P 1000, P 1001
- preparations for nutrition of patients with, T 349
- requirements in, P 998

Diet

- American, as related to nutrients in flour-converted products, C 485
- and food budget, of groups in Hawaii, adequacy of, P 1200
- and nutritional status in poliomyelitis, P 1077 - P 1081
- artificial, for mice, P 30
- commercial, effect on rats for several generations, P 132
- dynamic effects of, P 157
- effect on amino acid requirements, P 765
- effect on biosynthesis of ascorbic acid, P 585
- effect on blood cholesterol, P 691
- effect on body temperature control, P 160
- effect on bone response to endocrines, P 716
- effect on dental caries, P 947, P 949, P 955, P 965 - P 968
- effect on excretion of phenolic bodies, P 208
- effect on liver injury (experimental), P 1053
- effect on liver regeneration, P 1052, P 1054
- effect on pancreatic secretion, P 123
- effect on porphyrin formation, P 213
- effect on response to vitamin D, P 589
- factors related to reproductive span, P 147
- for hypertension, rice and fruit, P 1165
- low protein, P 1159
- inorganic salts in, P 1158
- proteins in, P 1157, P 1162, P 1163
- high cereal, effect on growth, lactation, longevity, and reproduction, P 382
- hospital, fortified with protein, acceptability to patients, Ps 15
- fortified with protein, cost of, Ps 16

Diet

- human, various, effects on experimental animals, P 131
- improvement for low income families of South Carolina, P 1185
- inadequate, relation to physical performance, P 154
- in dental caries, control of, P 950, P 953
- in production and cure of toxemic pregnancies, P 72
- in rodents infected with schistosome worms, studies, P 1032
- instruction, in reducing incidence of toxemia in pregnancy, P 61
- Japanese prisoner of war, nutritive value of, P 1223
- liberally adequate, effects on children in institution, P 183
- liquid, effect on nephrosis, P 1062
- for supplementary feeding of malnourished, P 182
- low protein, effect of cystine, P 778
- effect of methionine, P 778
- effect of tryptophane, P 778
- mixed, analysis for fat content, C 326
- of children in Chicago, evaluated, P 1227
- in South Carolina, related to height and weight, P 1228
- in Vermont, evaluated, P 1229
- pre-school, mineral and vitamins in, P 1226
- of laying hens, effect of gland-free cottonseed flour in, C 621
- prenatal, relation to health of mother and infant, P 52 - P 54
- relation to mentality of young, P 70
- purified, growth of rats on, P 146
- lactation of rats on, P 146
- reproduction of rats on, P 146
- supplemented with liver, P 230
- relation of previous, to effect of adverse conditions, P 90
- relation to atherosclerosis, P 1152
- relation to arterial disease, P 1149, P 1151
- relation to blood in pregnant women, P 57
- relation to health, P 141
- relation to hypertension, P 1157 - P 1167
- relation to longevity, P 141
- relation to malaria and treatment by quinine, P 1023, P 1024
- relation to metal poisoning, P 1132
- relation to mycotic infections, P 1022
- relation to physical efficiency, P 154
- relation to potency of unidentified nutrients of milk, C 603
- relation to rate of gain in weight of pre-mature infants, P 172
- relation to recovery rate of surgical patients, P 1096
- relation to resistance to fatigue in man, P 91
- relation to resistance to infections, P 1019
- relation to rheumatic fever, P 1082 - P 1085
- relation to several diseases, P 1149

Subject Index

Diet

- relation to susceptibility of monkeys to infection, P 1030
- relation to susceptibility to pneumonia, P 1025
- relation to vitamin A potency of milk and butterfat, C 598
- rice - beans - casein, minimum protein, P 274
- self selection by rats, endocrine factors in, Ps 11
- self selection of, studies on, Ps 7, Ps 9
- served at Texas State College for Women, ascorbic acid in, C 411
- special, for control of convulsion in epilepsy, P 1071
- sulfur containing amino acids new, to replace cystine in, C 50
- containing amino acids new, to replace methionine in, C 50
- synthetic supplements for mouse, P 32
- yeast in human, P 269

Dietary

- analysis of marketed pickling products, T 185
- enrichment, effect on life history, P 144
- of adequate diet, P 143
- factors, effect on formation of tumors, P 935
- effect on healing of bone structure, P 883
- effect on incidence of hepatic neoplasms, P 936
- effect on incidence of hepatic tumors by carcinogens, P 938
- essential, interrelationships of, P 796
- in food materials, C 155
- in maintaining blood constituents, P 686
- protective against exposure, P 529
- protective against thyroidism, P 529
- unidentified in animal protein, P 609
- unidentified supplements, role of, P 612
- food budget for population group according to income, P 1193
- habits as related to basal metabolism, P 153
- effect on market trends in Pennsylvania, Ec 258
- Puerto Rican, nutritional studies of, C 256
- special supplements, development for human nutrition, T 310
- development for clinical use, T 349
- studies, P 1181
- values, effect of waste on, in Navy operation, P 1177
- of inexpensive food combinations, P 1179

Digestion

- and metabolism of fat, P 124
- and tolerance by pre-school children, of foods considered unsuitable, P 120
- enzymatic of proteins, soy beans, P 115
- rumen, P 173

Digestibility

- and physiological fuel value of foods, P 116
- comparative, of natural and interesterified oils, P 125
- of raw and heated proteins, P 117

Digestibility

- of certain inexpensive foods treated with dilute acid, P 119
- of natural keratins, P 118
- of rape-seed oil in humans, P 127
- in rats, P 126

Digestive Tract

- disorders causing anemia due to lack of folic acid, P 572
- effect of vagotomy on, P 114
- effect of sympathectomy on, P 114

Dilantin

- effect in ascorbic acid deficiency, P 852

Diseases (see individual diseases)

- amino acid requirements in, P 8
- degenerative, P 972
- effects on nutrition, P 865
- in infants and children associated with nutritional disturbances, P 178
- metabolic, vitamin requirements in, P 102
- neoplastic, plasma proteins and nitrogen metabolism in, P 922
- of animal, nutritional, P 1255
- therapeutic products for, T 363
- of cattle, abnormalities, fetal, factors associated with, P 1386
- anascara of beef cattle caused by vitamin A deficiency, P 1372
- anemia in calves, P 1373
- Bang's, diagnosing and controlling, P 1374
- bleeding, abnormal, in livestock, P 1387
- lathyrism in livestock, P 1382
- nephritis in food producing animals and horses, P 1384
- rachitic in heavily fed cattle receiving adequate calcium phosphorous and vitamin D, P 1376
- reproductive disorders, P 1388
- tetany, grass, magnesium in, P 1377 - P 1379
- toxicity of molybdenum and relation to other minerals, P 1379
- toxicity of molybdenum and relation to copper and hemoglobin in cattle and sheep, P 1380
- of sheep, enterotoxemia of feed lot lambs, P 1391
- stiff lamb disease and related conditions, P 1389
- urinary calculi caused by sorghum feeds, P 1390
- of swine, anemia in suckling pigs, P 1393
- death losses in newborn pigs, factors causing, P 1397
- digestive disturbances, role of nutrition, P 1392
- enteritis, necrotic relation to nutrition, P 1394, P 1396
- enteritis, infections relation to niacin deficiency, P 1395
- pellagra and niacin deficiency, P 1395, P 1396
- of young turkeys, P 1443
- prevention and treatment, P 142
- relation of requirements to development of, P 5

Distiller's By-Products

- crystalline amino acids from, C 46

Subject Index

Distiller's By-Products
 for fattening swine, P 1326
 use in poultry rations, Ec 234
 use in poultry rations, hatchability potency,
 Ec 235
 use in swine nutrition, Ec 240

Distiller's Dried Solubles
 assay methods for, B 134
 effect on vitamin synthesis, intestinal,
 chicks, B 176
 enrichment of foods with, C 1090
 for use in enrichment of foods, amino acids
 in, C 46
 for use in foods, Ec 232, Ec 233
 for use in pharmaceutical products, amino
 acids in, C 46
 for use in ration of dairy calves, Ec 238,
 Ec 237, Ec 238
 leucine for food enrichment from, C 46
 nutritional value of, P 271
 production of food products from, C 45
 unidentified growth factors in, C 199
 growth factors in, crystallization and
 identification of, C 201

Distiller's Wastes
 as supplementary cattle food, Ec 239

Diuretic Agents
 effect on sodium excretion in pregnancy,
 P 74

Doughs
 bread, bromate level in relation to mixing
 time, C 870
 inhibitors, mold and rope for improve-
 ment, C 1162
 nutritional supplements in, C 1162, C 1099
 colloidal properties of, factors affecting,
 C 496
 fermentation, B 222, B 225
 frozen, preparation and storage of, C 834
 mixing and enrober coatings, T 225
 physical properties in relation to flour
 strength, C 495
 products, frozen, soft-wheat versus hard-
 wheat flours in, T 495
 tolerance of for high percentage of milk
 solids, T 236

Drinks
 carbonated soft, effect of various metals
 on, C 1034
 effect of rubber and plastic materials
 on, C 1038

Drugs
 effect on excretion of phenolic bodies, P 208
 inspection of, C 252
 methods of examination, C 251

Dysmenorrhea
 iron absorption and loss in, P 483

Dystrophy
 effects of inositol and creatinine metabolism,
 P 1003
 effect on biotin content, hamsters and
 guinea pigs, P 1002
 use of alpha tocopherol in, P 1004
 use of tocopherols in, P 1006, P 1007
 use of vitamin E on abnormalities of
 protein metabolism in, P 1009

Dystrophy
 use of vitamin E, energy relationships, P 1010

E

Echinenone
 activity in relation to beta-carotene, C 152
 as a vitamin A precursor, C 152
 from ovaries of sea urchin, C 152

Eczema
 value of lard in treatment of, P 975

Efficiency
 of food utilization, inheritance of, P 163
 mechanical, of boys and girls in various
 activities, P 187
 physical, relation to diet, P 154
 effect of breakfasts and abstinence from
 breakfasts, P 158

Eggs
 albumin for plasma protein regeneration,
 P 240
 blood spots in, C 620
 reduced by nutritional factor in bluegrass
 range, C 620
 biocolloidal condition, use in industrial
 products, Ec 187
 canned, improved methods, C 903
 chicken and turkey, factors involved in
 hatching at high elevation, P 1417
 cleaning of, effect of emulsept and chlorine
 on bacterial count, B 62
 cooked, stability of niacin in, C 927, C 928
 stability of riboflavin in, C 927, C 928
 stability of vitamin B₁ in, C 928
 dehydrated, effect of handling on vitamin
 content, C 980
 effect of pasteurization, B 60
 spoilage microorganisms in, B 65
 and frozen, comparison, at different
 temperatures, C 980
 and frozen products in foods, Ec 185, 186
 stored, changes in lipids of, C 979
 dehydration of, T 422
 effect of feeds on protein quality of, C 619
 effect of processing on biological value,
 C 1056
 enzymatic reactions during storage at 70
 degrees F., C 770
 factors affecting cooking and nutritional
 quality of, C 371
 flash heat treatment, C 951
 freezing, methods and equipment for, T 438
 fresh in storage, action of food effluents on,
 C 765
 frozen, at different temperatures, C 836
 cooking of, T 438
 effect of pre-treatment on, T 440
 microbiology of, B 66
 in cooked products, use of, T 439
 pathogenic bacteria in, B 67
 whole, yolks, and whites, effect of pre-
 freezing treatments on quality, C 1007
 in diet, effect on growth, P 236
 keeping quality during summer, B 58
 marketing of, Ec 287, Ec 288

Subject Index

Eggs

- meat spots in, C 620
- processing of, T 421
- preservation of, factors affecting, C 769
 - for home use, C 1055
- production, for dehydrating and freezing, Ec 290
 - home use, storage and marketing, Ec 290
- products, dehydrated, pathogenic micro-organisms in, B 64
 - dried, T 408
 - drying and storage, factors affecting changes in, T 407
 - frozen, factors affecting quality, C 837
 - frozen, factors affecting storage life, C 837
 - liquid factors affecting quality, C 837
 - liquid, factors affecting storage life, C 837
 - preservation of, factors affecting, C 769
 - quality of, factors affecting, C 769
- protein, defatted, supplemented by lysine or methionine, P 264
- quality of, effect of bread on, C 627
 - effect of different feed combinations, C 627
 - effect of environment on, C 675
 - effect of rate of production on, C 627
 - factors affecting, C 610, C 769
 - preservation by shell treatment, B 63
- replacement value by legume proteins, P 237
- shell, effect of pasteurization on, B 60
 - preservation of, C 768
 - process for cleaning of, B 58
- spoilage, prevention of, by control of bacterial count, B 59, B 60
- stored at 70 degrees F., C 770
 - effect of cleaning processes on microbiology and physical properties, B 61
- therm - stabilized, B 59
- vitamins in, effect of breed on, C 627
 - effect of feed combinations on, C 627
 - effect of rate of production on, C 627
 - effect of breed, C 610
 - effect on different feed combinations, C 610
 - effect of rate of production, C 610
 - method of estimation, C 333
- whites, dried, production of, uses, T 409
 - fermentation of, improved method for, T 162
- yolks, discoloration of, during storage, C 621
 - phosphoprotein in, isolation and characterization, C 372

Elderberries

- freezing of, uses, T 459

Electrolyte

- balance in infants on evaporated milk diets, P 178
- effect of ingestion when kidney function is reduced, P 178

Electronics

- application to food processing, T 21
- baking with radarange, T33

Electronics

- for rapid defrosting of frozen foods, pre-cooked, T 30
- sorting machine, for grading pickles, T 74
- sterilization of frozen foods, T 36
- thawing and heating, T 31

Emulsifiers

- esters of sorbitan and fatty acids as, C 1168
- for bread, cake, and ice cream, C 1167

Endocrine

- activity, nutritional effect of substances modifying, P 639
- aspects of cancer, P 932
- balance, relation to fructose metabolism, P 377
- bone response to, effect of diet, P 716
- factors in, protein metabolism, P 663, P 664
- reproduction and lactation of ewes, P 1319
- function, relation of protein metabolism, P 657
- hormones in, agricultural production, P1345
- imbalance and protein depletion, effect on metabolism, P 188
- imbalance in neoplastic growth, P 933, P 934
- relations in farm animals, P 1346
- relations of metabolism, study with isotopes, P 658
- secretion, relation to dietary needs, P 638

Energy

- cost of work for thin and obese persons, P155
- expenditure of boys and girls in various activities, P 187
- value of home-grown roughages, C 514

Environment

- cell, effect on respiration, P 97
- cold, physiological effects, P 96
- effect on fat usage, P 409
- effect on nutrition, P 92
- effect on nutritional requirements, P 97
- effect on pancreatic secretion, P 123
- effect on physiological reactions, P 95
- effect on requirements, P 95
- relation to caloric requirements, P 89

Enrichment

- dietary, effect on life history, P 143
 - with calcium, P 143
 - with meat protein, dried, P 144
 - with poultry meat, P 143
- of biscuits, with wheat germ, thiamine, and yeast, C 1100
- of bread, whole wheat, with non-fat dry milk solids, C 1085
- of cereals, value of, C 1092, C 1095
- of citrus products, canned with vitamins, C 1084
- of corn bread, C 1106
- of corn grits, C 1106
- of corn meal, refined, with dried cultured food yeasts, C 1097, C 1101
- of corn products, C 1103
- of flour, value of, C 1095
- of flour, wheat with dried cultured food yeasts, C 1101
- of foods, C 1079
- of foods, additives for, C 1079

Enrichment

- of foods, with amino acids from distiller's dried solubles, C 46
- of foods, with animal protein factor, C 1086
- of foods, with distiller's dried solubles, C 1090
- of foods, with vitamins, C 1107
- of food products, public acceptance of, C 1080
- of grain products, with vitamins and minerals, C 1104
- of milk, nutritive value improved with vitamins, C 1082
- of rice, C 1093, C 1095, C 1094
- thiamine, C 1091

Enterocrinin

- concentration of, C 235

Entomology, Ec 98 (See also Insects)

Enzymes, C 206

- action on starches, C 213
- activity and vitamin A nutritional status, P 628
- activity, influence of hormones, P 798
- amylolytic, chemical and physical characteristics, C 211
- of barley, effect of ascorbic acid on, C 210
- of malt, effect of ascorbic acid on, C 210
- on action of starches, native and treated, C 209
- and coenzymes, storage, relation of protein and vitamins, P 200
- and fermentation, B 211
- attacking nucleic acids, P 632
- bacterial, purified, effect of inhibitors on, B 242
- carbohydrate in plant and animal tissue, P 350
- splitting, purification of, C 208
- catalytic functions, C 226
- control of cholesterol metabolism in atherosclerosis, P 1155
- conversion of beta carotene to vitamin A, P 627
- digestion of proteins by, T 354
- digestion of proteins, soybean, P 115
- hydrolysis of protein compared with acid hydrolysis, P 322
- hydrolysis rates of, C 222
- hydrolytic, role in fruit and vegetable products, C 215
- in agricultural products, effect of high pressure on, C 232
- in baking, T 213
- in carbohydrate metabolism, purification of, C 212
- in flour, relation to baking characteristics, C 482
- in foods, frozen and stored, effect of environment on, B 9
- in processing of foods, application of, T 29
- in study of diabetes mellitus, P 995
- in wheat, relation to baking characteristics, C 482
- inhibitors, nutritional significance, P 728

Enzymes

- significance in legume feeds, P 728
- interrelations with proteins, amino acids and unknown vitamins, P 777
- with vitamin E, P 784
- intestinal, in celiac, P 892
- intra cellular, in protein metabolism, inhibition of, P 633
- lipolytic, chemical and physical characteristics of, C 211
- mechanism, in inactivation of estrogens, C 230
- in conjugation of phenols, C 230
- of hydrogen transport in animal tissues, P 630
- metabolic, kinetic studies, P 623
- of liver and kidney, effect of growth, hormones, P 649
- of olives, C 1074
- of protein synthesis, isotopic tracers, P 634
- oxidative, biochemical properties of, C 228
- industrial significance of, C 228
- in frozen pack fruits, C 878
- in frozen pack vegetables, C 878
- in sweet potatoes, C 441
- in white potatoes, C 441
- purification of, C 228
- pectic, chemistry of, C 216
- in dehydrated foods, C 1001
- deterioration, C 1002
- from different species of molds, biochemical properties of, C 219
- in wine making, C 218
- proteolytic, action of, P 631
- action of on wheat flour protein, C 482
- characterization and mode of action of, C 221
- proteolytic, chemical and physical characteristics of, C 211
- effect in hydrolyzing meat proteins, C 1061
- digestion of skim milk, T 115
- from mold bran extract by selective adsorption, C 223
- from various sources, C 222
- in doughs, straight and sponge, T 212
- reactivation, after thawing of some frozen vegetables, C 1029
- related to biotin, attempt to identify, P 563
- relation to vitamins, P 626
- relation to protein, in wheat flour, T 211
- respiratory, in fruit, C 415
- in pyruvic acid oxidation, P 356
- role in flour strength, C 495
- role in meat product flavors and keeping qualities, C 844
- role in spoilage of fish, C 777
- system and carbohydrates, P 625
- systems, in adrenal glands, P 635
- inhibition of, C 227
- of acid mouth organisms, effect on carbohydrates, P 967
- of animal tissues, synthesis and oxidations, P 624
- tests on blanched fruits and vegetables, C 1068

Subject Index

Enzymes

tissue, effect of protein depletion, P 188

Enzymolysis

study of, C 208

Epilepsy

canine, caused by agene in bleached flour,
P 1119 - P 1121

control of convulsions by dietary factors,
P 1071

effect of dietary factors in, P 1070

effect of electrolyte and water contents

of diet on electro encephalogram, P 1071

glutamic acid use in, P 1068, P 1069

Epoxides

fumigation of dried fruits, C 1145

in food, C 1142

Equipment

agitation research, T 61

for airlines, design and installation of,
T 13

for baby food production, T 4

for bulk products, automatic quick

freezing process, T 53

for canning, T 24

for cooking, improvement of, T 32

for final drying of dehydrated

vegetables, T 58

for food processing, engineering

research in, T 1

for food sterilization, T 23

for freezing of fruits and vegetables, T 50

for frozen food storage units, design and

construction of, T 39

for nutrition research, Ps 99

for preparing eggs, poultry, and meat

for freezing and cooking, T 438

for preprocessing of fruits and

vegetables, T 51

for preserving perishable farm products,

T 75

for processing, mechanical development,
T 8

for processing fruits and vegetables in

homes, C 1016

for quick freezing of liquid foods, T 52

home freezing units, T 40

performance of, C 643

homogenizing, efficiency of, T 63

household, thermocouple techniques,

adapted to, T 20

institutional effect on nutritive value of

foods, C 940

for quantity cooking of food, effect on

nutritive value, C 913

locker plant freezing units, T 54

refrigerator, T 42

low cost, for cooling cream on farm,

T 41

Ergosterol

inactivated, anti bacterial action of, B 241

studies on, C 189

Estrogens

effect on fattening poultry, P 1365, P 1367,
P 1369

enzyme mechanism in inactivation of,
C 230

Estrogens

in urine of pregnant mares, P 1311

mixed, therapeutic value, used as an

inunction, P 655

relation to appetite, P 637

relation to renal lipids in choline deficiency,
P 848

with androgens, use in metabolic dis-
turbances, P 656

Ethanolamine

action on liver, phospholipids, P 414

Excretion

of ascorbic acid, of college women on
self selected diets, P 541

of niacin, in disease, P 102

of phenolic bodies, effect of diet and drugs,
P 208

of riboflavin, in disease, P 102

of college women on self selected diets,
P 541

related to intake, P 540

urinary, of college women on different
intake levels, P 542

of sodium, during reduction regime, P 487

of thiamine, and riboflavin in last five
months of pregnancy, P 67

on low thiamine diet, P 534

urinary, of vitamins in intravenous

alimentation, P 336

relation between creatinine, ascorbic acid
and riboflavin, P 754

Exercise

enforced, effect on growth, lactation,

longevity, and reproduction, P 382

energy requirements of, in children, P 187

F

Factor

animal protein, assay for, P 615

role in human nutrition, P 610

unidentified, for chick growth, P 613

anti-pernicious anemia, in liver, relation to
folic acid, P 878

antistiffness, P 617 - P 619

unidentified, for animal reproduction, P 621

in animal protein supplements, role of,
P 612

in fish solubles, C 369

Farm(s)

and ranches, in California, factors affecting
organization and operation, Ec 12

animals, amino acid nutrition of, P 1270

feeding of, C 513

nutritional deficiencies of, P 1371

families, effect of land fertilization on

growth and physical condition of, C 562

prices, factors affecting, in Pennsylvania,
Ec 257

in postwar period in Maine, Ec 255

seasonal variations in Michigan, Ec 256

products, California, efficiency of marketing,
Ec 253

products, perishable, equipment and methods
for curing and preserving of, T 75

Subject Index

Farm(s)

preservation and curing of, controlled temperature, T 397

Fat(s) C 52

absorption, effect of addition of mono-glycerides and or free fatty acids, P 440
altered by catalytic means, C 78
analysis of mixed diets and foods for, C 326
and carbohydrates, relative value in human diet, P 441
and oils, adaptation of chromatographic analysis to, T 65
animal, chemistry of, C 1118
behavior of, effect of processing, T 140
edible, use in shortening and margarine interchangeable, T 142
in World War II, a book, Ps 77
products, processing methods, for higher stability and palatability, T 134
technology of production, processing, preservation and use, C 1118
animal, antioxidants for, C 1117
composition of, C 327
nutritive value of, C 346
antifoaming studies, C 74
antioxidants in, C 1126
autooxidation of, C 1126
chemical and spectrophotometric studies of, C 732
course and mechanism of, C 742
effect of inhibitors, C 739
carbohydrate and protein, nutritive value, determined by single food choice method, Ps 10
chemical changes associated with breakdown of kidney tissue, P 434
coconut, rancidity in manufacture, methods for control of, C 743
comparative nutritive value, P 24, P 416
comparative nutritive value, butter versus margarine, P 415
concentration, effect on utilization of protein, P 250
conversion of carbohydrates to, P 384, P 387
depot, in geese, C 355
deterioration, evaluation of literature on, C 734
dietary, effect on intestinal flora, B 168
effect on intestinal flora in calves, B 175
effect on nitrogen retentions, P 794
diets, effect on alloxan diabetes, P 990
high, effect on water balance in rats, P 1050
digestibility, effect of magnesium and calcium intake, P 790
digestion, P 124
edible, flavors and control in, C 736
nutritive value of, C 345, C 346
effect of fatty infiltration of liver, P 394
effect of type on growth in vitamin B low diets, P 785
effect of varying amounts on diabetes, P 994
effect on stability and utilization of vitamin A, P 511
emulsified, absorption and parenteral injection, P 897

Fat(s)

emulsion, T 362
fecal, excretion in sprue, P 443
excretion on low lipid diets, P 443
influence of sulfa drugs on, P 443
influence of type of diet on, P 443
for cake making, composition of, C 75
glycerides in temperature - pressure - solubility relationships of, C 66
heated or browned, effect on morphology and function of organs, P 444
in body, methods for appraisal of, P 1072
in buttermilk, comparison of methods, C 288
in cheese, biochemical changes during aging, C 764
in chocolate bloom, C 759
in diet, effect on protein utilization in sheep, P 1321
in eggs, changes during dehydration, C 979
in foods, C 325
in frozen fish, prevention of rancidity development, C 749
in meat, antioxidants for, C 1122
in milk, chemical changes in, as related to flavor of milk, C 726
in milk, effect of certain feeding practices on amount, C 593
in milk, lipase activity in milk, effect on, C 726
in milk, oxidative deterioration of, C 727
in milk, skim, comparison of methods, C 288
in muscle tissue, effect of B vitamin ratios, P 723
in whey, comparison of methods, C 288
intravenous administration, P 404 - P 407
intravenous administration, feeding in disease, P 1000
level in diet, effect on nutrition, P 408
losses, in milk plant, C 1044
metabolism, P 124, P 391 - P 445, P 976
disturbances in children, casec tolerance in, P 795
in invertebrates, P 412
study with carbon isotopes, P 217
minimum requirements, P 24
natural, effect of hydrogenation on physical properties of, C 58
glycerides in composition of, C 64
isomeric unsaturated fatty acids in, C 68
phosphatides in, C 70
nutrition, cellular aspects, P 411
nutritive value, P 23, C 328
nutritive value, comparative, P 24
oxidation of, C 72
oxidation of, course and mechanism, C 71
physical properties of, C 54
pilot plant hydrogenation studies on, C 57
properties in relation to their composition, utilization and structure, C 56
rancidity of, C 759
destruction of fat soluble vitamins in, C 737
in eviscerated poultry, C 748
retardation of, C 740
synergists in, C 1116
relation to economy of food utilization, P 438

Subject Index

Fat(s)

- relation to niacin, tryptophane, pyridoxine, P 752
- soluble vitamins, effect of soy bean lecithin on metabolism, P 514
- soluble vitamins, requirements of rat, P 37
- stability of, C 740
- stability of, in powdered milk products, C 978
- stabilization of, C 1115
- stabilization of, use of antioxidants in, C 1127
- study by infra-red methods, C 48
- supplements and unsaturated fats, for prevention of dermatosis, P 973
- synthesis, and oxidation, biological, P 435
- from carbohydrate precursors, in animal tissue, P 436
- usage, effect of environment on, P 409
- utilization, animal or vegetable origins, P 437

Fatigue

- relation to diet in man, P 91

Fatty acids

- chromatographic adsorption, C 67
- essential, animal synthesis of, P 423
- interrelation with pyridoxine, P 786
- esters, in foods, as stabilizers, emulsifiers and antistaling agents, C 1168
- metabolism and non toxicity tested by animals, P 1123
- hydroxy, nutritive value of, P 419
- in hydrogenated fats, availability of, P 422
- in lipase activity in milk, C 726
- in milk fat, significance, P 417
- isomeric unsaturated in natural fats, C 68
- isomeric unsaturated in oils, C 68
- metabolism, relation to carbohydrate metabolism, P 421
- study by deuterium technique, P 420
- physical properties of, C 54
- production of, as a therapeutic agent, T 328
- requirements in animal diets, P 28
- volatile, in cheese, determination of, by rapid direct-distillation, C 319

Fatty Constituents of Foods

- oxidation of, C 766

Fatty Oil(s)

- processing of, from fat bearing materials, T 137
- production of edible derivatives of, T 136

Feeds

- amino acids, in, analytical methods for, C 520
- animal, development of, T 243
- nutritive value of, effect of soil fertility on, C 561
- as source of pectin or cellulose from citrus peel, Ec 228
- as substitutes for milk in calf feeding, P 1305
- combinations, effect on vitamin content and quality of eggs, C 627
- dehydrated for fattening lambs, P 1315
- deterioration, oxidative processes responsible, C 822
- digestibility of, a monograph, Ps 69

Feeds

- effect of goitrogenic thiopyrimidines on, T 369
- effect of heat on growth promoting value for growing chicks, P 1410
- effect on protein quality of eggs, C 619
- enzyme inhibitors in, P 728
- essential amino acid in, C 375
- evaluation of grasses and legumes for, Ec 27
- from packing house wastes, Ec 176
- ingredients, bio-assays and chemical analysis for nutritional quality, C 519
- livestock, from sugar beet byproducts, Ec 214
- vitamin E potency of, C 521
- mixed, bio-assays and chemical analysis for nutritional quality, C 519
- estimation of vitamin A and carotene, C 142
- pantothenic acid in, method for, C 165
- plant protein, nutritive value for growth, laying and breeding rations for chickens, P 1411
- poultry, vitamin A in, method for, C 333
- amino acids in, P 1424
- choline in, P 1426
- proteins, hydroxy-amino acid in, C 383
- nutritive value, C 377
- serine in, C 388
- threonine in, C 387
- relation to the quality of beef, C 607
- sorghum, as cause of urinary calculi formation in sheep, P 1390
- stock, dehydration of, T 424
- storage of, changes in nutritive value, C 826
- supplements, stability of stabilized vitamin A and carotene in, C 824
- stability of vitamin D₂ and D₃ in, C 825
- synthetic d 1 lysine in, C 376
- synthetic d 1 methionine in, C 376
- thiamine, assay methods for, C 156
- trace mineral elements in, C 567
- trials with poultry, dehydrated bean vines, Ec 215
- vitamins in, analytical methods for, C 520

Fermentation

- and enzymes, B 211
- in pickling cucumbers in brine, B 221
- in rumen, B 171
- molasses, B 227
- of dough, B 222
- preservation of food, bacteria involved, B 220
- processes for soy sauce from soy beans, B 229
- processes in milling and baking, B 223
- soda cracker, B 226
- studies, B 209
- new varieties, development of, B 210
- using whey for derivation of nutritionally valuable materials, B 231

Fertility

- effect of tocopherol deficiency on, P 38
- of male mouse on synthetic diets, P 33

Fertilizer(s)

- a completely cemented and mineralized, Ec 51
- application to peas, method of, Ec 71

Subject Index

Fertilizer(s)

- application to peas, rate of, Ec 73
- commercial, effect of, on fig trees and crops, Ec 67
 - in World War II, a book, Ps 75
- effect of different amounts, sources and varieties on production of grain, Ec 33
- effect of, on improvement of wheat, oats and barley, C 585
- effect of, on vitamin B complex content of grains and forage crops, C 586
- effect of, on yield and quality of apples, Ec 61
- effect of rate of application on yields and quality of tomatoes, Ec 90
- experiments with apples, Ec 60
- experiments with grapes, Ec 70
- experiments with potatoes, Ec 77
- for peas, comparison of ratios, Ec 72
- for tomatoes, Ec 80 - Ec 82
- for tomatoes, in Ontario, response to, Ec 87
- for tomatoes, method of application, Ec 93
- for tomato varieties, effect of treatments, Ec 84
- from packing house wastes, Ec 176
- "M16", studies on, Ec 50
- phosphate, effect of, on crop yield, Ec 54
 - effect of, on nutrient value of forage, Ec 55
- program, continuous five year, for tomatoes, Ec 92
- quantity of, for optimum tomato yields, Ec 94
- requirements, Ec 43
- research on, Ec 44
- salt index, Ec 52
- study of, in relation to Pennsylvania crops, soils, and conditions, Ec 48

Fig(s)

- caprification by insects, P 1530
- freezing of, T 457, T 481
- frozen, effect of sugar on quality, T 488
- improvement and development of new varieties through breeding, P 1528
- packaging of, whole, for freezing, T 457
- physiology of splitting fruit, P 1531
- pruning studies, P 1529
- trees and crops, effect of commercial fertilizers on, Ec 67
- varieties, irrigation experiments to determine optimum requirements of, Ec 68

Fish

- cakes, processing of, T 159
- canned, keeping quality of, T 159
 - processing of, T 159
 - vitamin assay of, C 896
- coarse fleshed, methods of utilizing, Ec 182
- culture, diagnostic service for disease and treatments, Ec 138
- diseases of, bacteriological studies of, B106
- flesh, cathepsin in, isolation of, C 777
- fresh, insulated package for air transportation, T 529
- wrappings and containers for storage and transportation, T 575

Fish

- from Michigan waters, nutritive value, C 364
- frozen, prevention of rancidity of fat, C 749
- recipes for use, Ec 181
- wrappings and containers for storage and transportation, T 575
- livers, vitamin A in, effect of freezer storage, C 775
- vitamin A in, improved methods for, more efficient use of, C 775
- liver oils, and concentrates, vitamin A in, effect of temperatures on decomposition, C 774
- bio-assay of vitamin A in, C 143
- evaluation for vitamin A, correlation of official standards, C 145
- vitamin A in, C 368
- muscle, evaluation of protein, P 235
- nutritive value of, C 364
- protein, amino acids from, preparation and fractionation of, C 366
- derivatives of, T 356
- nutritive value of, C 365
- solubles, condensed, nutritive value related to spoilage, C 773
- condensed, unidentified growth factor(s), C 370
- unidentified nutritive factor(s) in, C 369
- spoilage of, activity of cathepsin in, C 777
- wastes, utilization for commercial purposes, Ec 183
- water for feed supplements, Ec 180

Fishery

- Atlantic, effect of price ceiling regulations, Ec 141
- byproducts, utilization, Ec 177
- products, canned, methods for determination of freshness, C 776
- canned, sterilization of, B 57
- improvement of, T 160
- packaged, effects of freezing storage on, C 867
- preparation of, for war needs, T 161
- raw, methods for determination of freshness in, C 776

Fishes

- effect of shrimp trawling on, Ec 135
- effect of water-hyacinth control, Ec 155
- lagoon, reed and pelagic, effect of atomic explosions, Ec 149
- life history, distribution and taxonomy of certain groups, Ec 140
- nutrition of, Ec 157
- pond, production and management, Ec 143
- toxicology, effects of insecticides and chemicals, Ec 154
- western, cultural investigations, Ec 146, Ec 147
- physiology of disease and control methods, Ec 147

Flavor(s)

- cocoa, C 547
 - volatile, composition of, C 549
- coffee, constituents, C 542
- isolation of elements in, C 85

Subject Index

- Flavor(s)**
 instant, C 541
 volatile, composition of, C 549
 development of, for quick freezing and storage, T 296
 extracts, production of, T 299
 food, aromatic chemical for, T 298
 chemical constituents of, C 552
 synthetic, T 295
 from oils of California desert plants, C 77
 frozen fruits, C 1018
 grapes, chemistry of, C 550
 manufacture of synthetic oils for, T 297
 natural fruit, composition of, C 549
 onions, chemistry of, C 550
 orange oil, isolation of elements of, C 85
 pineapple, chemistry of, C 550
 sugars, C 85
 synthesis of, C 551
 vegetable oils, C 61
 wine, chemistry of, C 550
- Flax Seed**
 as protein supplements in feeds, Ec 219
- Flies**
 cherry fruit, biology and control of, Ec 121
- Flounders**
 abundance, survival and migration, Ec 141
- Fluke**
 abundance, migration, effect of pollution on, Ec 144
- Fluoracetate**
 role in intermediary metabolism, P 359
- Fluoride**
 metabolism, of bones and teeth, P 491
 sodium, applications in dental caries, P 951
- Fluorine**
 a phosphatase inhibitor in dental caries, P 492
 analysis, therapy and relation to dental health, P 956
 beneficial effects on teeth, P 957
 effect in poultry nutrition, P 1455
 effect on hardness of dentin and tooth enamel, P 958
 optimum amount in drinking water, P 957
- Folic Acid, C 173**
 anemia due to deficiency, P 572
 antagonist, P 737
 antagonist, accelerating deficiency in mice, P 738
 assay, microbiological for, B 153, B 154
 microbiological for, in milk, B 156
 microchemical method for, B 155
 blood content, college women, P 549
 conjugase, inhibitor, P 739
 conjugated, absorption of, P 572
 deficiency, causing anemia, P 572
 clinical syndromes in man, P 843
 in rat, P 570
 lesser known in man, P 849
 degradation of, C 174
 effect on glossitis, P 848
 excretion, urinary, P 573
 free and conjugated, in prevention of experimental anemias, P 881
- Folic Acid**
 function of, P 567, P 570
 hemopoietic activity, P 565
 in chicken, C 358
 in foods, method for determination, C 181
 in meat, C 357
 in microcytic, iron deficiency anemias, P 881
 in strained foods, retention of, C 1042
 in treatment of sprue, P 1090
 in tropical foods, C 270
 in urine, college women, P 549
 interrelation with biotin, in nutrition of rat, P 570
 isolation from liver and yeast, C 177
 metabolic effects, P 568
 metabolism, P 572, P 849
 in malnutrition, P 569
 in pregnant women and infants, P 175
 in rabbit, P 44
 purification of, C 176
 relationship to anti-pernicious anemia factor in liver, P 876
 relationship to para amino benzoic acid for Lacto bacilli, P 13
 requirement for pig, P 1342
 for poultry, P 1437, P 1438
 for poultry, for growth, P 1439
 for turkeys, P 1440
 minimum, for rat growth, P 570
 response of pernicious anemia to vitamin M group, P 565
 role in leukemia, P 1035
 synthesis of new compounds with folic acid activity and antagonism, C 175
 to supplement purified diets for lactation in mice, P 33
 trace studies with C14, P 574
 treatment, of anemia, P 13
 of pernicious anemia, P 876, P 879
 of macrocytic anemia, P 876
 utilization, comparative by chicks, P 571
- Food(s) (See also individual foods)**
 acid, home canned, spoilage of, by micro-organisms, B 18
 acids, effects on aluminum and stainless steel, P 1133
 action of sterilizing agents on, C 1142
 amino acids in, evaluation and compilation of data on, C 373
 analysis of, C 243, C 250
 analysis, development of methods for, C 246
 and "Agricultural Policy," a publication, Ps 59
 and "Agriculture Organization," food objectives, basis of an article, Ps 73
 and beverages, gums as dispersing and suspending agents in, C 1171
 and feeds, evaluation of, assays with experimental animals, C 267
 and feeds, nutritive values of, influence of soils and fertilizers on, C 566
 and feeds, occurrence of unidentified nutrients of liver extracts in, C 804
 and feeds, packaging of, T 586
 and nutrition survey of United States, Ps 55
 antioxidants for, C 1113

Subject Index

Food(s)

antioxidants for protection of vitamin A in, C 1128
 Arctic, vitamin assay of, C 271
 ascorbic acid in, C 276, C 277
 in less common, C 410
 availability of sulfur derivatives in, P 473
 bacterial degradation of, B 8
 bacteriology of, related to preservation, B 1
 biotin in, method for, C 166
 bleaching of, C 1136
 budget and dietaries, for population group
 according to income, P 1193
 adequacy of, groups in Hawaii, P 1200
 bulk, as related to satiety, P 17
 calcium and vitamin C, conservation of, C 412
 canned, adequate sterilization for, B 16
 containers for, T 519
 d-isoascorbic acid in, C 886
 effect of storage temperatures on edibility of, C 787
 improved methods of preparation, C 903
 improvement of nutritive value, T 375
 in metal containers, solubility of iron and tin in, T 520
 nutritive value, factors affecting, C 882
 prevention of discoloration, C 903
 quality evaluation methods, T 374
 spoilage in, B 15
 sterilization of, B 17
 vitamin content of, effect of storage temperature, C 785
 vitamin content of, factors affecting, C 880
 Central American, composition of, C 261
 chemical, evaluation of, with animals, P 1122
 chemical agents in, detection and removal from, C 1147
 choline in, P 847
 color extracts, production of, T 299
 colors, synthetic, T 295
 composition values, C 255
 constituents, dynamic effects of, P 157
 influence on gastric function, P 112
 consumption, adequate, among farm families, P 1936, P 1937, P 1945, P 1182
 adequate family budget for, P 1178
 elementary school children and their families, P 1234
 family food, methods of studying, P 1172
 improving diets of low income families of South Carolina, P 1185
 in farmer owner and tenant tobacco farms, South Carolina, P 1174
 in southern farming areas, Arkansas, P 1173
 minimum adequate budget study, Providence, Rhode Island, P 1186
 of cotton farming families, Mississippi, P 1183
 of women with arrested tuberculosis, P 104
 survey to assist veterans' families, P 1176
 cooked and prepared, evaluation of data on nutritive value of, C 911

Food(s)

cooked in institution equipment, effect on nutritive value, C 913, C 940
 cookery, in quantity, loss of nutrients in, C 923
 deficient in iodine, raised by hydroponics, P 863
 dehydrated, oxidizing enzymes, related to nutritive value, C 961
 pectic changes in, C 1001
 digestibility and physiological fuel value, P 116
 digestion and tolerance by pre-school children of foods considered unsuitable, P 120
 distribution research, Ec 252
 dog, balanced and palatable, P 41
 dried, improved methods of preparation, C 903
 prevention of discoloration, C 903
 dynamic effect of, P 157
 economy, improvement of negro farm families in Missouri, P 1175
 edible, from vegetable wastes, Ec 202
 edible coatings for, T 556
 effect on volume and composition of pancreatic juice, P 122
 emergency, for survivors at sea, Ec 184
 epoxides in, action of, C 1142
 essential amino acids in, C 375
 evaluation for consumer use, Ec 259
 evaluation of, for protein requirements, P 246
 extraction from natural source, T 85
 fat in, C 325, C 326
 fatty, off-flavor development in, C 1123
 off-flavor development in, causes and prevention, C 733
 flavors, chemical constituents of, C 552
 for soda fountain use, T 306
 freezing of, T 431
 equipment for best results, T 55
 factors in preparation for, T 433
 literature on, Ps 61
 packaging for, T 536
 persistence of DDD and DDT, C 1144
 fresh and canned, comparative edible portions of, Ec 267
 fresh and dehydrated, comparative studies on acceptability and nutritive value, Ps 5
 fresh, nutritive value, compilation and evaluation of data, C 264
 frozen, additional uses for, T 427
 by-product utilization of, T 532
 carry home bag for, T 530
 community locker plants, design and construction, T 37, T 38
 consumer demand for, in Syracuse, Ec 268
 cookbook for, C 960
 cooking of, C 918, C 917
 d-isoascorbic acid in, C 886
 effect of freezing temperature on, C 1004
 effect on nutritive value and palatability, C 1015
 electronic sterilization, T 36

Subject Index

Food(s)

- improved papers for, T 534
- in home freezers, effect of fluctuating temperatures on quality, C 831
- methods of delivery to home, Ec 270
- microbiological survey on, B 68
- new products, T 92
- packages having protective markings for temperature changes, T 538
- packaging and wrapping, T 533
- packaging experiments, T 537
- packaging in locker plant, T 528
- packaging of, T 527
- packaging papers for, T 539
- palatability of, effect of fluctuating storage temperature, C 793
- processing for locker plant and home freezer, T 428
- quality control by drip, T 429
- review of technical literature on, Ps 60
- shipping containers and folding cartons for, T 569
- standards for, T 426
- vitamin C in, effect of fluctuating storage temperature on, C 793
- vitamin loss in, C 1003
- frozen pre-cooked, at different temperatures, C 883
 - bacteriological aspects of, B 70
 - electronics applied, for rapid defrosting, T 30
- factors affecting quality, T 495
- methods for heating, T 35
- microbiology, at different temperatures, C 833
- microorganisms in, B 69
- packaging of, T 532
- preparation and storage, C 834
- quick freezing, T 434
- refrigerated storage at different temperatures, C 833
- refrigerated storage, effect on quality, C 1011
- storage life, C 866
- thawing rates of, T 34
- thickened sauces in, freezing of, T 435
- frying of, in vegetable fats, T 139
- fumigants in, C 1143
- gums as dispersing agents for oils and vitamins in, T 277
- habits, of children from three months to six years, Ps 46
 - of children in Crippled Children's Hospital, improvement of, P 1244
 - of children, in negro school, Ps 30
 - of children, school, state-wide survey, Ps 34
 - of groups of families, Ps 28
 - of groups of military age, Ps 51
 - of men and women students in college, Ps 48
 - of non-biting flies, P 51
 - of urban families, college and high school students in Alabama, Ps 27
- Hawaiian, nutritive value of, C 262

Food(s)

- home canned, methods for safe processing of, B 73
 - retention of B vitamins in, C 881
- home dehydration of, T 397
- home preservation of, T 379
- human, effect of soil fertility on nutritive value, C 561
- hydroquinine in, safety tests on use, C 1155
- industry, administration of research, T 2
 - analytical methods, C 249
 - application of non-ionic surface-active agents to, C 1174
 - chemical requirements of, T 11
 - condiments for, from botanical materials, T 302
 - development of frozen pack and canning in Idaho, Ec 271
 - factory control laboratories, T 9
 - idle machinery, uses for, T 5
 - patents and applications, T 6
 - patents and applications, current evaluation of all, T 7
 - plant operations, T 18
 - processing and plant engineering for, T 14
 - surface fuels and heating units, T 19
- inexpensive, digestibility of, when pre-treated with dilute acid, P 119
- in frozen storage, coatings applied to wrapping papers for, T 535
 - effect of fluctuating temperatures on quality, C 829
 - effect of various temperatures on quality, C 830
 - length of storage period in relation to temperature, packaging and product, C 835
- relation of gas permeability of wrapping materials to rancidity in, T 533
- viability of various micro-organisms in, B 9
 - in glass containers, corrosion in metal closures of, T 548
 - packing of, T 540
 - process requirements for, T 542
- in school lunches, chemical analyses of, C 265
- in storage, action of food effluents on, C 765
- inorganic elements in, role of, P 447
- inspection of, C 252
- intake, during pregnancy and lactation, correlation with clinical and laboratory findings, P 59
 - effect of food and environment on, Ps 38
- graded breakfast patterns of young adults, Ps 48
- of children, ages three months to six years, Ps 46
 - psychological attitudes toward, Ps 43
- voluntary, of experimental animals, effect of diet variations on, Ps 4
- voluntary, physiology of, Ps 3
- iron in, utilized by man, P 481
- manufacture, practical operating problems in, T 15

Subject Index

Food(s)

marketing research, Ec 251
 materials, natural, nutritive value of, C 257
 methionine in, C 50
 minimal, for dental health, cost of, P 943
 mixed, vitamin A and carotene in, C 142
 natural, amino acid composition of, C 384
 niacin in, microbiological method for, C 162
 nutritive value of, C 257, C 258
 conservation of, C 909, C 910, C 990
 cooking methods for retention of, C 915
 effect of antibiotics, B 240
 effect of institutional cooking equipment on, C 913
 effect of soil fertility on, C 561
 packaged, discoloration in, causes and control of, C 1036
 elimination of oxygen in, T 558
 packaging, for protection from high humidities and temperatures, T 513
 for shipment, T 513, T 515
 in Pliofilm, T 549
 materials for, T 502
 pantothenic acid in, method for, C 165
 perishable, in domestic refrigerators, allowable storage times for, C 832
 in refrigerated storage, use of mycostatic, bactericidal agents on, B 10
 packaging of, in transparent films, T 516
 packaging problems, T 516
 preparation, effect on nutritive value, C 914
 prepared in homes, nutritive content of food consumed, C 916
 processed, dehydroascorbic acid in, C 184
 diketogulonic acid in, C 184
 incorporation of dried yeast in, C 1088
 packaging and storage of, T 523
 papers for, resistant to water and moisture, T 550
 riboflavin in, C 1041
 production, effect of farm management factors, Ec 4
 products, addition of proteins to, public acceptance of, C 1080
 canned, formulation of, T 373
 canned, new, processing times and temperature for, B 17
 canned, packing methods for, T 373
 chemically leavened, relation of flour to characteristics of, T 209
 evaluation of decolorizing materials for, C 1137
 from distiller's dried solubles, C 45
 frozen, pre-cooked, bacteriological standards for all, B 71
 improvement of flavor of, T 367
 in storage, stability of certain vitamins in, C 779
 interfacial modifiers in, C 1176
 methods of examination, C 251
 micro methods for application to, C 253
 mold inhibitor for, C 1160

Food(s)

new, T 89
 nutritional qualities, evaluation of, C 263
 packages for, non-metallic, T 518
 packaging of, T 508
 storage of, T 395
 sugar derivatives in, C 522
 surface-active agents in, C 1173
 technological, new and improved, T 90
 with low fat, causes and control of rancidity in, C 735
 wrapper for, improvement of, T 560
 protein quality of, evaluation and compilation of data on, C 373
 quality improvement, by packaging and processing, T 500
 quality of, comparison of like commodities from different sections, C 266
 rancidity, prevention in, C 745
 raw, and processed, requirements for packaging of, T 521
 maturity and quality, methods for, C 427
 vitamins, factors affecting, C 679
 refrigerated, thermal characteristics of, T 44
 relative economy of, in adequate diet in New York State, P 1180
 research, machinery improvement, T 10
 steam, superheated, T 17
 rodenticides for, T 594
 sampling methods, C 275
 selection, habits, preferences, and practices in, by Iowa families, Ps 29
 served in large scale feeding establishments, nutritive value of, Ps 14
 southern, staple, improvement of nutritive value, C 1096
 specialties, effect of different cooking methods on nutritive value, C 912
 specific heat of, T 42
 spoilage, causes of, B 2
 relation to nutritive value, Ps 18
 stability of, from reactions between carbohydrate and amino acids, C 708
 stored, ascorbic acid in, C 791
 control of infestation, Ec 130
 strained, retention of folic acid in, C 1042
 supply, food habits and cost, among natives of Alaska, P 1214
 United States per capita, 1909 to present, P 1170
 synthetic d 1 lysine in, C 376
 synthetic d 1 methionine in, C 376
 technology, machinery for, T 3
 temperature, effect on gastro-intestinal function and circulations, P 121
 thiamine assay methods on, C 156
 tropical, ascorbic acid, folic acid, niacin, riboflavin, and thiamine in, C 270
 uncooked, nutritive value of, compilation and evaluation of data, C 264
 varieties, new, special dietary value, T 91
 vitamin in, retention of, C 275
 vitamin A, oxidation of, C 766

Subject Index

Food(s)

- vitamin B in, C 155
 - methods of assay for, C 155
 - microbiological and chemical methods for, C 274
- vitamin E in, C 279
- warehouse, refrigerated, T 45
 - refrigerated storage of packaged goods in, T 47
- waste, from processing plants, disposal of, T 12
- with high fat content, in storage, rancidity of, C 747
- with high fat content, use of antioxidants for stabilization of, C 1127

Forages

- dehydrated, green, ascorbic acid and carotene in, C 998
- dried, and ensiled, for growth, fattening, and milk production, C 591
- and ensiled, nutritive value of, C 591
- stabilization of carotene in, C 517
- feed value, effect of different methods of processing, Ec 348
- handling costs, equipment requirements and feed value, Ec 348
- nutritive value, as affected by phosphate fertilization, Ec 55
 - effect of fertilization on, C 588
 - effect of soil qualities on, C 584
- preservation of, on farm, Ec 21
- range, composition of, as related to animal nutrition, Ec 40

Formic Acid

- formation by yeast, B 213

Foxes

- breeding, feeding, diseases of, P 1253

Freezing

- apples, T 462
- apricots, whole, untreated, T 457
- berries, adaptability for, C 633
- eggs, methods and equipment for, T 438
- elderberries, T 459
- figs, T 481
 - whole, untreated, T 457
- foods, T 431
 - equipment for best results, T 55
 - factors in preparation for, T 433
 - literature on, Ps 61
 - persistence of DDD and DDT in, C 1144
 - pre-cooked, effect on quality, C 1011
- for preserving and marketing horticultural products, Ec 318
- fruits, adaptability for, C 633
 - use of inverted syrups in, T 486
 - varietal adaptability, C 634
 - varieties, suitability for, C 638
- fruits and vegetables, C 1065, T 455, T 456, T 466, T 468, T 469
 - effect on riboflavin, C 910
 - effect on vitamin C, C 910
 - effect on vitamin content, C 948
 - improvement of methods of, T 382
 - varietal adaptation, C 635
 - varieties suitable, C 636, C 644
- grapes, whole, untreated, T 457

Freezing

- green vegetable varieties, C 639
- home, of foods, rapid methods, T 430
- fruits and vegetables, methods of, T 479
- lamb, effect on nutritive value, C 1009
 - temperature effect on juiciness, C 1010
- lobsters, whole live, T 447
- meat, methods and equipment for, T 438
 - products, at low temperature, T 445
- peach, varietal adaptability, C 637
 - varieties suitable, C 632
 - whole, untreated, T 457
- pies, T 496
- potatoes, pre-cooked, T 473
- poultry, methods and equipment for, T 438
 - products, at low temperatures, T 445
- quick, agricultural products, T 448
 - citrus juices, T 450
 - foods, pre-cooked, T 434
 - fruit and vegetable, T 460, T 461
 - Hawaiian, fruits, T 458
 - Irish potatoes, T 474
 - okra, T 472
 - pre-cooked foods, T 434
 - small fruits and vegetables, T 480
- saucers, thickened, used in pre-cooked frozen foods, T 435
- slush, of fruit purees, T 453
- strawberry varieties, adaptability to, C 637
- studies of, T 425
- turkey products, T 446
- vegetables, T-476
 - adaptability for, C 633
 - effect of variety, soil type and cultural treatment on, C 640
 - effect on vitamins, C 649
 - purees and juices, T 477
- watermelon balls, T 481

Frozen Food

- business, integration with agricultural production, Kansas, Ec 263
- lockers, business analysis, Ec 260, Ec 261
- economics of operations, Ec 262
 - home and commercial relative cost, Ec 265
- operation and merchandizing of foods, Ec 266

Fruits (See also specific fruits)

- ascorbic acid in, C 424
 - in less common, C 410
- candied, production of, T 181
- canned, bacterial spoilage of, B 74
 - vitamin content of, effect of storage temperatures on, C 788
 - vitamin content of, effect of storage time and temperatures on, C 789
- carotene in, C 424
- chemical composition of, C 633
- citrus, bactericides, for preservation and non-shrinking of, C 1150
 - biochemical studies of, C 420
 - breeding, for resistance to disease, P 1564
- characterization of carbohydrate constituents, C 421
- citrin in, C 422
- coating for preservation and non-shrinking, C 1150

Subject Index

Fruits

decay and deterioration, P 1563
 fungicides for preservation and non-shrinking, C 1150
 improved varieties through breeding, P 1527
 inositol in, C 422
 methods of preserving freshness, T 76
 mineral factors in, C 422
 niacin in, C 422
 citrus, physiological effect of sprays, insects and insecticides on, Ec 106
 processing, application of submerged combustion to, T 69
 proteins in, C 422
 riboflavin in, C 422
 storage and handling problems, Ec 320
 sugars in, C 422
 subtropical, refrigerated storage of, C 874
 concentrates, volatile, manufacture of, T 180
 crushed, fresh, cold processed gelled products from, T 451
 dehydrated, utilization of, Ec 200
 dehydration of, T 418
 use of sulphur dioxide in, T 417
 dried, chemistry of darkening of, C 717
 in storage, C 798
 in storage, factors affecting darkening, C 799
 packed in hermetically sealed containers, T 582
 powder made from, with added dextrose, T 423
 processing and storage of, T 418
 spoilage of, micro-organisms causing, B 77
 with high moisture content, fumigation with epoxides, for preservation, C 1145
 effect of soil treatment and variety on production of, Ec 59
 effect of sugars on, T 483
 factors affecting shipping, and storage quality, Ec 324
 flavors, natural, composition of, C 549
 freezing adaptability of, C 633
 use of inverted syrups in, T 485
 frozen, ascorbic acid in, effect of different storage temperatures and periods, C 876
 carotene in, effect of different storage temperatures and periods, C 876
 flavors of, C 1018
 products prepared from, T 184
 quality, effect of sugar on, T 484
 role of oxidative enzymes in, C 878
 spoilage of, chemical compounds used in prevention, C 1151
 use of various sugars and syrups on, T 489
 home canned, stored, nutritive value and quality of, B 75
 juices, and concentrates, frozen pack, refrigerated storage, vitamin C changes in, C 875
 and concentrates, pre-treatments and containers, for, C 875

Fruits

and concentrates, role of enzymes in stability, C 875
 canned, vitamin content of, effect of storage time and temperature, C 789
 citrus, canning and concentration, T 388
 citrus peel oil in, method of estimation, T 70
 methods of improving quality, T 172
 methods of lowering processing costs, T 175
 methods of preparing new, T 174
 processing of, T 450
 quick freezing of, T 450
 concentrates, factors affecting quality, T 170
 concentration of, T 167 - T 169
 enrichment, mixtures of vitamins, C 1107
 frozen and fresh, cold processed gelled products from, T 451
 glass packed, factors affecting quality of, C 1035
 granules or powder, added dextrose, T 423
 prepared from whole frozen fruit, T 184
 life lengthened, in refrigerated room, C 790
 marketing of, Ec 328
 packaging of, for consumer, T 577
 preserves, fading of red color in, method of treatment, C 904
 products, frozen, T 449
 gelled, cold processed, from fresh or frozen juices, purees and crushed fruits, T 451
 preparation of, from whole frozen fruits, T 184
 purees, frozen, improvement of methods for, T 453
 quick freezing, Hawaiian, T 458
 relative effectiveness and safety of fungicides and insecticides, Ec 120
 respiratory enzymes, C 415
 small, effect of transportation on quality, Ec 331
 efficiency of various washers on, T 73
 new varieties through breeding, P 1535
 varieties, changes during processing, C 641
 varieties, quality, C 641
 soft, frozen, pre-freezing treatment, in relation to quality, C 1020
 soil management for, Ec 58
 stone, breeding for resistance to disease, P 1562
 tree insect, Ec 119
 varieties and strains, vitamin content to determine nutritional value, C 416
 varieties suitable for freezing, C 424, C 638
 volatile products in, C 415
 wrapping papers for, T 578
 Fruits and Vegetables
 amino acids in, C 414
 blanched, enzyme tests on, C 1068
 nutritive value after processing and storage, C 1068

Subject Index

Fruits and Vegetables

- blanching and cooling for freezing, C 1066
- brining of, T 182
- canned, nutritional investigation, during processing and final product, C 890
- nutritive value of, vitamin losses during storage, C 892
- canning of, T 378, T 381, T 382, T 387
- canning problems, T 380
- carotene in, C 413
- chlorine dioxide bactericide treatment of, C 1140
- comparative cost of home and commercially frozen, Ec 264
- consumer unit packaging, Ec 317, Ec 319
- control of market diseases, P 1561
- cooked, effect on riboflavin, C 910
- effect on vitamin C, C 910
- cooking and freezing rates of, refrigerated air as heat exchanging medium, T 56
- cracked ice, and retaining vitamin C, Ec 309, Ec 311, Ec 312
- effect on market losses, Ec 311
- in display, consumer reaction to, Ec 310
- in preserving quality, Ec 304, Ec 305, Ec 306, Ec 308
- retention of weight, Ec 312
- cut, prevention of discoloration of, C 792
- dehydration, by blast of heated air, T 414
- from frozen state, nutritive value and quality, C 985
- improvement of methods of, T 382
- microchemical and histological studies, C 991
- dried, contamination of, with bacteria, yeasts and molds, methods of control, B 78
- effect of home cooking on quality and nutritive value, C 947
- equipment for deep bed chilling or freezing of, T 50
- equipment for pre-processing of, T 51
- evaluation of varieties of, C 628
- factors affecting preservation and processing of, C 642
- factors responsible for vitamin destruction, abnormal color and flavor, C 783
- for commercial canning, C 645
- for baby foods, new varieties, P 1523, P 1524
- freezing of, T 455, T 456, T 468, T 469, C 1065
- improving methods of, T 382
- in large package sizes, T 468
- varieties and stage of maturity most suitable, T 466
- fresh, objective method for quality, C 406
- packaging, Ec 314
- frozen, effect of packaging and storage on quality, T 478
- effect of treatment on palatability and nutritive value, C 643
- effect of variety on nutritive value and palatability, C 643
- effect on riboflavin, C 910
- effect on vitamin C, C 910

Fruits and Vegetables

- nutritive value of, factors affecting, C 1023
- quality of, factors affecting, C 1023
- retention of nutritive value, in household refrigerator, C 869
- vitamin retention of, effect of processing and storage on, C 870
- vitamin C in, C 1022
- frozen storage, of, T 470
- glass packed, factors affecting quality of, C 1035
- handling, storage and transportation, literature research on, Ps 62
- Hawaiian, carotenoids in, P 504
- high in nutritive value, selection of, C 630
- home canned, and stored, nutritive value and quality, B 75
- improved methods for processing, C 892
- survey of nutritive value, C 891
- home canning of, B 75
- home preservation, processes used, C 893
- home processing, equipment for, effect on nutritive value, C 1016
- hydrolysis of proteins in, C 414
- in frozen storage, role of oxidative enzymes on, C 878
- in storage, effect on riboflavin in, C 910
- in storage, effect on vitamin C, C 910
- marketing methods in Pennsylvania, Ec 323
- nutritive value of, C 405
- effect of home cooking on, C 947
- effect of treatments on, C 643
- effect of variety on, C 643
- optimum storage conditions, Ec 321
- packaged, effect on quality and prices, Ec 313
- packaging, and distribution, Ec 314, Ec 316
- pre-freezing treatment for, T 466
- preservation, C 1065, T 379, T 411
- processes used, C 893
- under home conditions, T 467
- processed, factors affecting abnormal color and flavor, C 786
- nutritive value as affected by enzyme content, C 783
- nutritive value as affected by storage, C 371
- objective method for quality, C 406
- vitamin assay, microbiological, C 1070
- vitamin destruction in, factors affecting, C 786
- processing, C 1064, T 410
- high frequency radio power, T 27
- production costs and efficiency, Washington, Ec 322
- products, carotene assays, C 785
- niacin assays, C 785
- role of hydrolytic enzymes in, C 215
- role of pectin in, C 215
- thiamine assays, C 785
- quality of, C 443
- quick freezing, improving methods of, T 460, T 461
- machines for, T 52
- small varieties, T 480
- reheated, effect on vitamin C, C 910

Subject Index

Fruits and Vegetables

- effect on riboflavin, C 910
 - relationship between maturity, quality and yield of commercial, C 683
 - retardation of enzymes activity by chemical inhibitors, C 1149
 - served to college women, ascorbic acid in, C 411
 - skin texture of, effect of complex phosphates on, T 392
 - supply for freezing industry, Ec 325
 - thiamine in, C 413
 - tropical and subtropical, composition of, factors affecting, C 574
 - tropical and subtropical, nutritive value of, factors affecting, C 574
 - preservation and utilization, T 390
 - varietal adaptation, for freezing, C 634
 - varietal adaptation, for quick freezing, C 635
 - varietal differences in vitamin and mineral content, C 647
 - varieties, breeding for commercial, C 629
 - for freezing, C 644, T 478
 - for home freezing, T 479
 - for quick freeze preservation, C 636
 - suitability for canning, C 644
 - suitability for dehydration, C 644
 - variety testing, P 1521 - P 1541
 - vitamin C in, C 413
 - vitamin content, as related to handling, transportation and storage, C 784
 - vitamins in, C 409
 - effect of canning, cooking, freezing on, C 948
 - wastes, use for culture medium, Ec 190
 - yield and quality, factors affecting, P 1475
- ### Fructose
- metabolism of, P 377
 - relation to endocrine balance, P 377
 - relation to insulin, P 377
 - utilization of, P 352
- ### Frying
- foods, in vegetable fats, T 139
- ### Fuel Value
- physiological, of foods, P 116
- ### Fumaric Acid
- metabolism, method, P 380
- ### Fumigants
- in food, action of, C 1142
 - in food, treated, C 1143
- ### Fumigation
- with epoxides, dried fruits of high moisture content, preservation of, C 1145
- ### Fungicides
- application, new techniques in, Ec 104
 - control of tomato disease by, P 1576
 - effectiveness and safety on fruits, Ec 120
 - for preservation of whole citrus fruits, C 1150
 - new, chemicals for use of, Ec 103
 - new, evaluation and development, P 1157
- ### Furan Compounds
- influence of environmental conditions on formation of, C 712

Furunculosis

- value of sulfa and other drugs, P 1011

G

Galactose

- metabolism, in lactose synthesis, P 375
- intermediary, P 376

Galacturonic Acid, C 220

Game

- wild of Colorado, nutritive value of, C 362
- preparation of, C 362

Gastrectomy

- nutritional factors in, P 1097
- subtotal, nutritional factors relating to, P 1098

Gastric

- acidity, casein and casein hydrolyzates in controlling, P 111
- relation to bone formation, P 715
- blood flow in relation to gastric secretion, P 110
- function, influence of food constituents on, P 112
- mucosa, effect of spices and condiments, P 113
- intake of radioactive phosphorous by, P 469
- secretions, effect of spices and condiments, P 113
- relation to gastric blood flow, P 110
- tissues, chromium in, P 496
- tumors, chromium in, P 496

Gastro-intestinal

- disease, absorption in, P 1100
- disorders, sorbitan esters for increased assimilability of food in, P 1012
- function, and circulations effect of food temperature, P 121
- operations, absorption following, P 1099
- tract, activity during intravenous alimentation, P 336

Geese

- depot fat in, C 355
- lipins in, C 355
- phospholipins in, C 355
- riboflavin in, C 355

Gelatin

- as supplement with protein hydrolyzate, P 320
- characteristics of starches, methods for determining, C 118
- dehydration of, T 422
- intravenous administration, effect on nitrogen balance, P 339
- relationship to nutrition, C 622

Geriatrics

- and vitamins, P 106
- effect of glutamic acid supplementation performance, P 1014
- effect of vitamin supplementation, P 1013
- vitamin administration, P 107

Germ-free

- animals, use in study of dental caries, P 960

Subject Index

- Germ-free
 - chickens, for study of unknown factors in nutrition, B 164
- Globulins
 - fractions from milk whey, chemistry of, C 386
 - serum content of, P 695
- Glossitis
 - effect of B vitamins and iron in, P 848
- Glucosamine
 - and chitin, P 625
 - in protein hydrolysates, C 26
- Glucose
 - derivatives from sugar, C 94
 - determination in presence of maltose, C 99
 - determination in presence of sucrose, C 99
 - determination of minute quantities, C 100
 - metabolism in muscle extracts, P 366
 - 1- phosphate, synthesis of, C 207
 - utilization, P 352
- Glucoside, flavone, studies of, C 105
- Glutamate
 - monosodium, production of, T 249, T 351
- Glutamic Acid
 - d, l, and i, synthesis of, C 42
 - in elderly subjects, effect on performance, P 1014
 - in epilepsy, P 1068, P 1069
 - in human blood plasma, C 38
 - in human blood serum, C 38
 - in nervous system, P 1065
 - in schizophrenia, P 1066
 - relation of rate of administration to nausea, P 341
 - relation of rate of administration to urinary wastage of nitrogen, P 341
 - synthetic methods for, C 43
- Glutamine
 - mechanism of formation, P 681
- Glutaric Acid
 - alpha keto, production by micro-organisms, B 230
- Glutathione
 - process improvement in manufacture of, T 248
- Glycerides
 - in fats, composition of, C 64
 - in fats, temperature-pressure-solubility relationships of, C 66
 - in mineral oil, C 150
 - in oils, composition of, C 64
 - in oils, temperature-pressure-solubility relationships of, C 66
- Glycine
 - metabolism in pathological conditions, P 296
- Glycosuria
 - effect of anti vitamins in, P 731
- Goat
 - effect of diseases on milk of, C 310
- Golter
 - due to iodine deficient foods, P 863
 - experimental, role of diet in production, P 1103
- Gossypol
 - and other cottonseed pigments, effect on rats, P 1112
- Grain
 - breeding and selection of varieties, P 1483, P 1546
 - combinations for poultry feed, effect on meat content, C 615
 - crisis (world) of 1945 - 1948, a book, Ps 74
 - milled, microbiology of, B 86
 - milling products, utilization for food and feeds, Ec 231
 - nutrition studies of, C 515
 - preservation of, on farm, Ec 21
 - process of sprouting, for food purposes, T 241
 - production, effect of different amounts, sources, and varieties of fertilizers on, Ec 33
 - products, enrichment with vitamin and minerals, C 1104
 - silage, in cattle feeding, Ec 25
 - sorghums, bread from, T 235
 - extraction of starch from, for processing into sirups, T 217
 - process for wet milling of, T 217
 - stored, control of infestation, Ec 130
 - vitamin B complex content of, effect of fertilizer on, C 586
- Grapefruit
 - juice, canned, processing of, T 171
 - chemical composition of, T 171
 - seed oil, C 342
- Grapes
 - chemical composition of color in, C 553
 - chemistry of flavor, C 550
 - development of color in, C 553
 - extraction of color in, C 553
 - fertilizer experiments, Ec 70
 - freezing of, T 457
 - juice, removal of potassium from potassium acid tartrate from, T 72
 - varietal characteristics of, T 179
 - maturity, as affecting quality of wine, C 686
 - modification of juice from, T 72
 - new varieties through breeding, P 1538
 - packaging for freezing, T 457
 - products, development of, T 179
 - sirups, refined, production of, T 71
 - vineyard, concord, soil management in, Ec 69
- Grasses
 - for poultry, vitamin A in, C 511
 - for poultry pasture, Ec 38
 - immature, for chickens, C 518
 - pasture, amino acids in, C 510
 - evaluation of, C 510
 - mineral content of, C 508
 - physiological development related to nutritional value, C 502
- Gravies
 - stability, during freezing, storage, heating, C 865
- Growth
 - amino acid requirement for, in dogs, P 43
 - and maintenance, effect of army rations with experimental animals, P 131

Subject Index

Growth

and repair of liver, role of biotin, and protein in, P 719
as affected by different levels of yeast, P 272
controlability of, by nutrition, P 138
effect of cereal diet on, P 382
effect of cobalt on, P 486
effect of egg in diet on, P 236
effect of enforced exercise on, P 382
effect of feeding rations low in calcium on, P 454
effects of testosterone propionate and anterior pituitary growth hormone on, P 649
effect of tocopherol deficiency on, P 38
effect of vitamin B complex on, relation of temperature, P 529
effect on chemical composition of tissues, P 139
essentials, new, for chick and rat, P 614
experiments with hormones, P 24
factor, animal protein unidentified, for chicks, P 613
new, for rat, P 614
factors, for guinea pigs, P 47
for rabbits, P 46
in milk fractions, C 330
in yeast, C 198
in yeast hydrolysates, C 198
strepogenin as, P 215
unidentified, in condensed fish solubles, C 370
unidentified, in distiller's dried solubles, C 199
unidentified, in distiller's dried solubles, crystallization and identification of, C 201
unidentified required for tetrahymena, C 200
hormone, comparison with testosterone propionate, P 647
in childhood, P 181
in mouse requirements for, P 32
leucocytes in, P 707
materials from waste fish water, Ec 180
minimum fat requirements for hormone experiments, P 24
minimum protein for, P 195
minimum protein for, on rice-beans-casein diet, P 274
neoplastic, endocrine imbalance in, P 933
nutritional factors involved in, P 136
of bacteria, indicator for, B 5
of children, P 179
of connective tissue in relation to diet, P 140
of male mouse on synthetic diets, P 33
of rats, factors affecting on niacin tryptophane deficient diets, P 765
of rats on purified diet, P 146
of wheat kernel, C 475
on vitamin B low diets, effect of type of fat, P 785
promoting values of sulfur containing amino acids, C 50

Growth

protein factors, unidentified, animal and microbiological, P 611
rate in hyperthyroid rats, effect of vitamin B complex, P 1102
relation of d-amino acids to, P 294, P 223
relation of methionine to, P 393
relation of mineral salts to, P 450
relation to basal metabolism, P 153
stimulated by testosterone propionate in mouse, P 650
by testosterone propionate in rat, P 64
stimulating properties of organic arsenicals in poultry, P 622
vaccenic acid, role in, P 416, P 418
value of meats for, in rats, P 143, P 144, P 145
value of protein concentrates for, P 247
value of sunflower seed meal for albino rats, P 263
Guanidacetic acid
utilization of, P 211
Guinea pig
antistiffness factor for, P 617 - P 619
requirements for reproduction in, P 1282
Gulonic acid
diketo, analysis of processed foods for, C 184
in presence of dehydroascorbic and ascorbic acid, C 184
Gum Arabic, C 555
Gums
as dispersing agents for oils and vitamins in foods, T 277
chewing, additives for dental caries control, P 963
base ingredients, characteristics of, C 556
gum for manufacture of, T 276
objective evaluation of, C 557
toxicity of some species of latex used in, P 1115
use of paraffin in pharmaceutical form, T 275
from seaweed, as stabilizers in certain food products, T 279
natural water soluble, as dispersing and suspending agents in beverages, C 1171

H

Haddock

abundance, survival and migration, Ec 141

Hair

loss of color, relation to vitamin deficiencies, P 840

Hams

cured and smoked, methods of storing without refrigeration, C 772
curing and smoking of, basic principles, T 165
curing of, effect of temperature on, T 152
curing, quick, methods of injection for, T 151
to lower moisture losses in storage, T 572

Subject Index

- Hams**
 - smoke oven for, T 154
 - Hay(s)**
 - alfalfa, carotene in, C 506
 - effect of method of storage on nutritive value of, C 827
 - land improvement for, Ec 19
 - preservation of, C 591
 - production under Maine conditions, factors affecting, Ec 20
 - timothy, carotene in, C 504
 - vitamin D assays of, C 513
 - Heart muscle**
 - effect of nutritional deficiencies on, P 982
 - respiration in, P 808
 - Heat**
 - effect on protein value, P 263, P 266
 - labile factor for cats, P 49
 - producing effect of proteins related to biologic value, P 276
 - Hematology**
 - in relation to dental disorders, P 945
 - Hemostatic agents**
 - materials useful as, T 365
 - Hepatitis**
 - effects of human plasma injections on, P 1049
 - viral, utilization of methionine in, P 291
 - Herbs**
 - production of, P 1505
 - Herbicides**
 - development of, P 1467
 - new chemicals as, Ec 103
 - Heredity**
 - effect on induced cancer in animals, P 915
 - Histamine**
 - antagonists, synthesis of possible, P 872
 - shock, effect of rutin in, P 606
 - Histidine**
 - destruction in pregnancy, P 212
 - effect on production of cobalt polycythemia, P 1076
 - metabolism, intermediary, P 212
 - Histology**
 - of muscle and blood, P 587
 - Homogenization**
 - efficiency of, by size of fat globules, T 62
 - of milk, C 1049, C 1051
 - of milk, cream, and ice cream mix, T 94
 - Honey**
 - vitamins in, C 530
 - Hormones**
 - action, role of B complex on, P 661
 - applications of, for increased production of snap beans, Ec 114
 - controlling lactation in livestock, P 1388
 - effect of feeding, gain and quality of carcass of beef cattle and lambs, P 1352
 - effect of, on poultry and egg production, P 1365
 - effect on milk secretion, P 1355
 - effect on specific action of nutrients, P 668
 - influence on activity of enzymes, P 798
 - influence on bone formation, P 798
 - influence on nutrition, P 636
 - ovarian activity, effect in diabetes mellitus, P 997
 - plant, effect on cereal starches and proteins of wheat, C 666
 - sex, effect on ascorbic acid deficiency, P 852
 - effect on experimental liver injury, P 1053
 - steroid, new synthetic methods for, C 236
 - thyroid, effect on ascorbic acid deficiency, P 852
 - effect on milk secretion, P 1355
 - various metabolic effects of, P 636
 - Horses**
 - and mules, cardiorespiratory responses as measure of work capacity, P 1310
 - breeding and feeding, P 1252
 - mares, pregnancy diagnosis of, P 1311
 - vitamin B requirements of, P 1309
 - Hydrocarbons**
 - chlorinated, injury to liver prevented by vitamin E, P 601
 - effects on requirements and metabolism of vitamins, P 799
 - Hydrocephalus**
 - possible relation of nutrition to, P 1015
 - Hydrogen**
 - heavy, use in study of carbohydrate metabolism, P 390
 - peroxide, as preserving agent in food production, C 1153
 - Hydroquinine**
 - in foods, safety tests on the use, C 1155
 - Hypertension**
 - arterial, dietary factors, salt, sugar, protein, P 1162
 - cardiovascular, rice and fruit diet in, P 1165
 - effect on dietary factors in, P 1166
 - effect of low protein diets on, P 1159
 - effect of nutrition in prevention, protein role in, P 1157
 - effect of sodium on, P 1160, P 1167
 - effect of vitamin "P" like materials in, P 1168
 - experimental renal, effect of protein intake, with and without choline deficiency, P 1163
 - requirements of inorganic salts in rats, P 1158, P 1166
 - therapeutic preparations for, T 349
 - Hypochlorites**
 - in egg material, germicidal efficiencies of, C 1152
 - Hypoglycemic lag**
 - effects of breakfasts on, P 159
 - Hypoproteinemia**
 - amino acids in blood and urine, P 1018
 - nitrogen balance in, P 1017
 - of endogenous and exogenous origins, P 1016
 - Hypoprote thrombinemia**
 - in liver injury, effect of vitamin K, P 1047
- I**
- Ice Cream**
 - application of Hellig lactic method to, C 285
 - calcium in, C 291
 - containers, gallon, sectional, T 567
 - emulsifiers for, C 1167
 - nutritive value of, C 324
 - physiological effects of, C 324
 - quality of, factors affecting, B 34
 - stabilizer in, C 1165 - C 1167
 - vanilla and chocolate, bacteriological study, of, B 33
 - whey powder in manufacture of, T 111
 - Icterus**
 - due to nutritional deficiency of B complex, P 1026
 - Immobilization**
 - effects on metabolism and circulation, P 152
 - Immune body**
 - formation, dietary factors, P 1020, P 1027
 - Immunological relations of human bovine avian type proteins, P 695**
 - Infants**
 - absorption comparative of three vitamin A preparations by, P 170

Subject Index

Infants

amino acid requirements for, P 77
 anaerobic metabolism in, P 168
 and children, optimum vitamin D for bone development in, P 85
 changes in blood amino acids following protein ingestion by, P 711
 fed breast and cow's milk, P 55
 feeding, completely supplemented, evaporated milk for, P 83
 free selection of food and feeding interval, Ps 8
 folic acid metabolism in, P 175
 foods, available iron as related to total iron content of, C 183, C 280
 canned, container evaluation of, T 576
 canned, improvements in, for increased marketable life, T 576
 canned, prevention of syneresis of starch in, T 165
 frozen, puree, sterile packaging of, T 164
 improvement in, T 95
 in storage, comparison of glass and tin packed, C 1037
 methods of processing, T 164
 packed in glass, sterilization of, B 13
 production of new equipment, T 4
 products, improvement of, T 163
 varieties, fruit and vegetables, for, P 1523, P 1524
 formula, terminal heating of, C 1052
 health, relation of maternal diet to, P 52, P 53, P 54, P 60
 newborn, effect of inorganic iron in diet of, P 177
 newborn, electrolyte balance, P 176
 metabolism and respiratory exchange, P 167
 metabolism of vitamin C by, P 169
 nutrition, amino acids in, P 84
 comparison of casein and lactalbumin in, P 84
 factors responsible for improved health in, P 75
 protein and vitamin interrelation in, P 782
 vitamin D in, P 84
 voluntary intake and instinct for optimal protein in, P 80
 nutritional disturbances associated with disease, P 178
 status affected by meat in diet, P 171
 parenteral amino acids as exclusive source of protein, P 174
 premature, effect of inorganic iron in diet, of, P 177
 electrolyte balance, P 176
 metabolism of, P 167
 metabolism of creatine, P 173
 preparations for nutrition of, T 349
 relation between diet and rate of gain in, P 172
 respiratory exchange, P 167
 requirement for vitamin B complex by, P 81
 for riboflavin by, P 82
 vitamin A absorption in, P 185, P 170

Infections

effect of nutritional deficiencies on specific diseases, P 1029
 effect of vitamin deficiencies in monkeys, P 1030
 effect on metabolism and dental health, P 943
 hematological and bacteriological aspects of chronic infections, P 1021
 in figs, introduced during caprification, P 1567
 influence of diets on resistance, P 1019, P 1028
 malarial effect of vitamin deficiencies and nutritive status, P 1023, P 1024
 mycotic, effect of diet, P 1022
 pneumonia, relation of diet to susceptibility, P 1025
 vitamin B complex for liver protection in, P 1026
 resistance to, effect of vitamin deficiencies, P 816
 resistance, viral, effect of amino acids, P 1031
 vitamin requirements in, P 102

Inhibitors

chemical, in fruits and vegetables, C 1149
 effect on fat auto-oxidation, C 739
 enzyme and nutritional significance, P 728
 in nutrition, P 727
 in legume feeds, counter measures for, P 728
 of intracellular enzymes, P 633
 of polysaccharide synthesis in vitro, P 381
 of pteroylglutamic acid conjugase, effect of nucleic acid, P 739
 of vitamins, analogues of pyridoxine
 thiamine, riboflavin and biotin, P 736
 mold, for food products, C 1160
 mold and rope, in bread doughs, C 1162
 phosphatase in prevention of dental caries, P 492

Injury

evaluation, survival time and treatment, P 1033
 prevention and treatment, P 142

Inositol

a lipotropic factor, P 391, P 397
 in citrus fruits, C 422
 metabolism, effects in muscular dystrophy, P 1003
 production of, C 169
 relation to carbohydrates, P 775
 relation to structure of streptadine, C 170

Insecticides

applications of, for increased production of snap beans, Ec 114
 new techniques, Ec 104
 as applied to plant sanitation and other health aspects, B 191
 development of, Ec 101
 effectiveness and safety on fruits, Ec 120
 new chemicals for use of, Ec 103
 physiological effects on citrus fruits, Ec 106
 sugar derivatives as, Ec 102

Subject Index

- Insecticides
 - testing of, Ec 99, Ec 100
 - toxic effects on fish, Ec 151, Ec 154
- Insect Control
 - and amino acids, Ec 107
- Insects
 - attacking fruit, control of, Ec 125
 - attacking vegetable crops, control of, Ec 112
 - control and disease, Ec 111
 - economic, control of, by application of chemicals, Ec 108
 - fruit-tree, Ec 119
 - nutrition of, affecting response to attractants and repellants, Ec 109
 - pests, affecting dairying, Ec 129
 - prevalence, relation to abundance of trout, Ec 133
 - vegetable, control of, Ec 113
- Insect Vectors
 - of crop diseases, Ec 110
- Insulin
 - action, cellular mechanism, P 643
 - effect on, intestinal secretion, P 644
 - metabolic reactions in vitro, Effect of, C 240
 - relation to fructose metabolism, P 377
 - resistance, P 645
- Intestine
 - absorption in deficiency diseases in, P 807
 - absorption of cellulose in, factors affecting, B 174
 - flora in, effect of dietary fat, in calves, B 175
 - effect of distiller's dried solubles on vitamin synthesis in chick, B 176
 - relation to utilization of different proteins in protein depleted dogs, B 178
 - relation to vitamin requirements, B 162
 - responsible for cellular decomposition, B 174
 - role in animal nutrition, B 163
 - synthesis of thiamine and riboflavin, effect of feed in dairy cows, B 173
 - synthesis of water soluble vitamins in livestock, B 172
 - lesions of, effect on blood volume, P 685
 - secretion of, effect of thyroid on, P 640
 - influence of insulin, P 644
 - influence of thyroid on, P 642
 - synthesis in, influence of dietary fat, B 168, B 175
 - of amino acids in rat, B 181
 - of B vitamins in horse, P 1309
 - of B vitamins, P 13
 - of niacin, B 170
 - of niacin in rat, B 166
 - of niacin, influence of pyridoxine deficiency, B 169
 - of vitamins, effect of surgical removal of intestine, B 167
- Intravenous Feeding
 - fat administration, P 404 - P 407
 - feeding, activity of gastro-intestinal tract during, P 336
 - of amino acids, P 334, P 337
- Intravenous Feeding
 - amino acids, effect on appetite, P 338
 - gelatin, P 339
 - hydrolyzed casein, P 339
 - metabolic changes during, P 336
 - peptides, P 340
 - urinary vitamin, excretion in, P 336
 - injection, metabolic changes during, P 336
 - solutions, T 364
 - therapy and nitrogen requirement, P 335
- Iodacetate
 - a phosphatase inhibitor in dental caries, P 492
- Iodine
 - deficient foods, goiter due to, P 863
 - in crops in Indiana, C 569
 - in pregnancy, P 493
 - in serum albumin, P 493
 - in soil in Indiana, C 569
 - in water in Indiana, C 569
 - metabolism, and thyroid function, P 494, P 495
 - metabolism by thyroid gland, influence of vitamin A, P 768
 - radioactive, in study of iodine metabolism, P 494
- Iron
 - absorption, P 475
 - and loss during menstrual periods, P 482
 - using radioactive iron, P 477, P 478
 - compounds, radioactive, effect of phytates on absorption, P 474
 - radioactive, utilization of, P 477, P 478
 - effect of inorganic in diet of infants, P 177
 - effect on glossitis, P 848
 - excretion, using radioactive iron, P 478
 - from beef, metabolism of, P 21
 - in bread, enriched white, availability and conservation, C 1106
 - in cane sirups, C 526
 - in corn, field, grown in South, C 407
 - in cornbread, availability and conservation, C 1106
 - in grits, availability and conservation, C 1106
 - in hemoglobin synthesis, P 706
 - in infant foods, available as related to total, C 183, C 280
 - in milk, determination of best method for analyzing, C 308
 - in molasses, C 526
 - in potatoes, C 443
 - in split peas, cooked, availability of, C 943
 - in turnip greens, C 408
 - metabolism, and hypophysis, P 483
 - in women, P 21
 - relation of ascorbic acid to, P 1097
 - radioactive absorption, in pregnancy, P 877
 - relation of certain reducing agents, P 1097
 - seasonal variations in vertebrates and invertebrates, P 484
 - relative availability of different forms, P 479
 - requirement of adolescent girl, P 20
 - requirement of women, P 21
 - solubility of, in metal containers packed with food, T 520

Subject Index

Iron

- therapy in refractory patients, P 702
 - utilization, human, P 475, P 480
 - using radioactive iron, P 478
- Ischmia**
- local metabolic changes following, P 683
- Isotope(s)**
- as tracers in metabolism, P 449
 - C 14 studies with folic acid, P 574
 - calcium, effect of phytates on absorption of, P 462
 - carbon, in study of metabolism, P 217
 - in study of vitamin A function, P 521
 - in synthesis of organic compounds, P 211
 - copper, in study of metabolism in animals, P 1291, P 1296
 - in study of iodine metabolism, P 494
 - derivatives of amino acids, micro-analysis of, C 44
 - derivatives of proteins, micro-analysis of, C 44
 - in study of carbohydrate, P 389, P 390
 - in study of endocrine relations of metabolism, P 658
 - in study of enzymes of protein synthesis, P 634
 - in study of fat and sugar metabolism, P 388
 - in study of food utilization, P 164
 - in study of intermediary metabolism, P 165
 - in study of phosphorus metabolism, P 860
 - iodine, in study of iodine metabolism, P 494, P 495
 - iron, effect of phytates on absorption, P 474
 - use in studies of absorption and utilization, P 477, P 478
 - phosphorus, for study of function and metabolism in dairy cows, P 1289
 - radioactive iodine, in study of thyroid hormones, P 641
 - radioactive phosphorus, in study of phospholipid turnover in liver disease, P 1055
 - radiocarbon in vitamin E studies, P 599
 - radio carbon, synthesis of vitamin E containing, C 147
 - synthesis of vitamin A containing, C 147
 - studies with amino acids, P 287
 - study of metabolic antagonists in tissue synthesis, P 276
 - sulphur, for study of metabolism, P 220
 - in vitro synthesis of protein, P 220
 - use in biologic synthesis of amino acids, P 219
 - use in biologic synthesis of proteins, P 218
 - use in biologic synthesis of vitamins, P 219
 - use in study of fatty acid metabolism, P 420

K

Kale

- ascorbic acid in, factors affecting destruction, C 692
- varieties, raw and cooked, C 656

Kale

- carotene in, factors affecting destruction, C 692
- palatability, in relation to cooking procedures, C 655
- in relation to variety, C 655
- thiamine in, varieties, raw and cooked, C 656

Keratins

- digestibility of, P 118

Ketogenic Diet

- action on electrical activity of brain, P1071

Kidney

- breakdown associated with changes in fats, P 434
- damage in choline deficiency, P 845, P 846
- enzymes, effect of growth hormones, P 649
- methyl groups, chemical reactions in, P 306
- renal calculi, metabolic factors in, P 1146
- renal disease, relation of nutrition to growth and development of children with, P 981
- renal hypertension, possible relation of hydrochloric versus citric acid in etiology, P 1169
- renal insufficiency, relation to arterial disease, P 1149, P 1151

Kojic Acid

- formation from carbohydrates, C 534

Kynurenic Acid

- effect on niacin metabolism, P 753

Kynurenin

- relation to niacin production in rat, P 757

L

Lactalbumin

- for dietary use, T 360
- hydrolyzates, P 315
- for oral administration, T 361
- for plasma protein regeneration, P 240
- in infant nutrition, P 84
- in maintenance of, nitrogen balance, P 232
- nutritive value of, compared with b-lacto globulin, P 233
- proteins, effect of manufacturing processes on nutritive value, C 1048
- with a yeast hydrolyzate, as a dietary supplement, T 340

Lactates, from whey, production of, T 112

Lactation

- effect of cereal diet, P 382
- effect of methionine deficiency in, P 78
- food intake in, correlation with laboratory and clinical findings, P 59
- metabolism of women during, P 56
- nicotinic acid requirement in, P 69
- of rats on purified diet, P 146
- physiology of, in cattle, P 1301
- requirements in mouse, P 32
- riboflavin requirements in, P 68
- thiamine requirements for, P 66
- value of meats for, in rats, P 145

Subject Index

- Lactation**
 - value of protein concentrates for, P 247
- Lactic Acid**
 - bacteria, synthesis of amino acids, B 109
 - formation by yeast, B 213
 - from molasses, C 535
 - (Hilleg) method application of, to ice cream, C 285
- Lactobacillus**
 - casei factor, C 205
 - growth factor, B 119
 - para-amino-benzoic acid for, P 13
 - pteroylglutamic acid for, P 13
- Lactose**
 - as a dietary carbohydrate, P 371
 - development of derivatives of, T 252
 - effect on protein utilization, P 372, P 374
 - in dairy products, C 290
 - physiological effects of, P 373
 - production by crystallization, C 98
 - studies of, C 97
 - synthesis, and galactose metabolism, P 375
 - utilization by dairy calves, P 1273
- Lamb**
 - cooking of, effect on nutritive value of, C 1009
 - cured, storage of, C 771
 - freezing of, effect of temperature on juiceness of, C 1010
 - effect on nutritive value, C 1009
 - in frozen storage, effect on vitamin B complex, C 858
- Lambs**
 - breeding hothouse, P 1247
 - effect of feeding vitamins and hormones, P 1352
 - effect of thiouracil and propylthiouracil on growth, P 1364
 - feeding of, P 1312
 - energy value and physical balance in rations, P 1316
 - concentrated rations for, P 1315
 - grains and roughages in, P 1314
 - food requirements for, P 1313
 - mortality on fattening rations, P 1313
- Lanthionine**
 - formation of, C 47
- Lard**
 - antioxidants for preservation of, C 1118
 - home rendered, C 951
 - quality improvement, C 118
 - shipping and folding cartons for, T 569
- Lathyrism**
 - experimental in rats, caused by factor in singletary peas, P 1108
- Learning Ability**
 - of children, related to thiamine supplement, P 533
- Leavening Agents**
 - in baked products, T 274
 - in baking powders, T 274
 - synthesis of acid compounds for reaction with basic salts for, T 272
- Leavening problems, T 271**
- Lecithin(s)**
 - metabolism, P 401
 - soy bean, effect on lipid metabolism, P 402
 - effect on metabolism, of sex hormones, P 669
 - effect on skin conditions, P 402
 - use in foods, new and improved, T 146
 - use in margarine, C 332
 - use in various food fields, Ec 171
- Legumes (See also specific vegetables)**
 - comparison with meat in child feeding, P 180
 - for poultry pasture, Ec 38
 - growth of, as related to potassium supply of Michigan soil types, C 587
 - in southern dietary, nicotinic in, C 451
 - precursor of nicotinic acid in, C 451
 - proteins, egg replacement value, P 237
 - serum protein regeneration value, P 237
 - sprouting of, for food purposes, T 241
 - vitamin A in, for poultry, C 511
- Lemon Juice**
 - frozen, new uses for, T 176
- Leucine**
 - from distiller's dried solubles, for enrichment of foods, C 46
 - synthetic methods for, C 43
- Leucocytes**
 - in nutrition and growth, P 707
- Leukemia**
 - ascorbic acid in, P 1036
 - role of folic acid in, P 1035
- Leukemic cells**
 - in bone marrow, nutritional aspects, P 714
- Leprosy**
 - attempts to cultivate, P 1034
- Levulose**
 - extraction methods for, C 101
 - metabolism, P 379
 - value of, C 524
- Limonin**
 - study of, C 63
- Linoleic Acid**
 - pure, preparation of, T 135
- Linseed**
 - meal, toxic factor in, P 1110
 - oil meal for poultry, effect of processing on nutritive value, C 1077
 - oil meal gum, edible, extraction and purification, T 278
- Lipases**
 - activity in milk, C 726
 - enzyme activities of, for incorporation into food and pharmaceutical preparations, C 224
- Lipids**
 - complex, formation from simple amino acids, P 411
 - determination of, C 53
 - digestion and absorption, effect of vitamins in frog, P 788
 - fecal, influenced by mineral supplementation, P 1385
 - function in cell proliferation, P 680
 - in cell proliferation, P 680
 - in dairy products, deterioration of, C 725

Subject Index

Lipids

- in tissues, effect of diet, P 410
- in vegetables, deterioration of, C 756
- fractionation and purification of, C 431
- metabolism, cholesterol and lecithin, P 401, P 402
- relation to migration of birds, P 413
- studies on, C 52

Lipins

- in geese, C 355

Lipoproteins

- function in cell proliferation, P 680
- serine possible link between proteins and lipids, P 445

Lipotropic

- factors, P 391 - P 397
- effect on bile secretion, P 128
- effect on liver disease, P 395
- in metabolism, P 391 - P 400
- unidentified in pancreas, P 396

Liquid Films

- mass transfer through, T 399

Liver

- and liver extracts, evaluation of protein in, P 235
- and vitamin K, P 604
- antianemic substances of, C 180
- carbon dioxide fixation in and biotin, P 562
- damage, in choline deficiency, P 845
- in rats fed diets with yeast as sole protein, P 268
- relation to arterial disease, P 1149
- disease, degenerative effect of diet, P 1054
- effect of intravenous human albumin, P 1048
- effect on blood volume, P 685
- function of methionine in, P 292
- in relation to lipids, P 395
- phospholipid turnover, effect of methionine and intravenous liver extract, P 1055
- dried extracted pork, amino acid distribution in, C 356
- effect of choline and methionine on pyrimidine derivatives, P 1042
- enzymes, effect of growth hormones, P 649
- exchange of colloid with blood, P 709
- experimental injury, dietary and endocrine effects, P 1053
- extracts, methods for evaluation of the antipernicious anemia activity of, C 179
- unidentified nutrients in food and feeds, C 604
- unidentified nutrients of, methods for testing, C 196
- fatty, infiltration of, P 1051
- infiltration of, effect of fats on, P 394
- on high cholesterol diets, P 399
- fish, oil, bioassay of vitamin A, C 143
- folic acid from, C 176
- function in relation to carcinogens, P 918
- growth and repair, protein and biotin in, P 719
- impairment relation to plasma protein synthesis, P 1045

Liver

- injury, effect of vitamin K on hypoprothrombinemia, P 1047
 - protection against chlorinated hydrocarbons by vitamin E, P 601
 - metabolic diseases of, P 1043
 - methyl groups, chemical reactions in, P 306
 - of animals that store fat easily, riboflavin in, C 355
 - pathology of, metabolism of individual amino acids, P 1044
 - proteins, effect of carcinogens and induced hepatomas, P 917
 - fractionation of, C 28
 - regeneration, after hepatectomy dietary effects, P 1052
 - as related to protein intake, P 1046
 - cytochrome C as biocatalyst, P 629
 - role in nutritional diseases, P 1040
 - separation of vitamin concentrates from, C 178
 - storage and vitamin A balance, P 506
 - storage of fat, relation to amino acids, P 392
 - relation to choline and fat, P 414
 - supplements for purified diets, P 230
 - vitamin A storage, effect of thyroxin, P 766
- ### Livestock
- marketing and feeding in Washington, Ec 293
 - production, nutritive value of native forage plants for, Ec 15
- ### Lobsters
- abundance, survival and migration, Ec 141
 - freezing of whole live, T 447
- ### Longevity
- effect of cereal diet, P 383
 - in relation to diet, P 141
 - in relation to protein character, P 252
- ### Lupine
- seed meal, Ec 223
- ### Lycopene
- in cannery tomatoes, relation of maturity to, C 697
- ### Lysine
- d 1 in food and feeds, C 376
 - deficiency in linseed meal after destruction of toxic factor, P 1110
 - effect of heat on nutritive value, P 266
 - supplement for heated proteins, P 264
 - supplement to natural proteins, T 348
- ### Lysozyme
- systems related to vitamin A nutritional status, P 628

M

Macaroni

- manufacture of, C 499

Magnesium

- and calcium intake, effect on digestibility of fat, P 790
- availability of, from plant sources, P 45
- effect on crops, C 582

Subject Index

- Magnesium**
requirements for rabbits, P 45
role in grass tetany in range cattle, P 1377
- Maize**
endosperm, effect of genetic character on carbohydrates in, C 664
niacin correlated with sugar content in, C 664
hybrids, high in niacin, C 659
- Malformations**
congenital and diet, P 63
produced by maternal vitamin A deficiency, P 65
- Malnutrition**
effect on blood volume, P 685
folic acid metabolism in, P 569
in patients, forced feeding in, P 343
in specific areas, study to define problems, P 1217
protein metabolism in, P 198
- Malt**
manufacturing improvements of, T 220
problems of production and quality, T 330
studies on, C 104
- Maltose**
sirups, studies on, C 104
- Manganese**
and boron effect, yield and qualities of tomatoes, Ec 88
deficiency, phosphorus metabolism in, P 860
role in calcium balance in lactating cow, P 1375
sulphate, influence of application to soil on tomato yields, Ec 89
- Manioc**
a publication, Ps 65
- Maple**
sap, factors affecting flow of, P 1470
sugar, investigations, C 531
sirup, investigations, C 532
refining by ion exchange, T 81
- Market**
conditions affected by merchandizing methods and dietary habits in Pennsylvania, Ec 258
research survey in Philadelphia, P 1184
theory of future markets, Ps 80
- Margarine**
effect of age on weight, C 335
fats and oils in, T 142
flavor improvement, T 143
moisture in, method of determination, C 334
nutritive value of, C 346
oils in, stability of, T 143
oil, unhardened, in, C 331
use of vitamin concentrates in, C 1083
versus butter, comparative nutritive value, P 415
vitamin A in, method of determination, C 333
vitamin A stability in, processing and storage of, C 767
- Maternal Nutrition**, P 13, P 62
and congenital malformations, P 63
as related to abnormalities in offspring, P 64
- Maternal Nutrition**
effect of tryptophane restriction on offspring, P 79
factors responsible for improved health, P 75
in primates, P 87
malformations in vitamin A deficiency, P 65
niacin in, P 71
niacin requirements in, P 69
relation to maternal and infant health, P 54
relation to recurrent abortion, P 62
thiamine requirements in, P 66
- Mayonnaise**
rancidity of, in storage, C 747
- Meat(s)**
aged versus unaged, comparison of, for freezing, T 444
amino acids in, C 378 - C 379
antelope, effect of season on palatability and nutritive value of, C 676
antioxidants for, C 1117
ascorbic acid in, C 876
bacteria of fresh canned and cured, B 48
canned, bacteria in, relation to thermal processing of, B 43
Clostridium botulinum relation to, B 41
for children, effect of processing on amino acids, C 884
improvement of, T 157
protein quality of, C 883
vitamin B complex in, effect of processing and storage, C 885
carotene in, C 876
chemical and physical properties as related to palatability factors, C 349
comparison with legumes in child feeding, P 180
cured, bacteria affecting discoloration of, B 44
curing of, T 153
cutting, personalized, for locker plant patrons, Ec 296
cuts, cooked, amino acids in, C 381
edible, respiration in, C 361
fresh, amino acids in, C 381
deer, effect of season on palatability and nutritive value, C 676
flavor, effect of containers on, C 1031
for freezer, various wraps for, T 570
freezing, methods and equipment for, T 438
frozen, antioxidants to prolong storage life, C 119
ascorbic acid in, effect of different storage temperatures and periods on, C 876
carotene in, effect of different storage temperatures and periods on, C 876
comparison of packaging methods for, T 574
cooking of, T 438
defrosting and cooking, C 920
discoloration, causes and correction of, C 1012

Subject Index

Meat(s)

frozen, effect of size of sample and rate of freezing on, T 442
 effect of size of sample on histological characteristics of, T 442
 factors affecting nutritional value, C 840
 factors affecting keeping quality, C 840
 pre-treatments for, T 574
 storage temperature in relation to freezing points, T 441
 table ready, effect of storage time on quality of, C 852
 table ready, effect of temperature on quality, C 852
 home canning of, B 75
 in diet, effect on nutritional status of infants, six weeks to two years, P 171
 in frozen storage, C 838
 effect of different temperatures on, C 841
 effect of different temperatures and periods on quality, C 839
 effect of pre-treatments and wraps on keeping qualities and palatability, C 1033
 factors affecting quality of, C 842
 molds of, B 52
 niacin in, C 163
 losses in cooking in army messes, C 929
 varieties of, effect of cooking methods on, C 933
 nutritive value, as related to Montana soils and plant materials, C 610
 for growth of dogs, P 229
 in high cereal diets for rats, P 145
 of swine, effect of rations on growth and quality of, C 611
 organic compounds in, which affect growth, reproduction, and lactation in rats, C 359
 packaging and merchandizing, Ec 291
 packing, evaluation of, pasteurization processes in, B 42
 palatability as related to Montana soils and plant materials, C 610
 pantothenic acid in, C 352
 losses in cooking in army messes, C 929
 pigments, C 360
 potassium in, C 353
 pre-cooked, factors influencing rancidity, T 434
 freezing, effect on quality, C 1011
 in refrigerated storage, effect on quality, C 1011
 preparation factors in relation to, nutritional value and palatability, C 845
 preservation factors in relation to, palatability and nutritive value, C 845
 products, amino acid in, C 379
 calcium enriched, as a source of calcium, phosphorus and protein in rats, children, C 1111
 canned, vitamin content and losses in, C 1058
 cured, light stability studies of, C 1057
 development of processes for canning, C 888
 flavors and keeping qualities, role of enzymes in, C 844

Meat(s)

flexible packages for, T 571
 freezing at low temperatures, T 445
 fresh, light stability studies of, C 1057
 fresh, vitamin content and losses in, C 1058
 heat resistant putrefactive spores in, B 47
 new types, T 147
 packaged, effect on nutritive value, keeping quality and palatability, C 1030
 preserving of, C 888
 processed, flavoring of, T 300
 processed, in frozen storage, factors affecting quality, C 842
 processed, in storage, changes in nutritive value, C 843
 retention of nutritive value during processing and storage, C 846
 smoked, light stability studies of, C 1057
 smoked, vitamin content and losses in, C 1058
 vitamins in, C 379
 cooked, effect of handling method on, after removal from frozen storage, C 921
 protein, as supplement to vegetable proteins, C 612
 effect of various protein enzymes in hydrolyzing, C 1061
 effect of processing storage, and nutrition of animal on, C 1087
 pteroylglutamic acid in, C 357
 putrefactive anaerobic spores in, prior to heat processing, B 46
 pyrodoxine in, C 164
 quality of, related to Montana soils, plant materials, C 610
 reaction of smoking on, T 156
 riboflavin in, C 352
 losses in cooking in army messes, C 929
 variety in, effect of cooking methods on, C 933
 smoked, wrapping of, T 573
 sodium in, C 353
 staphylococcus food poisoning in relation to, B 40
 studies on, C 254
 table ready, in frozen storage, effect on quality, C 852
 thiamine in variety, effect of cooking methods on, C 933
 losses in cooking in army messes, C 929
 versus legumes, effect on nutritional status of children in institution, P 1236
 vitamin B complex in, effect of canning operations on, C 887
 factors affecting, C 352
 factors affecting loss in storage of, C 849
 vitamins in, C 379
 effect of thawing methods after frozen storage, C 921
 dehydrated and stored, C 982
 effect of periods of storage on, C 847
 effect of rate of freezing on, C 847
 variety effect of different methods of cooking on, C 930
 Medicine, clinical biochemicals related to, book, Ps 71

Subject Index

- Medicine
 - clinical, grant for research, Ps 100
 - grant to N.Y.U. Bellevue Medical Center, Ps 101
- Melons
 - Indiana, pre-cooling, Ec 332
 - problems of packing, shipping and marketing, Ec 334
- Memadione
 - synthetic procedures for manufacture of, C 130
- Menopause
 - and vitamin E, P 602
- Menstrual Disorders
 - relation of amino acids to, P 1056
- Mental Defectives
 - use of glutamic acid in, P 1069
- Mentality of Young
 - relation to prenatal diet, P 70
- Merchandizing
 - meat, Ec 291
 - survey, Ec 248
- Metabolism (See also specific nutrients)
 - and digestion of fat, P 124
 - and heat loss in hibernation, P 150
 - and heat loss of men and women, P 149
 - anaerobic, in newborn and premature infants, P 168
 - ascorbic acid, P 19
 - basal, and resting as affected by age changes, P 156
 - and resting as related to body size of animals, P 156
 - effect of iodine, P 153
 - of boys, 9 to 16 years, P 187
 - of girls and young women, P 151
 - of pregnant women, P 187
 - of women and girls as related to dietary habits, P 153
 - rate evaluation after feeding tests (dogs), P 166
 - relation to physical growth and physiological measurements, P 153
 - carbohydrate, P 346, P 390
 - purification of enzymes involved in, C 212
 - thiamine, effect of breakfast, P 383
 - carbon, in one celled animals, P 364
 - cell, adenosinetriphosphate in, P 362
 - effects of immobilization, P 152
 - endocrine relations of, P 658
 - fat, in invertebrates, P 412
 - study with isotopes, P 388
 - fructose, P 352
 - fumaric acid, P 380
 - galactose, P 375
 - glucose, P 366
 - hibernating, of woodchucks, P 150
 - intermediary, acetic acid in, P 357
 - fluoracetate in, P 359
 - intermediary, of fats, study of isotopes, P 165
 - isopropyl alcohol, P 378
 - levulose, P 379
 - nutritional factors involved in, P 136
 - of creatine in premature infants, P 173
- Metabolism
 - of folic acid in pregnant women and infants, P 175
 - of iron from beef, P 21
 - of premature and newborn, P 167
 - protein, P 367
 - radioactive isotopes as tracers, P 449
 - sugar, study with isotopes, P 388
 - vitamin, P 367
 - vitamin C, in newborn, P 169
- Metabolites
 - essential, functions of, P 137
 - in urine, in metabolism study of fat, P 759
- Metals
 - for dairy use, T 563
- Methionine
 - a lipotropic factor, P 391
 - amount in commonly used foods, C 50
 - conversion to cystine, P 310
 - dl in foods, C 376
 - dl in food and feeds, C 376
 - deficiency in gestation and lactation, P 78
 - effect on deficiencies, P 809
 - effect on phospholipid turnover in liver disease, P 1055
 - effect on production of cobalt polycythemia, P 1076
 - effect on rats on low protein, pyridoxine free diet, P 778
 - metabolism in, tissue slices, P 293
 - metabolism of, P 289
 - metabolism using isotope (S-35), P 292, P 293
 - rates of metabolism of l, d, and dl-methionine, P 290
 - relation to body reactions, P 289
 - relation to growth, P 393
 - replaced in diet by sulfur containing amino acids, C 50
 - supplement for heated proteins, P 264
 - supplement to natural proteins, T 348
 - studies with isotopes (S-35), P 288
 - utilization, by chicks, P 1422
 - in hepatitis and cirrhosis, P 291
 - in l, d and dl form in normal and pathological conditions, P 291
- Methods
 - analytical, C 241
 - for control or quality in food industries, C 245
 - for determination of bile pigments, P 129
- Methyl Groups
 - available reactions in liver and kidney, P 306
 - labile, relation to neoplasm formation, P 916
- Methylation
 - organic synthesis of starch by, C 108
- Mice
 - nutritive requirements of, P 30
- Microbial
 - flora, B 160
 - synthesis (attempted) of animal protein factor, B 179
- Microbiology, B 125
- Microorganisms, B 89
 - amino acids, synthesis by induced mutants, P 308

Subject Index

Microorganisms

aseptically grown monocellular organism, metabolism in, P 763
Clostridium botulinum, B 104
Doderlein's bacillus, nutritional requirements of, B 91
 effect of steepwater on growth of, B 107
 effect on oils, B 38
 enzyme systems of, P 624
 for producing food acids, B 230
 for producing soy sauce, B 229
 from milk, reductase produced by, B 30
 genus proteus, amino acid metabolism by, B 105
 growth factors for, B 116
 in dairy products, effects of cold on, B 11
 in dehydrated egg spoilage, B 65
 in dried fruit spoilage, B 77
 in dried fruit and vegetable contamination, B 78
 in frozen stored foods, viability of various, B 9
 in home canned acid food spoilage, B 18
 in pre-cooked, frozen foods, B 69
 in quick frozen poultry products, effects of cold on, B 12
 in vegetable souring, B 78
L-arabinosus, conversion of indole to tryptophane by, B 115
L-arabinosus and *L-casei*, microbiological assay for biotin by, B 117
 metabolism of, function of vitamin B complex in, B 111, B 112
 neurospora, relation of amino acids to growth of strains of, B 93
 nutritional requirements of, B 90
 occurrence of, resistant to anti-bacterial agents, B 242
 of wine, influence on flavor, B 215
paramecium, nutrition in, B 96
 pathogenic, in dehydrated eggs and products, B 64
 photosynthetic, growth of factors affecting, B 98
 protein synthesis in, B 180
 related to spoilage in dates, B 81
 relation to spoilage in canning procedures and conditions, B 15
 requirements of, amino acids and other nutrients, B 97
 inorganic trace elements, B 98
 riboflavin production by, factors affecting, B 177
Salmonella typhimurium, dietary requirements of, B 92
 sources of contamination in food plants, and methods of control, B 193
 spore formation and germination, B 104
 synthesis of, amino acids by, B 109
 vitamins by induced mutants, P 308
tetrahymena, unknown factors for growth of, C 200
 thermal death time of, B 21
Trichomonas vaginalis, requirement of, B 95
Tubercle bacilli, nutritional requirements of, B 99

Microorganisms

unicellular, metabolism of carbon and nitrogen, B 103
 unidentified growth factors for, B 158
 vitamin requirements for, B 116
 water borne, chlorine resistant, in butter deterioration, B 36
Mildews
 downy on lima beans, P 1570
 powdery, study of spore germination, P 1559
Milk
 agent, mammary tumor chemical characterization of, P 931
 mammary tumor in mice, biological characteristics, P 930
 allergy problems of, P 871
 and cream plant sanitation, B 187
 bottled, keeping quality under various conditions of processing, C 1045
 by-products, food specialties made from, T 109
 for poultry feed, Ec 163
 calcium in, C 291
 canned, improvement in, T 95
 cans, sterilization by ultra violet rays, B 184
 carotene in, C 301, C 302
 chemistry of freshly exposed surfaces, relation to spray concentrating and drying, T 398
 cholesterol in, C 289
 effect of season and breeds of cows, C 624
 clean, production, factors affecting, B 186
 colloidal chemistry of, C 298
 color of, T 100
 composition of, C 292, C 293
 factors affecting, C 594
 condensed, whole, in manufacture of caramels, Ec 161
 control program, effectiveness in quality production, Ec 283
 costs of distribution, Ec 278
 economic analysis, Ec 279
 cost of production, Ec 277
 cow, amino acids in, C 385
 cows, unidentified nutrients in, determination of source, C 603
 dehydrated, formation of surface layer, C 965
 dried, skim, preparation, for reconstruction of butter oil, T 107
 dried whole, factors affecting keeping quality, C 971
 amino acids in, C 968
 dried whole, chemical changes in browning of, C 718
 chemical changes in manufacture of, C 722
 chemical changes in storage, C 722
 effect of manufacturing on physical properties of, C 962
 foam properties of, C 976
 for breadmaking, T 117
 improvement of, T 95, T 105
 marketing outlets for, Ec 160
 oxidation of fatty constituents of, C 766
 oxidation of vitamin A of, C 766

Subject Index

Milk

proteins in, effect of processing on nutritive value, C 974
 protein stability in, C 963
 reconstruction of, factors affecting, C 963
 unpalatable, compounds isolated in, C 723, C 972
 uses in food, factors affecting, T 116
 dry products of, moisture in, T 404
 effect of antioxidants on flavor and keeping quality, C 1129
 effect of diseases in cow on, C 310
 effect of diseases in goat on, C 310
 effect of dried fodder on nutritive value, C 591
 effect of soil fertility on nutritive value, C 589
 evaluation of quick tests for quality of, C 287
 evaporated, amino acids in, C 968
 calcium in, C 291
 completely supplemented for infants, P 83
 improvement of, T 120
 processing of, T 119
 proteins in, effect of processing on nutritive value, C 974
 riboflavin in, C 303
 studies in, C 966
 evaporating and drying of, in non milk industry, T 400
 emulsified, machines for quick freezing of, T 52
 fat, chemical changes in, as related to flavor of milk, C 726
 deterioration effect of trace metal contamination on, C 728
 effect of certain feeding practices on amount of, C 593
 fatty acids of, significance, P 417
 fractionation methods, C 330
 growth promoting value of, C 330
 nutritive value of, C 330
 oxidative deterioration of, C 727
 physical state, changes in, C 329
 production increased, C 602
 production, influenced by iodinated casein supplementation, C 599
 structure, changes in, C 329
 studies, C 311
 fat test, variation between daily fresh and 15 day sample, C 283
 fever, nutritional aspects, P 1057
 flavor of, T 100
 effect of homogenization on, C 1051
 chemical changes in milk fat as related to, C 726
 fluid, preservation by concentrates and freezing, T 436
 whole, riboflavin in, microbiological assays for, B 150
 folic acid in, stability of, B 156
 food specialties made from, T 109
 for manufacturing purposes, improvement of, T 101

Milk

from cows fed from depleted and high fertility land, nutritive value of, C 592
 homogenization of, T 94
 effect on properties, C 1049
 human, amino acids in, C 385
 and cow's for infants, P 55
 factors influencing production and composition, P 76
 tocopherols in, C 306
 vitamin A in, as affected by high vitamin A, C 597
 in home refrigeration, keeping quality of, B 29
 in manufacture of cheddar cheese, acidity of, T 123
 inorganic constituents in, C 307
 in prevention of dental caries, P 962, P 964
 iron in, best method for analyzing, C 308
 lipase activity in, specific fatty acids involved, C 726
 manufacture of food products made from, T 103
 market, ascorbic acid in, C 305
 bacterial levels related to farm equipment sanitation, B 185
 economic analysis, Ec 280
 factors affecting quality, C 293
 homogenized, curd tension and number test applied to, C 297
 riboflavin in, C 305
 marketing, Ec 276, Ec 282
 methods for obtaining fat from C 726
 niacin content related to anti-pellagra activity, P 836
 niacin in, C 304
 non-protein nitrogen fraction in, C 385
 nutrients, unidentified, source in cow, C 603
 nutritive value of, effect of pasteurization on, C 1050
 effect of seasonal environmental factors on, C 1050
 effect of season variation, C 593
 factors affecting, C 593
 feeding practices related to, C 593
 from cows fed from high fertility land, C 592
 from cows fed from depleted land, C 592
 role of soil fertility on, C 589
 under specific dietary conditions, C 590
 pasteurized quality determined by microscopic procedure, B 28
 physical properties, C 296
 plant, fat losses in, C 1044
 potentials of pasture, hay, roughage for dairy cattle, P 1258, P 1259
 processed, at high temperature, effect on physical and chemical properties of, C 1047
 loss of riboflavin in, C 1046
 production, carotene used as a source of vitamin A in, C 596
 effect of environment of cattle, P 1254
 effect of method of milking, P 1298

Subject Index

Milk

effect of supplementing dairy rations with vitamin A concentrates, C 1081
 dried and ensiled forages for, C 591
 influenced by iodinated casein supplementation, C 599
 role of soil fertility on, C 589
 seasonal variation of, C 294
 products, T 93
 amino acids in, C 385
 ascorbic acid in, factors affecting stability of, C 977
 concentrated and dry, composition of, factors affecting, C 967
 concentrated and dry, marketing qualities of, factors affecting, C 967
 dry, chemistry of browning of, C 720
 effect of antioxidants on flavor and keeping quality, C 1129
 flavor defects in, cause and prevention of, C 721
 inorganic constituents in, C 307
 mechanism of deteriorative changes in, C 724
 nutritive value of, improved by vitamin enrichment, C 1082
 organic compounds in, which affect growth, reproduction, and lactation in rats, C 359
 powdered, stability of vitamin and fat in relation to oxygen versus nitrogen packing, C 978
 production of improved, T 121
 properties affected by milk fat, C 329
 spray dried and sterilized, vitamin A losses in, C 975
 unidentified nutrients in, methods for testing, C 196
 unidentified nutrients, occurrence in foods and feeds, C 604
 properties, affected by milk fat, C 329
 proteins, biological value of, in varying intensities of heat, C 974
 changes in, C 600
 evaluation of, P 231, P 232
 hydroxy-amino acid in, C 383
 nutritive value of, C 384
 physical and chemical properties of, C 299
 serine in, C 388
 shortage of sulfur amino acids in, P 233
 structure, C 296
 threonine in, C 387
 utilization in various food combinations, Ec 159
 quality of, factors affecting, C 595
 reductase produced by microorganisms from, B 30
 relation of diet to vitamin A potency of, C 598
 riboflavin loss in, during storage, C 1046
 secretion and constituents, effect of thyroid hormones, P 1354
 effect of hormones, P 1355

Milk

skim, condensed, sweetened, T 118
 digestion of with proteolytic enzymes, T 115
 fat analysis, comparison of methods, C 288
 in supplementary diet for malnourished children, P 182
 solids, causes for their variation, C 309
 dry, use of, T 99
 non-fat, chemical factors affecting baking quality of, C 946, C 970
 dry, non-fat, stored in home, quality and use of, C 973
 dry, non-fat, study of, C 295
 non-fat, added to whole wheat bread, C 1085
 non-fat and whole, new food uses for, T 108
 non-fat as supplement in bread, effect of heat treatment on value of, C 969
 souring, frozen culture for, T 102
 supplies, raw, thermoduric bacteria in, B 28
 supply improvement for creameries and cheese factories, Ec 284
 synthetic products, relation to infantile megaloblastic anemia, P 878
 use in Detroit's hospitals, P 1218
 use of dry products in pre and post operative patients, P 1094
 vaction of, T 94
 variation of constituents, related to history, care, and environments of cow, C 595
 vitamin A in, C 302, C 333
 effect of breed on, C 623
 effect of individuality on, C 623
 effect of stage of lactation on, C 623
 vitamin D, availability to consumer, nationwide survey, Ec 285
 in biological assays, C 252
 vitamin E in, C 601
 vitamins in, effect of feeding practices on amount, C 593
 whey, albumin from, C 386
 casein from, chemistry of, C 386
 globulin fractions from, chemistry of, C 386
 Milling
 and baking, fermentation processes in, B 223
 dry, of corn, improvements in, T 218
 electronic moisture, determination apparatus for, T 43
 flour, by importation, T 219
 industry, western wheat varieties, use in, C 669
 wet, of grain sorghums, process for, T 217
 Mineral(s)
 as related to origin and growth of tumors, P 941
 ash constituents, in cane sirups, C 526
 in molasses, C 526
 compounds, for enrichment of cereal foods, C 1109

Subject Index

Mineral(s)

- content of bones, relation to connective tissue, P 587
- deficiencies, effect on bone development in children, P 859
- effect on vitamin A blood content, dairy cattle, P 704
- elements, required by poultry, P 1452
- enrichment of cereal products, application of phosphates of calcium and iron to, C 110
- enrichment of grain products, C 1104
- factors, in citrus fruits, C 422
- in food of college women, P 446
- in pharmaceuticals, packaging of, T 591
- in plants, effect of location factors on, C 681
- in rutabagas, effect of storage on, C 631
- effect of varietal differences on, C 631
- in vegetables, effect of large quantity cooking on, C 936
- effect of environment on, C 691
- effect of temperature of blanching on, C 882
- processed, C 1040
- interrelationship in animal metabolism, P 789
- in nutrition of dairy cattle, P 1284, P 1285, P 1286
- losses in diarrhea, P 999
- methods of assay for, B 147
- mixtures in rations of poultry, P 1451
- oil, absorption of carotene from, C 150
- absorption of vitamin A from, C 150
- effect on vitamin A and carotene blood levels, P 513
- glycerides in, C 150
- products in feeds, physiological effects, P 1272
- requirements and metabolism of animals, P 1283
- requirements of poultry, P 1450
- salts, relation to growth, P 450
- trace elements, for sheep, relation to carotene utilization, P 1317
- functions in nutrition, P 485
- in dairy cows, nutrition of, P 1293
- in feedstuffs, C 567
- in poultry nutrition, C 567
- in poultry rations, P 1449

Mink

- breeding, feeding, diseases of, P 1253

Mint

- plant growth and yield studies, P 1544

Mixes

- cake flour, T 229 - T 233
- doughnut, development of, T 229
- dry, processing of, T 421
- flour, determination of fat in, C 497
- food preparation of, T 231
- hot roll, stabilizing the yeast in, T 228
- ice cream, dehydrated, preparation of, T 104
- homogenization and vacreation of, T 94
- powder, dehydrated, improvement of, T 405

Mixes

- sweetened, concentrated, preparation of, T 104
- sweetening agents to replace sucrose in, T 257
- premixes, for foods for baking, T 228
- ready prepared, making of, T 227
- soup, dehydrated, preparation of, T 303
- utilizing dehydrated potato, T 415

Molasses, C 533

- ash constituents in, C 526
- blackstrap, kojic acid from formation, C 534
- calcium in, C 526
- cane, unfermentable reducing substances in, C 537
- fermentations, B 227
- iron in, C 526
- lactic acid from, C 535
- phosphates in, C 562
- unfermentable constituents in, C 536

Mold

- counting techniques, simplification of, B 6
- destruction by sterile lamps, B 183
- inhibitors, for bread doughs, C 1162
- for food products, C 1160
- mycelia in butter, B 35

Molds

- in bakery products, prevention of, C 1161
- in bread, time required for development, C 1163
- in cheese, growth control by ultra violet lamp, B 32
- in cream, B 35
- in figs, control by sprays and fumigants, P 1565
- temperature and humidity related, P 1566
- in meats, B 52
- in tomato products, technique of counting, B 80
- vitamin production by, B 278

Molinillo Seed

- oil, nutritional studies of, C 342

Molybdenum

- toxicity and relation to other minerals in cattle and sheep, P 1379, P 1380

Monoglycerides

- effects on absorption of triglycerides, P 439
- effect on fat absorption, P 440

Moth

- coddling, biology and control, Ec 122
- grape berry, biology and control of, Ec 124
- oriental fruit, control of by DDT, Ec 123

Mucoprotein

- plasma, P 214
- urinary, P 214

Mung Bean

- for poultry feeding, P 1413

Muscle(s)

- diseases, nutrition and metabolism in, P 1005
- edible, commercial production and conservation, Ec 153
- effect of desoxycorticosterone, P 660
- histology, P 587
- metabolism, function of vitamin E in, P 724
- pigments, C 360
- protein, P 721

- Muscle(s)**
 skeletal, thiamine changes in, P 720
 tissue, constitution of, relation to ratios of vitamin B complex, P 723
 moisture in, effect of vitamin B complex ratios, P 723
 toxicity of, due to certain foods in some areas, Ec 150
 vitamin content, causes of variation in some animal, P 722
- Mushrooms**
 cultivated, control of insects affecting, Ec 117
 nutritive value of, C 436
- Mustard Greens**
 ascorbic acid in, C 437
- Myeloma**
 multiple, electrophoretic studies on plasma in, P 928

N

- Nectarines**
 canning of, T 386
 frozen, effectiveness of sugars on preserving qualities of, T 487
 new varieties through breeding, P 1521
- Nematopsis**
 distribution in coastal waters, Ec 137
 propagation and control, in Long Island Sound, Ec 137
- Nephrosis**
 effect of amino acids on metabolism in, P 1060
 effect of rutin and vitamin C administration on, P 1063
 liquid diet with amino acids and minerals for, P 1062
 protein sparing action of urea in, P 1059
 treatment with human albumin, P 1058, P 1061
- Nerve**
 vagus, effect of vitamin deficiencies on transmission of impulses, P 818
- Nervous System**
 diseases, glutamic acid, use in, P 1068, P 1099
 glutamic metabolism and role in, P 1065
- Niacin**
 blood content of college women, P 548, P 549
 deficiency, factors affecting growth, P 765
 in animals, P 547
 in children, P 834
 niacin therapy for, P 822
 relation to oral disease, P 835
 relation to tryptophane, P 748
 development of maize hybrids high in, C 659
 effect of cooking on, C 932
 effect on glossitis, P 848
 from tryptophane, P 750
 in Alaska field peas, C 452
 in cheese, C 321
- Niacin**
 in chicken, effect of method of preparation on, C 935
 in corn, breeding for pellagic areas, C 660
 in corn, factors affecting, C 662
 in corn, sweet, C 658
 in corn varieties, C 663
 in diabetes, change in fat metabolism by, P 985
 in eggs, cooked, stability of, C 927, C 928
 in foods, microbiological method, C 162
 in foods, tropical, C 270
 in fruits, citrus, C 422
 in fruits and vegetable products, C 785
 in lamb, effect of frozen storage on, C 858
 in legumes of Southern dietary, C 587
 in meat, C 352
 in meat, method for, C 163
 in milk, C 304
 in milk, related to anti-pellagra activity, P 836
 in musts and wines, B 215
 in peas, effect of blanching variables, C 1071
 in pork, factors influencing, C 354
 in pork, from garbage fed hogs, C 613
 in pork, influence of ration on, C 614
 in pork, influence of storage in freezer lockers on, C 614
 in pork loin, effect of frozen storage on, C 858
 in potatoes, C 444
 in variety meats, effect of cooking methods on, C 933
 in vegetables, canned, effect of commercial operation on, C 896
 intake and excretion in pregnancy, P 71
 levels in children, survey, P 1241
 losses in cooking of meat in army messes, C 929
 metabolism, P 547, P 848
 effect of kinurenic acid with and without niacin or pyridoxine, P 753
 microbiological assay, P 548
 precursor, in legumes of Southern dietary, C 587
 production in rat, relation of kinurinine, P 757
 ratio to other constituents of muscle tissue, P 723
 relation to dietary protein, P 759
 relation to tryptophane, pyridoxine, and fat, P 752
 requirement, effect of protein intake on, P 749
 requirement, human, P 18
 requirement in reproduction and lactation, P 69
 supplements for swine rations, P 1341
 synthesis, effect of amino acids of the diet on, P 747
 effect of pyridoxine deficiency, B 169
 in rat, B 166
 synthetic procedures for manufacture, C 130

Subject Index

Niacin

- tryptophane deficient diets, factors affecting growth of rats, P 765
- tryptophane relation, P 751
- tryptophane-pyridoxine relation, P 753
- urinary excretion of, in disease, P 102
- utilization, college women on known intake of niacin and tryptophane, P 550

Nitrogen

- absorption in steatorrhea, effect of casein and casein hydrolyzate, P 1093
- amino level of blood, relation to nausea, P 341
- atmospheric fixation of, Ec 49
- balance, amino acid requirement for dog, P 43
 - at different levels of protein and vitamin A, P 746
 - during recovery from burns, P 887
 - effect of anti-vitamins, P 731
 - effect of gelatin fed intravenously, P 339
 - effect of human serum albumin on, P 345
 - in hydrolyzate use, P 323, P 328, P 329
 - in idiopathic hypoproteinemia, P 1017
- compounds for feeds from shark meal, Ec 179
- for tomatoes, Ec 83
- metabolism, as affected by source and caloric intake, P 196
 - effect of amino acids in nephrosis, P 1060
 - in neoplastic diseases, P 922
 - of adolescent boys, P 463
 - of adolescent girls, P 464
- relation of intake to stool nitrogen, P 204
- requirements, in aging women, P 108
 - in convalescence, P 103
 - intravenous therapy, P 335
 - related to caloric intake, P 335
- retention, effect of dietary fat, P 794
- effect of methyl testosterone, P 659

Nitrous Acid

- effect on protein, C 15

Nucleic Acids

- and derivatives, enzymes acting on, P 632
- and sulfhydryl, effect of, P 739
- and their hydrolysis products, large scale preparation methods, C 18
- and their hydrolysis products, isolation of, C 18
- biochemical properties of, C 16, C 19
- chemical properties of, C 19
- chemistry of, C 17
- metabolism of, C 17
- metabolism and precursors of, P 303
- preparation of derivatives of, C 16
- synthesis of derivatives of, C 16

Nucleoproteins

- biological properties of, C 19
- chemical properties of, C 19

Nucleosides

- metabolism of, in tissue cultures, P 216

"Nutricion"

- publication of, Ps 54

Nutrients

- biological availability of, P 162
- of unknown chemical composition, C 197

Nutrients

- unidentified, in liver extracts, methods for testing, C 196
- unidentified, in milk and milk products, methods for testing, C 196
- various, interrelationships, P 729

Nutrition

- advisory service for a community, Ps 84
- and resistance to climatic stress,
 - literature survey, Ps 56
- charts, distribution of, Ps 98
- conference of Florida feed dealers, Ps 96
- department in small community hospitals, organization of, Ps 88
- development of school and community program in, Ps 85
- education, consumer panels, Ps 95
- home making institute for a community, Ps 92
- in elementary schools, Ps 94
- in public schools, Ps 86
- needs of rural homemakers of low socio-economic status, Ps 91
- needs to change food habits of college home economics students, Ps 93
- teaching center in hospital, Ps 90
- training, fellowship for, Ps 103, Ps 105
- effect of environment, P 92
- effect on growth, P 138
- exhibit, permanent, Ps 97
- human, P 4
- human and animal, as related to composition of soil and plants, C 570
- in medicine, P 864, P 865
- investigations, public health in Florida, Ps 83
- of brain tissue, P 717
- "Nutrition Reviews," publication of, Ps 52
- problems, P 2
- research at University of California, publications 1942-1947, Ps 57
- studies in, P 1

Nutritional

- effects of substances modifying endocrine activity, P 639
- factors, P 3
 - assay methods for, C 244
 - concentration from raw materials, T 307
- "Nutritional Observatory" publication of, Ps 53

Nutritional Status

- and diet survey, birth to adult years, P 1198
- Chicago Cook County health survey, P 1197
- dental health as basis for, P 943, P 944, P 945
- in burns and traumatic shock, P 886
- influence on body temperature, and blood pressure, P 1156
- of Alaska natives, relation of diet to certain eye conditions, P 1214
- of children, comparison of meat and legumes in feeding, P 180
- in institution, effect of meat versus legumes, P 1236
- in nursery school, relation to diet, P 1224
- in Hawaii, relation to dental status, P 1200

Subject Index

Nutritional Status

- in school, improving health by improved nutrition, P 1240
 - in school, in connection with use of skim milk, P 1239
 - in school, nutritional deficiencies, P 1237, P 1238
 - of college women, P 548, P 549
 - ascorbic acid metabolism, P 579
 - comparative, P 1210
 - of girls, high school, plasma protein and hemoglobin, P 1242
 - ninth grade, effect of school lunch program, P 1233
 - of industrial workers and families, P 1206
 - of infants as affected by meat in diets, P 171
 - of low income ambulatory patients and response to therapy, P 1222
 - of mental patients, effect of institutional diet, P 1196
 - of mothers during reproductive cycle, P 55
 - of mothers, infants, and children, P 1225
 - of Navajo Indians, P 1203
 - of negro students, relation to food habits, P 1230
 - of population groups, according to income, P 1193
 - application of microchemical techniques, P 1188, P 1191, P 1211, P 1212
 - causes of lowered hemoglobin levels, P 1207
 - in Maine, relation to diet, P 1202
 - in Newfoundland, P 1204, P 1213
 - in New Mexico, P 1205
 - in Oregon, P 1216
 - in Pennsylvania, mass studies, P 1208
 - in selected areas in west, P 1195
 - in West Virginia, P 1215
 - of pregnant women in northeast, P 1221
 - relation to course of pregnancy, P 60
 - of Puerto Rican families, basic needs, P 1209
 - of rural population of Colorado, P 1199
 - of troops allowed free choice of packaged army ration, P 1219
 - of women, ages 50-70, ascorbic acid metabolism, P 580
 - on restricted protein intake, P 104
 - methods for evaluation of, P 13
 - microbiochemical tests for, P 1187, P 1189, P 1190, P 1194
 - relation to ability to perform detoxication, P 1117
 - relation to incidence and resistance to tuberculosis, P 1139
 - relation to tolerance to chemotherapeutic agents, P 1116
 - vitamin A and enzymatic activity, P 628
 - vitamin levels in children in Child Research Council, P 1241
 - with respect to thiamin in Hawaii, P 1201
- Nutritionist**
- for child development center, Ps 89
 - for hospital outpatient department, Ps 87

Nuts

- edible, growing of, P 1542
- methods of processing, T 190
- products, antioxidants to prolong storage life of, C 1119



Oats

- composition of, C 470
- improvement of, effect of fertilizer on, C 585
- isolation of adenine-pentose-phosphate from, C 471
- protein qualities of, C 403

Obesity

- appraisal of fat content of body, P 1072

Oil(s)

- antioxidants in, C 1126
- auto-oxidation in, C 1126
- butter, pure dehydrated, processing of, T 132
- corn, edible, methods of refining, T 67
- cottonseed, hexane extracted, C 336
- crude, stored, quality changes in, C 731
- edible, factors affecting flavors, C 738
- nutritive value of, C 345
- oxidative deterioration in, C 730
- research on, T 133
- technological development and transportation of, T 66
- effect of hydrogenation on physical properties of, C 58
- effect of micro-organisms on, B 38
- essential, desert plants, as source of flavoring material, C 77
- essential, from natural sources, provision of, T 297
- fatty, fractionation of, C 58
- production of edible derivatives of, T 136
- refining of, C 58
- fish liver, vitamin A in, C 143, C 368, C 774
- vitamin A in, correlated with official standards, C 145
- flavor of, by new process, T 141
- from plants indigenous to southwest, Ec 242
- glycerides in, C 64
- temperature-pressure-solubility relationships, C 66
- glyceridic, organic derivatives of, C 65
- gums as dispersing agents for, T 277
- in corn, C 114
- in salad dressing production, T 145
- in stored soybeans, C 754
- isomeric unsaturated fatty acids in, C 68
- keeping qualities, effect of catalysts and antioxidants on, C 744
- manufacture of synthetic, for flavoring, T 297
- mineral, absorption of carotene from, C 150
- absorption of vitamin A from, C 150
- glycerides in, C 150
- natural and interesterified, digestibility of, P 125
- natural, vitamin A in, improving quality of, T 317

Subject Index

Oil(s)

- nutritive value of, C 328
- oxidation of, C 72
- orange, composition of, C 341
 - isolation of flavor elements in, C 85
- peanut, improvement of yield and quality, T 138
- phosphatides in, C 70
- pilot plant hydrogenation, C 57
- polymerized, metabolism of, P 432
- rape seed, digestibility in humans, P 127
 - digestibility in rat, P 126
- retardation of rancidity in, C 740
- salad, soybean versus cottonseed as, C 338
- soybean, edible, methods of refining, T 67
 - higher saturation for processing into edible products, C 62
 - processing, method for, C 752
 - stability of various types, C 711
 - studies on, C 337
 - tri-chlor-ethylene extracted, C 340
 - unhardened, in margarine, C 331
 - used in edible products, reversion and flavor of, C 753
- stability of, C 740
- stability of, in margarine, T 143
- tropical, C 342
- vegetable, antioxidants for, C 1122
 - chemical bleaching of, C 1139
 - chemical rearrangement by ester interchange, C 69
 - flavor of, C 61
 - fractionation of, C 60, C 62
 - tocopherol in, C 343

Okra

- ascorbic acid in, C 438
- calcium in, C 439
- for processing, T 471
- investigation, P 1499
- nutrient requirements of, Ec 76
- processing, utilization of, Ec 209
- quick freeze, T 472
- seed, improvement of stock, P 1500
 - loss of viability, cause and control, P1501

Olives

- green, pickling of, B 84
- keeping quality of, T 159
- new varieties through breeding, P 1541
- oxidases of, C 1074
- processing of, T 159
- ripe, bacterial spoilage during pickling, B 82

Onions

- flavor of, chemistry, C 550
- hybrid varieties, P 1503, P 1504

Oral Disease

- relation of niacin and other vitamin B complex deficiencies to, P 835

Orange(s)

- concentrate, frozen, T 454
- juice, dehydrated in powder form, T 419
 - dehydration of, T 422
- yellow pigments in, effect of processing and storage, C 554
- yellow pigments in, composition of, C 554

Orange(s)

- marmalade, ascorbic acid in, C 905
- oil, composition of, C 341
 - isolation of flavor elements in, C 85
- Valencia, causes of granulation in, P 1532

Organic

- chemistry, C 2
- research, grant for, Ps 102
- synthesis of, C 1

Organisms

- thermal death time, B 21
- unicellular, amino acid metabolism in, P 763
- unicellular, carbon metabolism in, C 364

Organs

- vitamin E in human, P 595

Ossification

- biochemistry and biophysics of, P 452

Osteoporosis

- strontium in treatment of, P 884

Oxalates

- in foods, protection against caries and erosion, P 959, P 970

Oxidases

- in barley, C 462
- in olives, C 1074
- in wheat, C 462

Oysters

- and other shellfish, effects of DDT, Ec 151
- freshness, use of pH in determination of, C 778
- glycogen and total solids in, seasonal changes, C 677
- physiology, propagation, and fattening, natural enemies, pollution, Ec 132

P

Packages

- consumer, variations in dimensions and weights, T 524
- films on, permeability of, T 557
- flexible, for meat products, T 571
- insulated, for air transportation of perishable foods, T 529
- non-metallic, for food products, T 518
- papers for, permeability of, T 557
- protective wrappings for, T 510

Packaging

- adhesives for, T 526
- aluminum foil for, T 545
- development, T 506
- engineering of, T 497
- for frozen storage, T 531
- heat sealing materials used in, T 561
- in pliofilm, T 549
- labeling, government grade identification, T 561
- materials, comparative protection of various, T 517
- evaluation of, T 522
- film forming, insect repellent, T 555
- for foods, T 502
- grease proofing film, T 553
- improved testing methods of, T 503
- laminating composition for combination of, T 562
- moisture resistance of, T 509
- new techniques, T 509
- protective, suppliers of, T 512
- solvent deposited and molten types, T 551
- papers, rodent and insect repellent, T 554
- permeation of organic vapors in, T 559

Subject Index

- Packaging
 - research, T 505
 - sealing liners, for food products, improvement of, T 547
 - standards of, minimum and preferred, T 511
 - studies, T 501
- Pancreas
 - cystic fibrosis of, vitamin A absorption in children with, P 184
 - deficiencies, infants, amino acids in blood, P 711
 - fibrosis, absorption in, P 1099
 - function, alterations by nutritive state, P 122
 - juice, effect of diet and environment, P 123
 - effect of foods on volume and composition, P 122
 - unidentified lipotropic factor in, P 396
- Pancreatitis
 - chronic cystic, gastro intestinal absorption in, P 894
 - lipid tolerance in, P 895
- Pantothenate
 - calcium, synthetic procedures for manufacture of, C 130
- Pantothenic acid
 - and other B vitamins, ratio to other constituents in muscle tissue, P 723
 - and pyridoxine, relation to carbohydrate metabolism, P 773
 - availability of, P 536
 - deficiency, clinical syndromes in, P 843
 - relation to achromotrichia, P 838
 - relation to adrenal cortex, P 771, P 772
 - relation to "burning feet" syndrome, P 839
 - relation to other vitamin B complex, P 841
 - relation to protein in diet, P 841
 - effect of cooking on, C 932
 - in broilers, effect of grains in feed, C 615
 - in cheese, by microbiological and biological methods, C 321
 - in corn, factors affecting content of, C 662
 - in feeds, methods for, C 165
 - in foods, methods for, C 165
 - in meat, C 352
 - in musts and wines, B 215
 - in turkeys, finished for market, C 615
 - interrelation with riboflavin and pyridoxine in poultry nutrition, P 1427, P 1441
 - intestinal synthesis in horse, P 1309
 - losses in cooking of meat in army messes, C 929
 - metabolism in rabbit, P 44
 - metabolism, physiological role, P 552
 - relation to adrenal cortex activity, P 543
 - requirement of man, P 17
 - requirement of poultry, P 1436
 - role in bacteria metabolism, B 104
 - role in relation to carbohydrate metabolism, P 558
- Pantothyl alcohol
 - availability, P 553
- Papaya
 - analysis of, C 425
 - drying of, suitable methods for, C 425
 - proteolytic activity of, C 425
- Para-aminobenzoic acid
 - as a coenzyme, P 551
 - as anti rickettsial agent, P 551
 - for lacto bacilli, P 13
 - interrelation with pteroylglutamic acid, P 13
 - microbiological assay of, B 152
 - physiological function during growth for food and fermentation processes, B 152
 - relation to other vitamin B complex members, P 551
 - requirement for pig, P 1342
 - role in life cycle, P 551
- Paraffin
 - use in chewing gum, T 275
- Paralysis
 - ascending, in dogs, vitamin B complex deficiency in, P 842
 - familial, periodic, significance of carbohydrate:potassium ratio, P 1074
 - progressive in dogs, a potassium deficiency, P 1073
- Parasites
 - intra cellular, effect on host cell metabolism, P 188
- Parathyroid
 - influence on intestinal secretion, P 642
- Parenteral
 - and oral feeding of protein, P 331
 - feeding, amino acid solutions suitable for, P 330
 - biochemistry, intracellular in, P 98
 - effect on serum proteins, P 203
 - efficacy of, P 98
 - in disease in children, P 1001
 - injection of emulsified fats, P 897
 - minimal requirements for short periods, P 100
 - of amino acids in infants and children, P 174
 - of amino acids, rate of utilization, P 332
 - of carbohydrates, requirements of, P 99
 - of fat requirements, P 99
 - of mineral requirements, P 99
 - of nitrogen requirements, P 99
 - of proteins, P 331
 - problems of administering, P 99
 - requirements minimal, related to oral intake of liquid concentrates, P 101
- Parsley
 - processing utilization of, Ec 209
- Pasteurization
 - processes of, used in meat packing, B 42
 - studies of, B 27
- Pastry
 - frozen, quality control of, T 492
- Pasturage
 - carotene in, C 507
 - deficiency and toxicity of, Ec 22
 - evaluation of, Ec 31, Ec 34, Ec 36
 - nutritive value of, factors affecting, Ec 22
 - nutritive value, measurement of, Ec 24
 - producing, curing, and storing of, Ec 37
 - utilization of, by beef cattle, Ec 23
- Pasture
 - effect of different fertilizer treatments, Ec 34

Subject Index

Pasture

- effect of soil types, Ec 57
- grass, amino acid in, C 510
 - evaluation of, C 510
 - factors affecting quality and quantity, Ec 19
 - mineral content of, C 508
- improvement, Ec 18
- investigations, Ec 16
- irrigated for dairy cattle, Ec 17
- plants, mineral content of, C 509
 - vitamin content of, C 509
- research on volusia soil, Ec 32

Peaches

- ascorbic acid in, C 876
- breeding for resistance to disease, P 1564
- canned, effect on vitamin content, C 894
- carotene in, C 876
- dehydrated and stored, vitamin C in, C 984
- factors affecting Michigan prices, Ec 329
- freezing of, T 457
- fresh, vitamin C in, C 984
- frozen, effect of sugar on quality of, T 488
 - effectiveness of various sugars on preserving qualities of, T 487
 - freestone, pre-freezing treatment in relation to quality, C 1020
 - methods for preventing discoloration in, T 78
 - prevention of discoloration in, C 872
- harvesting, packing and shipping trials, Ec 330
- improvement and development of new varieties through breeding, P 1521, P 1533
- in frozen pies, preservation of color and flavor, C 873
- in storage, factors influencing keeping quality, C 796
- lye peeling of, T 77
- orchards, soil management in, Ec 64
- organic acids in, C 423
- packaging of, T 457
- potassium needs of, C 583
- storage of, factors influencing keeping quality, C 796
- varieties, adaptability to freezing, C 637
 - freestone, adaptability for canning, C 646
 - high in ascorbic acid, C 632
 - high in carotene, C 632
 - suitable for freezing and preservation, C 632
- whole, untreated, packaging of, for freezing, T 457

Peanut(s)

- and peanut butter, thiamine losses during processing of, C 1078
- and products, improvement of, T 189
- and products, microbiological assay of vitamins in, C 459
- butter, factors affecting composition, C 458
 - improvement of texture, food value, stability, T 192
 - in packaged cartons, T 194
 - physical and chemical methods for characterizing, C 457

Peanut(s)

- stabilization of, C 1164
- studies, T 193
- effect of refrigeration on, C 879
- factors affecting composition of, C 458
- new food, ascorbic acid in, C 1043
- new food products from, T 187
- oil, improvement of yield and quality, T 138
 - in storage, rancidity of, C 747
- stabilizing agent from, for peanut butter, C 1164
- optimum moisture content for storage of shelled and unshelled, B 85
- packaging of, T 587
- processing improvement of, T 188
- processing, temperature for, T 587
- products, effect of, refrigeration on, C 879
- preparation of, T 191
- protein, edible, free from oil, production of, T 195
 - raw and heated, compared, P 117
- rancidity and oil separation in, C 750
- sprouted, preservation of, T 482
- storing and shipping methods for, Ec 131
- varieties, quality improvement, C 674

Pears

- cannery wastes, sugar solutions from, Ec 198
- frozen, prevention of discoloration in, C 872
- improvement and development of new varieties through breeding, P 1521

Peas

- ascorbic acid in, effect of blanching variables, C 1071
- breeding for quality, P 1492 - P 1495
- comparison of fertilizer rations to, Ec 72
- dried, biochemistry of, C 399
- enzyme inhibitors in, P 728
- field, Alaska, composition of, C 452
 - in south, for processing, T 471
- frozen, effect of physical and chemical properties on quality of, C 1025
 - objective tests for quality of, C 434
- method of fertilizer application to, Ec 71
- new uses for, C 398
- niacin in, effect of blanching variables, C 1071
- nutrient requirement of, Ec 74
- nutritive value of, C 398
- phosphate and nitrogen application to soil for, Ec 75
- protein in semi synthetic diets, P 254
- proteins of, C 398
- rate of fertilizer application to, Ec 73
- Scotch, factors affecting cooking quality, C 693
- split, cooked, availability of iron in, C 943
 - cooked, loss of thiamine in, C 943
- sprouts, vitamin C in, C 398
- thiamine in, effect of blanching variables, C 1071

Pecans

- in storage, rancidity of, C 747

Pectic

- enzymes, chemistry of, C 216

Subject Index

- Pectic
 - materials and gums from cactus plant, Ec 243
- Pectin
 - chemistry of, C 216
 - factors that induce jelling of, C 217
 - from vegetable tissues, effect of complex phosphates on, T 393
 - molecule, and its derivatives, chemistry of, C 214
 - role of, in fruit and vegetable products, C 215
- Pectinic acids
 - of low methyl ester content, development of, T 268
- Pellagra
 - breeding of high niacin white corn for, C 660
 - in south, reduction of by dried brewer's yeast and enriched bread, C 1089
 - in swine, P 1395, P 1396
 - relation of corn and tryptophane to, P 13
 - role of stomach in pathogenesis, P 837
 - use of milk in, P 836
- Penicillin
 - antibiotic effect on bacteria of fresh milk, B 236
- Pentosans
 - in flour, C 486
 - in wheat, C 486
- Pentose(s)
 - metabolism of, P 370
 - reaction of, C 102
- Peppermint
 - improvement and development of new varieties through breeding, P 1545
- Peppers
 - ascorbic acid content in, C 647
 - barreled, bacteriology of, B 83
 - breeding for resistance to tobacco mosaic, P 1572
 - control of etch and ringspot diseases of, P 1571
- Peptic
 - tryptic digestion of rennet custards in vitro, C 225
- Peptide
 - bond synthesis in animal tissue, P 681
 - metabolism in intravenous hydrolyzate alimentation, P 340
 - synthesis, C 21
 - synthesis of, by transacylation, C 20
- Personnel
 - training program, P 104
- Pharmaceutical(s)
 - containing vitamins and minerals, packaging of, T 591
 - from Alaskan cannery waste, Ec 178
 - industries, synthetic vitamin A for, T 322
 - vitamin E concentrates for, T 327
 - preparations, amino acid crystals put into, C 45
 - products, amino acid used in, from distiller's dried solubles, C 46
- Phenolic
 - bodies in blood and urine, methods, P 206
- Phenolic
 - bodies excretion, effect of diet and drugs, P 208
- Phenols
 - enzyme mechanism in conjugation of, C 230
- Phenylalanine
 - antagonists, new possible, P 733
- Phosphatase
 - inhibitors in prevention of dental caries, P 492
- Phosphate(s)
 - and nitrogen application to soil for peas, Ec 75
 - complex, effect on pectin extraction from vegetable tissues, T 393
 - effect on proteins, T 394
 - effect on skin texture of fruits and vegetables, T 392
 - in food processing, utilization of, T 391
 - cycle in dismutation, P 365
 - defluorinated superphosphate, feeding trials with cattle and poultry, P 1288
 - in cane sirups, C 526
 - in molasses, C 526
 - in natural fats, C 70
 - in oils, C 70
 - in serum, factors affecting concentration, P 488
 - effects on circulation, P 488
 - effects on electrocardiogram, P 488
 - metabolism of bones and teeth, P 491
 - role in carbohydrate metabolism in alloxan diabetes, P 991
- Phospholipid(s)
 - action of choline and fat on liver phospholipid, P 414
 - analytical methods for, P 410
 - metabolism in tissues, P 414
 - relation of diet to, P 1064
- Phospholipins
 - in geese, by Man and Peters Method, C 355
- Phosphoprotein(s)
 - in egg yolk, isolation and characterization of, C 372
 - in feed, C 383
 - in milk, C 383
- Phosphorus
 - availability in phosphate fertilizers, P 467
 - in supplements for swine, P 1344
 - relation to vitamin D₃, P 591
 - effect of fertilizer on feeds, C 568
 - effect of ratio to calcium on calcium metabolism, P 461
 - field test of different carriers of, Ec 56
 - in Alaska field peas, C 452
 - in feeds, availability of, C 568
 - in pasture fertilization, response of cattle, P 1285
 - in poultry nutrition, P 1453
 - in turnip greens, C 408
 - metabolism, during intravenous alimentation, P 336
 - effect of subnormal temperature in rats, P 471

Subject Index

- Phosphorus**
 - in choline and manganese deficiency, P 860
 - in guinea pigs, effect of sterols, P 619
 - of adolescent boys, P 463
 - of adolescent girls, P 464
 - radioactive, in diagnosis of calcium disturbance, P 468
 - in diagnosis of phosphorus disturbance, P 468
 - in study of role of thyroid in metabolism, P 470
 - intake by gastric mucosa normal, pre-cancerous, and cancerous, P 469
 - studies in dairy cows, P 1289
 - relations of soils and plants, Ec 53
 - relation to calcium and vitamin D in reproduction of dairy cattle, P 1286
 - requirements, for aging women, P 108
 - reproduction and lactation in ewes, P 1318
 - role of thyroid in, P 470
 - utilization search for unknown factor enhancing, P 620
- Photosynthesis**
 - mechanism of, P 1462
- Physical fitness**
 - amino acid requirement for dog, P 43
- Phytate(s)**
 - calcium, production of, C 169
 - effect on absorption of radioactive calcium, P 462
 - effect of, on absorption of radioactive iron, P 474
- Phytic acid**
 - production of, C 169
- Phytin**
 - digestion of, conditions affecting, P 466
- Pickles**
 - spoilage of, B 83
- Pickling products**
 - quality analysis of, T 185
- Pie(s)**
 - cartons and plates for, improvement of, T 593
 - crust, improving water resistance of, T 236
 - mix, T 239
 - mix, antioxidants for, C 1123
 - filling mix, T 240
 - freezing of, T 496
 - frozen, fruit and cream, processes for, T 493
 - improved formula, T 491
 - various kinds, T 490
- Pigments**
 - of hemoglobin, C 360
 - of meat, muscle, C 360
- Pike**
 - yellow, life history, propagation and effect of turbidity, Ec 139
- Pilchard fishing**
 - abundance, availability, spawning, Ec 142
- Pimento**
 - improved strain of the perfection variety, C 647
- Pimento**
 - peppers, effect of various fertilizer practices on the pH of, C 578
- Pineapple**
 - chemistry of flavor of, C 550
- Pituitary**
 - anterior, relation to carbohydrate metabolism, P 665
 - relation to protein metabolism, P 662
 - relation to protein metabolism, P 665
- Plankton**
 - marine, as emergency food, Ec 184
 - as food for domestic animals, Ec 184
- Plant(s)** (See also specific foods)
 - ascorbic acid in, effect of electromagnetic radiation, C 680
 - breeding investigations, P 1471
 - crop tests, P 1459, P 1460
 - desert of California, chemistry of essential oils of, C 77
 - disease, bacterial, virus and other of truck crops, P 1578
 - breeding fruits for resistance to, P 1562, 1564, 1573, 1574, 1575, 1577
 - etch and ringspot of peppers, control of, P 1571
 - soil treatment for, P 1558
 - survey, P 1555
 - food, by-products, tocopherol in, C 343
 - Puerto Rican, effect of seasonal variation on vitamin A and C in, C 682
 - foods, vitamins in, C 269
 - frost resistance, P 1461
 - growth and development, P 1457
 - and regulating substances in, C 233
 - and regulators, evaluation of, P 1467
 - and relation of metabolic factors, P 1469
 - studied through protein and enzyme chemistry, P 1468
 - little known protein constituents of, C 231
 - medicinal, chemical studies of, T 347
 - nitrogen compounds in, reactions, B 128
 - pasture, mineral content of, C 509
 - vitamin content of, C 509
 - pathology, P 1554
 - physiology, and genetics, P 1458
 - pigments formed from sugars, P 1464
 - literature on, translation of foreign, Ps 72
 - rusts, P 1556
 - breeding cucumbers for resistance to, P 1568, P 1569
 - breeding beans, peas, tomatoes, for resistance to, P 1569
 - spacing, P 1553
 - utilization of sucrose, P 1465
 - vitamins and minerals in, effect of location factors on, C 681
- Plantain**
 - vitamin A in, C 503
 - vitamin C in, C 503
- Plums**
 - canning of, T 388
 - curculio on peach, biology and control of, Ec 126

Subject Index

Plums

improvement and development of new varieties through breeding, P 1521, P 1534

Pneumonia

factor, isolation of, C 203
Icterus accompanying, in negro, P 1228
susceptibility, relation of diet to, P 1625

Poliomyelitis

effect of nutritional status, P 1080
experimental effect of diet and B₁ deficiency, P 1079
nutritional management, P 1081
relation of diet to, in monkeys, P 1078
susceptibility of scorbutic monkeys, P 1077
virus multiplication in mouse brain in vitro, P 718

Pollution

of fish and shellfish areas, sources, and methods for purification, Ec 150
of oysters, Ec 132

Polycythemia

cobalt, effects of cystine, methionine, histidine and choline, P 1076
pathologic physiology of, P 1075

Polyoxethylene

stearate, for use in bread, cake, C 1159

Polypeptide

metabolism, P 281

Pork

chops, frozen, effect of storage time on quality, C 859
frozen, effect of temperature on quality, C 859
cured, and uncured in freezer storage, relative development of rancidity in, C 856
diets and toxemia in pregnancy, P 72
for frozen storage, effect of ultraviolet light on, B 45
from garbage fed hogs, nicotinic acid content, C 613
riboflavin content of, C 613
thiamine content of, C 613
frozen, rancidity control, C 1131
stability of vitamins during storage, C 853
in freezer storage, desiccation of, C 855
effect of air on, C 854
enzymatic activity, C 857
liver, riboflavin in, microbiological assays, B 150
loin, in frozen storage, effect on vitamin B complex, C 858
nicotinic acid in factors influencing, C 354
potency, influence of ration of animal on, C 614
potency, influence of storage in freezer lockers on, C 614
nutritive value, effect of canning on, C 612
effect of chilling on, C 612
effect of curing on, C 612
effect of freezing on, C 612
effect of nutrition of animal on, C 612
effect of single grain rations for swine on, C 611

Pork

effect of storage on, C 612
products, preserving of, effect on nutritive value, keeping quality, C 1062
storage of, C 860
rancidity development, preserved and cooked various ways, C 742
riboflavin in, factors influencing, C 354
retention, preserved and cooked various ways, C 746
thiamine in factors influencing, C 354
retention, preserved and cooked in various ways, C 746
trimmings, lean, amino acids in, effect of dehydration, long time autoclaving and boiling on, C 983
storage in freezer, stability of vitamins in, C 853

Polysaccharide(s)

effect of dry grinding on chemical and nutritional properties of, C 1000
from *Serratia marcescens*, immunological properties of, T 366
in sugars, C 88
serum content of, P 695
synthesis, Schardinger dextrans as inhibitors, P 381

Porphyrin

dietary factors affecting, P 213

Potash

as affecting crops, C 582

Potassium

and vitamin E, metabolic function, P 793
deficiency, as cause of progressive paralysis in dogs, P 1073
effect on blood and tissue proteins, P 809
deficiencies in dogs, P 862
in meats, C 353
in serum, effects on circulation, P 488
effects on electrocardiogram, P 488
factors affecting concentration, P 488
metabolism in diabetic acidosis, P 490
in diabetes mellitus, P 490
ratio to carbohydrate, significance in familial penodic paralysis, P 1074
requirements of, apples and peaches, C 583
supply, of Michigan soil types, relationship to growth of legumes, C 587
utilization by normal women, 60 - 70 years, P 489

Potatoes

as related to soil types, Ec 57
ascorbic acid in, C 945
during refrigeration, C 803
effect of storage temperature, C 802
effect of maturity on, C 695
breeding for quality, P 1438, P 1507, P 1508
breeding, for resistance to disease, P 1573, P 1574
chemical composition of, factors affecting, C 580
chips, factors causing development of rancidity in, C 755
stabilization of, antioxidants for, C 1121
consumer preference for, Ec 344
culinary quality of, C 440, C 442, C 443, C 444

Subject Index

Potatoes

- factors affecting, C 580, C 579
- culinary properties of, effect of environment on, C 694
- dehydrated, brown substances formed in, C 992
- in prepared mixes, T 415
- dehydration of, discoloration during, C 993
- effect of soil treatment on yield and quality of, Ec 78
- effect of storage temperature, on dehydroascorbic acid, C 802
- enzymes, oxidative, in, C 441
- fertilization of, C 575
- fertilizer experiments with, Ec 77
- freezing, effect on, C 1027
- frozen, effect of physical and chemical properties on quality of, C 1025
- grading, packaging and shipping, Ec 341
- iron in, C 443
- market quality of, factors affecting, C 579
- marketing and processing, Ec 340
- marketing of, Ec 343
- maturity and set, factors affecting, P1509
- niacin in, C 444
- nutritive value of, C 430
 - effect of environment on, C 694
- pre-cooked, freezing of, T 473
- production, P 1506
 - marketing problems resulting from war time shifts, Ec 339
- puffs, T 186
- quality price relationship, Ec 342
- quick freezing, T 474
- spraying of by newer materials and schedules, Ec 116
- starch and its derivatives, C 117
- storage, C 810
- storage losses, C 809
- sugar content of, during refrigeration, C 803
- sweet, ascorbic acid in varieties of, factors affecting, C 696, C 804, C 805, C 808
 - carotene in varieties of, factors affecting, C 696, C 804, C 805, C 808
 - curing of, C 806
 - effect of processing on nutritive value of sweet and Irish, C 806
 - factors affecting ascorbic acid in, C 407
 - factors affecting carotene in, C 407
 - meal from, analysis and feeding trials, Ec 208
 - oxidative enzymes in, C 441
 - processing method of, T 471
 - processing utilization of, Ec 209
 - storage and curing of, C 806
 - stored, causes of internal breakdown, C 807
 - use of flour from, Ec 207
 - utilization in making vinegar sirup and a dehydrated food product, Ec 206
- varieties, breeding for, P 1495, P 1512
 - effect of storage on ascorbic acid content, C 804, C 805
 - effect of storage on carotene, C 804, C 805

Potatoes

- effect of environment on carotene content of, C 804, C 805
- effect of curing on ascorbic acid content, C 804, C 805
- effect of curing on carotene content, C 804, C 805
- thiamine content of, C 443
- tops, killing for early harvest, P 1510
- vitamins in, C 440

Poultry

- breeding methods, P 1250
- disease, Newcastle's, P 1400
- deficiency nutritive, P 1398
- dressed, in frozen storage, effect of pre-treatments on, C 1014
- eviscerated, contamination of, B 11
- fat rancidity in, C 748
- feed, milk by products for, Ec 163
- nutritive value of plant protein, P 1411
- plant food supplements to improve hatchability of eggs, P 1406
- wey and fermentation products for, Ec 165
- feeds, for growing chicks and poults, effect of heat on growth promoting value, P 1410
- iodoproteins in, P 1368
- utilization of mixed, P 1405
- feeding, C 513
 - comparative value of common grain combinations, for nutritive value, C 615
 - comparison of rations for baby chicks, P 1402
 - effect of estrogens on fattening, P 1365-P 1367 and P 1369
 - effect of nutritional factors on pigments, P 1403
 - effect of nutritional factors on production and hatchability of eggs, P 1407
 - of chicks and pullets, P 1401
 - of ducks, P 1408, P 1409
 - of turkeys, P 1409
 - relative value of Ladino clover as a range for pullets, Ec 39
 - trials with defluorinated superphosphate, P 1288
- freezing, methods and equipment for, T 438
- growth, stimulation by organic arsenicals, P 622
 - studies with Ramie meal, Ec 225
 - with citrus seed meal, Ec 229
- home canning of, T 377
- incubation period related to breed, P 1251
- market quality, factors affecting, Ec 298
- meat enrichment of adequate diet, P 143
- meat, quality after storage, C 861
 - vitamin content as influenced by nutritional factors, C 616, 618
 - vitamin content as influenced by processing, C 616
- methods for home canning of, T 377
- nutrition, trace mineral elements in, C 567
- paralysis, control measures for, P 1399
- pasture, evaluation of grasses and legumes for, Ec 38

Subject Index

- Poultry**
 grasses and legumes as source of vitamin A (carotene), C 511
 price of broilers, factors affecting, Ec 299
 products, cooking and freezing rates of, T 56
 freezing of, at low temperatures, T 445
 changes affecting quality, C 1013
 frozen storage, changes effecting quality, C 1013
 literature on, Ps 63
 packaged, effect on nutritive value, keeping quality and palatability, C 1030
 preparation, changes affecting quality, C 1013
 quick frozen, microorganisms in, effects of cold on, B 11
 Salmonellas in, B 54
 rations, animal products in for growing chick, P 1425
 cottonseed meal as protein supplement, P 1414
 distillery by-products in, Ec 234
 folic acid requirements for poultry, P 1438-P 1440
 mung bean, nutritive properties of, P 1413
 protein, supplements in, P 1412
 soy bean oil meal and torula yeast, relative value for laying and breeding hens, P 1416
 soy beans, oil meal, free choice feeding, P 1417
 soy beans with and without methionine P 1415
 vitamin B complex requirements for turkey poults, P 1441
 vitamin requirements for poultry, P 1427, P 1441
 mineral, P 1449-P 1454
 roasters, frozen, factors influencing quality, C 862
 storage, effect on palatability, C 863
 effect of temperatures and periods on quality, C 864
 frozen, rancidity in, C 747
 toxicity of DDT to, P 1383
 xanthophyll, stored by, C 617
- Pregnancy**
 and recurrent abortion, nutrition in, P 62
 basal metabolism in, P 187
 complications of, influence of diet, P 53
 diagnosis in mares, P 1311
 disorder effect on blood, urine, and tissues of rats, P 73
 effect of methionine deficiency, P 78
 evaluation of diets in, P 13
 folic acid metabolism in, P 175
 food intake in, correlation with laboratory and clinical findings, P 59
 histidine destruction in, P 212
 in ewes, effect of nutritional factors, P 1319
 metabolism of women during, P 56
 niacin intake and excretion in, P 71
 radioactive iron in, P 877
 relation of diet to blood in, P 57
- Pregnancy**
 relationship of nutritional state of women to course of, P 60
 riboflavin requirements in, P 68
 significance of nutritional deficiencies in, P 58
- Preparation**
 and use of food, habits, preferences, and practices in Iowa families, Ps 29
 of food, customary home practices, C 916
 effect on nutritive value and acceptability, C 914
 for school meals, C 958
 for serving, factors involved in, T 433
 for white and negro village families in selected areas of Mississippi, Ps 31
 geared to wartime supplies, C 959
 in large quantity, recipe testing, C 956
 preferred method, by city and farm population in Florida, Ps 26
- Preservation**
 and decomposition of food, B 7
 of foods, bacteriology related to spoilage and damage, causes of, B 1-B 3
 in home, methods of, T 396
 methods for foods, changes due to, T 55
 new processes and principles, T 16
 use of ascorbic acid in, C 1043
 use of electricity in, T 28
 of perishable farm products, under controlled temperature, T 397
- Preservatives**
 sulphur dioxide, and sodium benzoate, binary mixtures, action of, C 1154
- Preserves**
 prepared from whole frozen fruits, T 164
 utilization of corn sirups in, T 256
- Preserving agents**
 preparation and evaluation, C 1147
- Primates, infant and maternal nutrition of,**
 P 87
- Processing**
 apples, McIntosh, methods of, T 464
 blanching, of vegetables, effect on vitamin retention, C 1072
 peas, effect on ascorbic acid, thiamine, niacin, C 1071
 cereals, manufactured, effect on amino acids in, C 1073
 cherries, in dry sugar, C 1065
 effect on vegetable proteins, P 257
 food, application of electronics to T 21
 application of enzymes to, T 29
 continuous pressure heat treating apparatus for, T 25
 engineering research in, T 1
 high temperature, T 26
 products, canned, new, times and temperatures for, B 17
 use of chlorine in, C 1138
 use of dielectric heating on, T 22
 utilization of complex phosphates in, T 391
 horticultural products, T 410
 linseed oil meal, for poultry, effect on nutritive value, C 1077

Subject Index

Processing

- meat products, retention of nutritive qualities during, C 846
- of canned fish, T 159
- of coffee, T 421
- of coffee, by high vacuum techniques, T 286
- of dried fruits, T 418
- of dry mixes, T 421
- of eggs, T 421
- of eggs, effect on biological value, C 1056
- of evaporated milk, T 119
- of foods, effect on nutritive value, C 1040
- of foods, improvement in quality by, T 500
- of fruit juices, T 450
- of fruits and vegetables, C 1064
- of fruits and vegetables, equipment for, C 1016
- of gelatin desserts, T 421
- of grapefruit juice, T 171
- of home canned foods, methods of, B 73
- of meat, protein in, effect on biological values, C 1087
- of milk, loss of riboflavin in, C 1046
- of nuts, methods of, T 190
- of olives, T 159
- of peanuts, improvement of, T 188
- of peanuts, temperature for, T 587
- of purees, T 452
- of soybean oil meal, effect of heat on, C 1075
- of sweet potatoes, methods of, T 471
- of tea, T 421
- of wheat germ, T 159
- proteins, effect on biological value of, C 1054
- soya products, effect of heat on nutritive value, C 1075
- soybean oil extracted meal, effect on nutritive value, C 1076
- strawberries, dry sugar, C 1065
- various foods, heat penetration in, T 385
- vegetables, effect on nutritive value, C 1040
- effect on vitamin content, C 1067

Produce

- perishable, handling for local consumption, Ec 307

Progesterone

- production of, C 237

Proteases

- enzyme activities of, for incorporation into food and pharmaceutical preparations, C 224

Protein(s)

- alterations during experimental periods of rat growth, P 225
- anabolic properties of steroid hormones, P 666
- anabolic properties of testosterone propionate and growth hormone, P 647
- and carbohydrate interconversion, P 773
- and vitamin A relation, P 746
- amino acid, composition of, C 10
- in, methods for determining, B 138
- in, by quantitative determination, C 268

Protein(s)

- amount and level in diet, effect on utilization of other nutrients, P 239
- animal concentrates as supplement to vegetable proteins, P 255
- to supplement soya products, P 260
- versus vegetable, availability of amino acid in, C 389
- versus vegetable, (pea), C 398
- assay methods microbiological, B 139
- assimilation in forced feeding, P 343
- beans, biological value of, C 396
- nutritive value of, relating to abundance and proportion of essential amino acids, C 396
- biological value, effect of heat, P 264, P 265, P 270
- of individual, P 228
- related to thermogenic effect, P 276
- body, distribution under changing conditions, P 194
- biuret reaction in presence of ethylene glycol, C 9
- calories from, relation to recovery rate of surgical patients, P 1096
- cereal, amino acids, P 256, C 400
- effect of environment on behavior and composition, C 700
- nutritive value, P 243, C 395
- cereal grains, comparative nutritive value of, C 464
- character of, and longevity, P 252
- cheese, biochemical changes during aging, C 764
- chemical reactions of, as affected by presence of phosphoproteins, C 23
- concentrates, as amino acid sources for chicks, P 1421
- biological values, P 247
- consumption, restricted by war, adjustment of women to, P 104
- corn, C 114, C 467
- in various portions of, C 468
- nutritive value of, C 402
- structure of, C 401
- corrosion inhibitors from, Ec 168
- cow's milk and vitamins in infant nutrition, P 782
- deficiencies in vegetable, P 253
- deficiency, effect on blood and tissue protein, P 809
- effect on enteritis, P 1029
- effect on hepatitis, P 1029
- effect on oral structures, P 810
- effect on tuberculosis, P 1029
- hydrolyzate with dextrose for, T 355
- ocular changes in, P 812
- yeast hydrolyzate with lactalbumin for, T 340
- depletion, and antibodies, P 188
- and endocrine imbalance effect on metabolism, P 188
- effect on tissue enzymes, P 188
- development of methods for hydrolysis of, C 6

Subject Index

Protein(s)

- dietary, relation to niacin, P 759
- dried meat, enrichment of adequate diet, P 144
- effect of complex phosphates on, T 394
- effect of dry grinding on chemical and nutritional properties of, C 1000
- effect of processing on biological value, C 1054
- enzyme, relations in wheat flour, T 211
- enzymic digests of, T 354
- evaluation, of proteinaceous foods, P 235
 - of six different, P 188
 - of six pure proteins with human subjects, P 245
- factor, animal, assay for, P 615
 - animal, attempts to synthesis by microbial process, B 179
 - enrichment of foods, C 1086
 - role in human nutrition, P 610
- feeding, oral and parenteral, P 331
- feedings, Ec 174
 - from yeast, Ec 241
- fish derivatives of, T 356
- food, dairy, as meat substitute, Ec 169
- from alcohol extracted soybean meal
 - gelling characteristics of, Ec 224
- from peas, in semi synthetic diets, P 254
- from plants, indigenous to Southwest, Ec 242
- gland free cottonseed flour as protein source, P 262
- growth factors, unidentified, animal and microbiological, P 611
- high, diets for weight reduction, P 199
- hydrolysis of, in fruits and vegetables, C 414
- hydrolyzates, T 350, T 351, T 353
 - analytical procedures for, C 8
 - and amino acids, combinations of, for clinical and general food, T 352
 - and proteins in medical practice, P 326, P 327
 - and proteins for oral feeding, P 327
 - animal, beef, fish, liver, P 315
 - biological value, P 312 - P 328
 - effect on deficiencies, P 809
 - effect of degree of hydrolysis on nitrogen balance, P 329
 - enzyme compared with acid, P 322
 - for clinical use and as dietary adjuncts, P 325
 - for dietary purposes, T 358
 - for food fortification, T 358
 - from distiller's dried solubles for use in gravies, sauces, Ec 233
 - glucosamine in, by periodate method, C 26
 - in short time parenteral feeding, P 100
 - in treatment of gastric ulcer, P 1140
 - nutritive value of, oral and parenteral, T 356
 - of yeast, for dietary or therapeutic use, T 339
 - preparation of, oral and parenteral, T 356

Protein(s)

- preparation of, with dextrose, in-travenous use in deficiency, T 355
- vegetable, peanut, soybean, wheat gluten, P 315
 - yeast, growth factors in, C 198
- immunological relations of, P 695
- in citrus fruits, C 422
- in diet, effect on growth at suboptimal vitamin A levels, P 746
- in dietary, effect of high and low levels on induced cancer, P 910
- in dried milk, effect of processing on nutritive value of, C 974
- in evaporated milk, effect of processing on nutritive value, C 974
- in hemoglobin synthesis, P 706
- in human nutrition, P 189, P 190
- in muscle tissue, effect of vitamin B complex ratios, P 723
- in peanuts, raw and heated, P 117
- in ration of lamb and ewe, effect of, P 1320
- in soybeans, raw and heated, P 117
- in starch, C 114
- in sugarcane juices, C 525
- insoluble, in cheese, as affecting cooking quality, C 320
- intake, effect on riboflavin requirements, P 749
 - effect on niacin requirements, P 749
 - related to liver regeneration, P 1046
 - relation to creatine metabolism in infant, P 173
- interactions and combinations, P 783
- interaction with vitamin E, P 780
- investigations, agricultural biochemistry, C 5
- in vitro synthesis, with sulfur isotope, P 220
- interrelations with amino acid, enzymes and unknown vitamins, P 777
- intravenous for hypoprotein anemia, P 880
- iodinated in feeding of farm animals, P 1347, P 1362, P 1368
- iodinated, effect on thyroid activity, P 770
 - on vitamin A in tissues, P 770
- isotopic derivatives, microanalysis of, B 137, C 44
- level in diet, relation of vitamin B complex members, P 841
 - relation to metal poisoning, P 1132
- liver, fractionation of, C 28
 - synthesis and utilization, P 222
- meat, biological value of, effect of nutrition of animal on, C 1087
 - biological value of, effect of processing on, C 1087
 - biological value of, effect of storage on, C 1087
 - canned, quality of, C 883
 - for growth of dogs, P 229
 - metabolism, P 188, P 238
 - during partial starvation, P 192
 - endocrine factors in, P 663, P 664
 - function of pyridoxine in, P 778

Protein(s)

metabolism, inhibition of enzymes in, P 633
in rat, P 198
in small animals, P 191
on reduced caloric and water intake,
P 193, P 197
relation of anterior pituitary, P 662,
P 665
relation of pyridoxine, P 779
relation to endocrine function, P 657
study with carbon isotopes, P 217
utilization for hemoglobin, P 699
methods of hydrolysis, C 7
milk, biological value of, in varying
intensities of heat, C 974
changes in, C 600
cow's and human, comparative biological
value, C 385
evaluation of, P 231 - P 233
nutritional evaluation of, C 384
physical and chemical properties of, by
new methods of separation and
fractionation, C 299
utilization, P 231
effect of suboptimal intakes of thiamine
and riboflavin, P 234
whey, C 386
minimum for growth and reproduction,
P 195
minimum for maintenance on rice-beans-
casein diet, P 274
mixture, value, P 195
mixture, value in forced feeding, P 343
natural and synthetic, in therapeutic diets,
P 342
natural, supplementation by purified amino
acids, T 348
nutritive quality, as defined by blood
protein regeneration, P 241
as defined by short period feeding tests,
P 226
nutritive value of raw and heated, P 117
of muscle, P 721
of normal tissues, rate of metabolism,
P 679
of thyroid, analysis of, C 27
optimal for infants as reflected by voluntary
intake, P 80
peanut, amino acids in, by newer micro
methods, C 456
peas, Alaska field, C 452
biological value of, C 398
field, effect of heat, P 265
effect of cooking on, C 398
nutritional value of, C 398
preparations for administration of, T 359
products, for general dietary, specific,
or therapeutic use, T 360
in blood of cancer patients, P 926 - P 928
purified, growth of hamsters on, P 227
qualities, in foods, evaluation and
compilation of data on, C 373
of breakfast cereals, C 403
of cereals, effect of milling and manu-
facturing on, T 215

Protein(s)

of corn, C 403
of eggs, effect of feed on hens, C 619
of oats, C 403
of wheat, C 403
reinforcement of therapeutic diets, P 342
relation to enzyme storage, P 200
requirements, human, evaluation of food-
stuffs for, P 246
in forced feeding, P 343
of poultry, P 1418
of young adults - human, C 403
role in determining quality characteristics
of flour, C 487
soybean, C 945
development of products with, T 199
for supplementing foods, T 199
utilization of, P 259
value in human diet, P 258
soy flour, C 394
sources of amino acid nitrogen, effect on
growth and reproduction in rats, P 223
sparing effects of complex carbohydrates,
P 797
sparing effects of vitamin E, P 760
special, utilization in human feeding, P 242
stability in whole milk powder, C 963
structure, in milk, C 296
studies of, C 4
sugar retention, factors influencing, C 711
supplementary relationships between
proteins of bread, and foods of animal
origin, C 404
supplements, for cattle, P 1267
food products, C 1080
for swine, P 1324, P 1325
in poultry rations, P 1412, P 1416
synthesis, and degradation in cancer tissues,
P 923
biological, using isotopes, P 218
enzymes and mechanism of, P 634
in microorganisms, B 180
mechanism in living tissues, P 677
treated with nitrous acids, C 15
type, effect on calcium utilization, P 791
utilization, by growing chicks and poults,
P 1410
by rat influenced by quality and quantity,
P 224
effect of fat in diet of sheep, P 1321
effect of lactose on, P 372
effect of B complex on, P 781
effect of vitamin B complex, P 776
for animal growth, factors affecting,
P 249, P 250
in protein depleted dogs, relation to
appetite and intestinal flora, B 178
nine essential amino acids, P 238
relation to caloric requirements, P 251
utilization of, correlated with appetite
and intestinal flora, Ps 22
vegetable, as affected by processing, P 257
concentrates, deficiencies in, P 253
deficiencies in, P 255
nutritive value of varieties, C 395

Subject Index

- Protein(s)**
 regenerative value for, blood protein, P 248
 wheat, amino acids in, C 491
 effect of plant hormones on, C 666
 effect of varietal differences on, C 666
 metabolism of, P 244
 wheat flour, action of proteolytic enzymes on, C 482
 changes in, due to fermentation, storage, heat, drying, C 821
 nature of alteration due to maturing by natural and chemical means, C 483
 wheat gluten, analysis of, C 490
 whipping compounds, T 203
 yeasts as sources, P 275
- Proteinases**
 intracellular, study of, C 221
- Proteolytic enzyme**
 action, P 631
- Protease, P 214**
- Prothrombin**
 production and vitamin K utilization, P 603
- Prunes**
 dehydration of, relation of temperature and humidity to quality, C 994
 factors affecting storage life and quality, C 884
- Psoriasis**
 relation to vitamin A and carotene, P 977
 vitamin deficiencies in, P 976
- Psychiatric disturbances**
 effect of vitamins, P 1067
- Psychometric evaluation**
 of certain foods, specific problems for, Ps 39
 of food and beverage products, method research on, Ps 40
- Psychrometry**
 at low temperature, T 49
- Pteroylglutamic acid (See Folic Acid)**
- Purees**
 processing of, changes in vitamin content, T 452
- Purine**
 metabolism, P 209, P 210
- Pyramin**
 and thiamine in man, P 15
- Pyridine**
 derivatives effect of feeding on liver, P 1042
 metabolism, P 209
- Pyridoxine**
 analogues, P 736
 anti vitamin effects, P 734
 and pantothenic acid, relation to carbohydrate metabolism, P 773
 antagonists (desoxypyridoxine) effect on lymphoid tissue, antibodies and serum proteins, P 735
 availability of, P 536
 deficiency, clinical syndromes in man, P 843
 derivatives, antianemic activity in chicks, T 326
- Pyridoxine**
 preparation of, T 326
 effect on conversion of protein to glucose, P 829
 function in protein metabolism, P 778
 in cheese, by microbiological and biological methods, C 321
 in meat, method for, C 164
 interrelation with essential fatty acids, P 786
 interrelation with riboflavin and pantothenic acid in poultry nutrition, P 1427
 niacin, tryptophane relation, P 753
 tryptophane, fat relation, P 752
 relation to protein metabolism, P 779
 role in conversion of indole to tryptophane, B 115
 synthetic procedures for manufacture of, C 130
- Pyrimidines**
 with hematopoietic factors, synthesis of, C 204
- Pyruvate**
 metabolism and acetoin, P 354, P 355, P 364
- Pyruvic acid**
 respiratory enzymes in oxidation of, P 356
- Q**
- Quaternary ammonium compounds**
 eating and drinking utensils, B 198
 efficiency of, B 190, C 1152
 field tests of effectiveness, B 203
 food handling equipment, B 197
 for sanitation of, B 198
 sometimes ineffective, B 205
- R**
- Rabbits**
 biological feeding trials with, Ec 36
- Raffinose**
 production of, T 250
- Raisins**
 factors affecting quality, C 995
- Ramie meal**
 digestion trials, nitrogen balance, vitamin analysis, Ec 225
- Rancidity**
 of coconut fats, control of, C 743
 of fats, C 759
 of fats and oils, retardation of, C 740
 of fat, destruction of fat soluble vitamins during, C 737
 of fat in eviscerated poultry, C 748
 of fat of frozen fish, prevention of, C 749
 of food products with small quantities of fat, causes and control of, C 735
 of foods, prevention of, C 745
 of mayonnaise, C 747
 of meats, pre-cooked, factors influencing, T 434
 of peanut oil, C 747, C 750

Subject Index

Rancidity

- of pecans, C 747
- of potato chips, factors causing, C 755
- of pork, frozen, control of, C 1131
- of pork, cured and uncured, C 856
- of pork, preserved and cooked, C 746
- of poultry, frozen, C 747
- of sausage meat, frozen, antioxidants for control of, C 1127

Raspberries

- vitamins in, effect of quick freezing on, C 1017

Recipes

- for retaining nutritive value and palatability of foods, C 915

Recommended dietary allowances

- in nutritious bread loaf, C 1098

Refrigeration

- household, for retention of nutritive value of fruits and vegetables, C 869
- survey of present and future applications of, T 432

Relishes

- ascorbic acid in, C 410

Renal (See Kidney)

Rennet custards

- peptic- tryptic digestion of, in vitro, C 225

Reproduction

- effect of cereal diet for, P 383
- of mouse, requirements for, P 32
- of rats on purified diet, P 146
- of rats, value of meats for, P 145
- metabolism of women during cycle, P 56
- minimum protein for, P 195
- minimum protein for, on rice-beans-casein diet, P 274
- prolongation of span, relation of water and diet, P 147
- value of protein concentrates in, P 247
- unidentified factors for animal, P 621

Reproductive rest

- metabolism of women during, P 56

Requirements (See also specific nutrients)

- caloric, relation to environment, P 89
- certain fatty acid, P 23
- dietary, of elderly people, P 105
- effect of cold on, P 93
- effect of environment, P 97
- energy, of children, P 186
- fat, minimum, P 24
- fluid electrolyte for surgical patients, P 98
- for amino acids, P 7
 - by dogs, P 43
 - by infants, P 77
- effect of diet, P 765
- in health and disease, P 8
- for ascorbic acid, P 19
- for biotin by man, P 17
- for folic acid by rat, P 570
- for iron by adolescent girl, P 20
- for magnesium by rabbit, P 45
- for niacin by human, P 18
 - in reproduction and lactation, P 69
- for nitrogen in convalescence, P 103
- related to caloric intake, P 335

Requirements

- for pantothenic acid by man, P 17
 - necessary for survival of adrenalectomized rats, P 772
- for protein as met by foodstuffs, P 246
- for surgical patients, P 98
- for riboflavin by adult, P 16
 - by infant, P 82
 - by man, P 17
- in pregnancy and lactation, P 68
- for thiamin, in reproduction and lactation, P 68
- for unidentified nutrients by rat and pigeon, P 39
- for vitamins, by adults, P 9
 - by children, P 86
 - by man, P 10
 - by various animal species, adaptation to diets, P 25
- in convalescence, P 103
- in infections and metabolic diseases, P 102
 - nitrogen and minerals, by aging women, P 108
- for vitamins, fat soluble, by rat, P 37
- for vitamin A, by male and female, P 11
- for vitamin B complex, P 12, P 13
 - by cotton rat, P 34
 - by different genetic strains of mice, P 31
 - by infant, P 81
 - by rabbit, P 44
- for water, by mammals, P 22
- minimal for short time parenteral feeding, P 100
- minimal parenteral, relation to oral intake of liquid concentrates, P 101
- nutritive, and cell respiration, P 27
- at different ages of childhood, P 84
- for tissue culture, P 28
 - of cats, P 48
 - of mice, P 30
 - of mouse, P 33
 - of rat for growth, lactation, and reproduction, P 35
- of adolescent, relation to disease, P 5
- of dogs, P 40
- of embryonic tissue cells in vitro, P 26
- of man at work, P 6
- of mouse for growth, P 32
 - for reproduction, P 32
- of normal men doing hard work, P 88
- of nutrients, effect of caloric intake, P 729
- of opossums, American and tropical, P 50
- of rats, effects of accelerated metabolism, P 94
- of rats, effects of low temperatures on, P 94
- under varied environmental and climatic conditions, P 95

Respiration

- cell, and nutritive requirements, P 27
- effect of environment on, P 97
- in edible meat cuts, C 361

Retina

- content of vitamin A and vitamin A aldehyde on different levels of intake, P 525

Subject Index

Rheumatic fever

- relation of diet to cellular metabolism, P 1086
- relation of diet to susceptibility and treatment, P 1082, P 1083, P 1085
- relation of globulins in blood to immunity, P 1084

Riboflavin

- analogues, P 736
 - as potential antagonists, P 736
- and other B vitamins, ratio to other constituents of muscle tissue, P 723
- assay procedures for, B 149
- blood level, related to intake, P 540
- critical evaluation of chemical and biological methods for, C 158
- deficiency, P 831
 - cataract, due to, P 830
 - effect on alloxan diabetes, P 989
 - effect on conversion of protein to glucose, P 828
 - effect on organs of rat, P 829
 - in anoxic anoxia, P 833
 - methods, chemical for detecting, P 832
 - riboflavin therapy for, P 822
- effect of cooking on, C 932
- effect of suboptimal intake on utilization of milk proteins, P 234
- excretion, of college women on self selected diets, P 541
 - related to intake and blood level, P 540
 - related to that of creatinine and ascorbic acid, P 754
- urinary, in disease, P 102
- urinary, of college women on different intake levels, P 542
- for aging women, P 108
- generation, by molds and bacteria, B 228
- in baked goods, factors affecting, P 952
- in beans, lima, factors affecting, C 687
- in beans, lima, fresh cooked and canned, retention of, C 897
- in beef, microbiological assays for, B 150
- in breads, quick, unleavened, factors affecting, C 952
- in breads, yeast, factors affecting, C 953
- in broilers, effect of grains in feed, C 615
- in broilers finished for market, C 615
- in cowpeas, C 453
- in eggs, cooked, stability of, C 927, C 928
- in foods, losses before preparation, C 1041
 - microbiological assays for, B 150
 - processed, C 1041
 - tropical, C 270
- in fruits, citrus, C 422
- in fruits and vegetables, effect of cooking on, C 910
 - effect of freezing on, C 910
 - effect of reheating on, C 910
 - effect of storage on, C 910
- in geese, C 355
- in human nutrition, P 539, P 546
- in ice cream, availability of, P 544
- in lamb, effect of frozen storage on, C 858
- in liver of geese, C 355

Riboflavin

- in liver, pork, microbiological assays for, B 150
- in meat, C 352
- in meat, losses during cooking in army messes, C 929
- in milk, evaporated, C 303
 - microbiological assays for, B 150
- in milk, market, C 305
- in milk, whole, microbiological assays for, B 150
- in musts and wines, B 215
- in peas, Alaska field, microbiological method for, C 452
- in pork, cooked in various ways, C 746
 - from garbage fed hogs, C 613
 - factors influencing, C 354
- loin, effect of frozen storage on, C 858
- in soybeans, C 453
- in spinach, fresh cooked and canned, retention of, C 897
- in turkeys, finished for market, C 615
- in variety meats, effect of cooking methods on, C 933
- in yeast, T 338
- intake and urinary excretion in pregnancy, P 67
- intake relation to excretion and blood level, P 540
- interrelation with pyridoxine and pantothenic acid in poultry nutrition, P 1427
- intestinal synthesis in horse, P 1309
- levels in children's survey, P 1241
- metabolism, in man, P 540
 - intermediary in man, P 545
 - in rabbit, P 44
- new derivatives, of, C 161
- nutrition of pig, P 1339
- nutritional aspects, P 546
- production and purification of, C 159
- requirement, effect of protein intake, P 749
 - in pregnancy and lactation, P 68
 - of adult, P 16
 - of infant, P 82
 - of man, P 17
 - of poultry for embryo development, P 1438
- relation to adrenal cortex activity, P 543
- retention and resistance to incidence of tumors, P 935
- synthesis by micro-organisms, especially yeast, B 177
- synthesis of compounds structurally related to, C 160
- synthetic procedures for manufacture of, C 130

Ribose

- d, synthesis of, P 625

Rice

- and fruit diet in hypertension, P 1165
- bran extract, production of, T 324
- by-products, nutritive value of, C 473
- composition of, factors affecting, C 705
- cooking and recipes for, C 950
- enriched, C 1093, C 1094, C 1995
- food value of, factors affecting, C 705

Subject Index

Rice

- milled, effect of processing on keeping quality and composition, T 216
- nutritive value of, C 473
- polished, physiological energy value of, C 472
- processed and stored in Hawaii, consumer acceptance, cooking qualities, and nutritive value, C 811
- thiamin in, factors affecting, C 705
- unmilled, physiological energy value of, C 472

Rickets

- studies on refractory, P 1087

Rickettsial diseases

- alteration of body function in, P 1088

Rodenticides

- as applied to plant sanitation and other health aspects, B 191, C 1177

Rope

- in bread, time required for development of, C 1163
- inhibitors, in breads and doughs, C 1162

Rose hips

- as source of ascorbic acid, Ec 245

Roughage

- corn cobs, utilization of, P 1263
- home grown, energy value of, C 514
- milk potentials of, P 1259
- nutritive value of grass silage preserved with molasses, P 1266

Rumen

- digestion of crude fibre, B 173
- effect of feed in dairy cows, B 173
- fermentation studies, B 171

Rutabagas

- ascorbic acid in, C 945
- minerals in, effect of varietal differences on, C 631
- vitamins in, effect of storage on, C 631
- effect of varietal differences on, C 631
- P 1513

Rutin

- effect on albuminuria in nephritis, P 1063
- in buckwheat plants, factors affecting, C701

S

Saccharin

- with dulcin, development of a synthetic blend, T 255

Saccharomyces alcoless

- non-alcoholic products from, T 341

Salad dressing

- development of formulations for, T 144
- starches and oils in production of, T 145

Salicylates

- effect on ascorbic acid in blood, P 586

Saliva

- analysis in diagnosis of nutritional status, P 946

Salmon

- Alaska, appearance and abundance, spawning areas and improvement, Ec134

Salmon

- Columbia river, factors affecting abundance, Ec 136
- runs blocked by dams, diet evaluation, Ec 146
- wastes for pharmaceutical manufacture, Ec 178

Salmonoid fishes

- vitamin requirements, effect on growth and condition, Ec 156

Salt

- needs in parenteral feeding, P 100
- stabilized, potassium iodide applied to, C 1112

Sanitation

- compounds, B 201
- educational program plans for food and dairy plant workers, B 208
- farm equipment, B 185
- industry, food, detergents for, B 206
- literature, bibliography, B 207
- methods in frozen food packing and effectiveness, B 194
- milk plant, B 187
- plant and product, B 192
- plant and rodenticides for, B 191
- plant, relation to microscopical analysis of canned foods, B 202
- problems and methods of control in food plants, B 193
- surveys to test procedure, B 182

Sauces

- for institution use, preparation of, T 304
- for seasoning and flavoring, development of new, T 305
- stability during freezing, storage, and heating, C 865

Sausage

- frozen, rancidity control of, C 1130
- manufacture, bacteriological problems in, B 49
- processing of, C 1032
- spicing and flavoring of, T 300

Schizophrenia

- glutamic acid in, P 1065

School lunches

- chemical analysis of, C 265
- program, appraisal of nutritional effects, P 1235
- program, effect on nutritional status of girls, P 1233
- program in rural community, P 1232

Scup

- abundance, migration, effect of pollution, Ec 144

Seafood

- fresh, life prolonged by antiseptic means, B 56
- investigation of, C 367

Seal

- liver oils, vitamin A assay of, C 775

Sea urchin

- ovaries, echinenone from, C 152

Seed

- disinfection, P 1560

Subject Index

- Serine
 - as source of amide nitrogen, P 295
 - dl, nepirotoxic action of, P 1064
 - dl, synthesis of, C 42
 - in feed proteins, C 388
 - in milk proteins, C 388
 - possible link between proteins and lipids, P 445
- Sesame seed meal, biological efficiency, effect of processing, P 257
- Sex
 - effect on protein utilization for growth, P 250
 - hormones, metabolism, effect of soy bean lecithin on, P 669
- Shad
 - abundance, mortality, and migration, effect of pollution, Ec 144
- Shark meal
 - for poultry, swine, and cattle feed, Ec 179
- Sheep
 - and cattle, unidentified vitamins required by, P 1282
 - breeding methods, P 1248
 - Corriedale and Columbia, P 1249
 - effect of dietary fat on protein utilization, P 1321
 - physiological effects of feeding thiouracil, P 1363
 - production, improved range practices for increase in, Ec 13
 - protein in ration, effect of, P 1320
 - requirements of phosphorus, P 1318
 - requirements of trace elements, P 1317
 - skeletal growth, abnormal in Ancon sheep, P 1322
- Shellfish
 - factors affecting productivity of, Ec 97
- Shock
 - due to surgery, nutritional disturbances, P 1095
- Shortenings
 - characteristics of, C 347
 - effect of antioxidants on, C 1120
 - fats and oils in, T 142
 - historical survey of, C 76
 - hydrogenated, nutritive value of, C 346
 - stability of, C 1120
 - hydrogenation, effects of, C 76
 - nutritive value of, C 346
 - plastic range of, C 76
 - testing for packaging, C 348
- Shrimp
 - Gulf, in frozen storage, cause and prevention of changes in quality, C 868
 - life history and survival, effect of chemical plant control on, Ec 135
 - microbiology of, B 55
- Skeleton
 - composition of, P 453
 - development of, effects of caloric restriction on, P 135
 - metabolism of, P 453
- Skin
 - conditions, effect of soy bean lecithin on, P 402
- Skin
 - effect of desoxycorticosterone, P 660
- Silage
 - carotene, losses in, C 823
 - corn, carotene in, C 516
 - grass and legume, preparation and value of, Ec 28
 - legume, for chickens, C 518
 - preservation of, C 591
- Slaughter houses
 - small, economic problems of, Ec 292
- Soap
 - greases for, from packing house wastes, Ec 176
- Sodium
 - benzoate and sulfur dioxide, binary mixtures, preservative action of, C 1154
 - chloride, crystallizing habits of, C 120
 - excretion during reduction regime, P 487
 - excretion in normal and toxemic pregnancy, effect of diuretic agents, P 74
 - in frozen vegetables, C 1028
 - in hypertension, P 1160, P 1167
 - in meats, C 353
 - relation to edemas of pregnancy, P 74
- Soil(s)
 - and fertilizers, influence on, nutritive values of foods and feeds, C 566
 - study of, Ec 48
 - and plants, composition as related to nutrition of animals and man, C 570
 - phosphorus relations, Ec 53
 - building of, organically, Ec 41
 - building practices, Ec 47
 - covers, effect on yield and quality of apples, Ec 61
 - in apple orchard, Ec 63
 - effect of seasonal changes on nutrient levels, of, Ec 45
 - fertility, effect on health of cow, C 589
 - effect on milk production of cow, C 589
 - effect on nutritive value of milk, C 589
 - levels, build up and maintenance of, Ec 46
 - improving physical structure to increase yield and quality of vegetables, C 563
 - increase of humus content in production of super high yields of crops, Ec 42
 - iodine in, C 569
 - management, in cherry orchards, Ec 64
 - in concord grape vineyard, Ec 69
 - in fruits, Ec 58
 - in peach orchards, Ec 64
 - practices, effect on apple tree growth and fruiting, Ec 62
 - practices, effect on soil structure and water losses in apple orchard, Ec 62
 - physical properties, relation to food and feed crops, C 564
 - qualities, effect on nutritional value of forage crops, C 584
 - research on, Ec 44
 - saline and alkali reclamation of, Ec 47
 - surveys, Ec 43
 - treatment, effect on growth of citrus trees, Ec 66

Subject Index

- Soll(s)**
 effect on growth of walnut trees, Ec 66
 effect on production of fruits, Ec 59
 effect on yield and quality of white potatoes, Ec 78
 types, as related to pasture, alfalfa, corn, and potatoes, Ec 57
 types, rainfall, and replacable magnesium, as related to deficiency symptoms, Ec 95
 volusia, pasture research on, Ec 32
- Sorbitan**
 esters, in foods, C 1168
 monostearate, esters of, to retard staling in bread, C 1158
- Sorbitol**
 studies on, C 103
- Sorghum**
 grains, industrial utilization of, Ec 230
 silage, digestibility of, C 515
- Soups**
 concentrated, improvement of, T 158
- Soybean(s)**
 albumin, in confectionery and bakery products, Ec 222
 chemical studies of, C 392
 development of food ingredients from, T 201
 enzyme inhibitors in, P 728
 essential amino acids in varieties, C 390
 flour, added to wheat flour for bread, T 197
 improvement of, T 202
 in bakery and confectionery products, Ec 221
 in bakery goods, utilization of, T 256
 new and improved, T 200
 proteins in, C 394
 frozen, effect of physical and chemical properties on quality of, C 1025
 industry in Kansas, economics of, Ec 346
 isolation of adenine-pentose-phosphate from, C 455
 lecithin, effect on metabolism of fat soluble vitamins, P 514
 lecithin, effect on metabolism of sex hormones, P 669
 meal, diets for chicks, animal factor for, P 613
 nutritive value of, C 393
 oil, flavor stability of, C 339
 fractionation of, C 62
 processing, method for, C 752
 quality characteristics of tri-chlor-ethylene extracted, C 340
 refining, methods for, T 67
 studies of, C 337
 unhardened in margarine, C 331
 used in edible products, C 753
 variously produced types, stability of, C 751
 versus cottonseed oil as salad oil, C 338
 oil meal, in food, feed, and industrial uses, Ec 220
 nutritive value of, C 449
 nutritive value of, effect of heat of processing on, C 1075
- Soybean(s)**
 nutritive value of, effect of processing on, C 1076
 products, application in food field, Ec 217
 animal protein to supplement, P 260
 as human food, Ec 218
 food, derived from processing of, T 198
 nutritive value of, effect of heat of processing on, C 1075
 protein(s), development of products with, T 199
 effect of processing on biologic value, P 257
 enzymatic digestion of, P 115
 from bean, C 945
 raw and heated, compared, P 117
 raw and heated, with and without methionine for chicks, P 1415
 value in human diet, P 258, 259
 riboflavin in, C 453
 stored, oil in, C 754
 utilization of, Ec 219
 utilization of factors of, C 391, P 259
 varieties of, breeding for, P 1496, P 1497, P 1498
- Spermatogenic**
 deficiency, relation of amino acids, to, P 1056
- Spices**
 analysis of, C 558
 and condiments, effect on gastric mucosa and secretions, P 113
 extracts of, C 560
 improvements in, T 301
 seasonings, C 559
- Spinach**
 ascorbic acid retention in fresh cooked and canned products, C 897
 carotene retention in fresh cooked and canned products, C 897
 effect of processing on nutritive value, C 1040
 processing utilization of, Ec 209
 riboflavin retention in fresh cooked and canned products, C 897
 thiamin retention in fresh cooked and canned products, C 897
- Sprays**
 DDT and DDD in canning and freezing of foods, persistence of, C 1144
 residues, factors affecting deposit, retention, and removal of, Ec 105
- Spreads**
 ascorbic acid in, C 410
- Sprue**
 absorption in, P 1099
 ascorbic acid levels in blood, P 1091
 excretion of fecal fat in, P 443
 folic acid in treatment of, P 1090
 metabolism defects in, P 566
 vitamin A levels in blood, P 1091
- Squash**
 hubbard, vitamins in, effect of dehydration and freezing on, C 1017
 seed, cooking qualities and palatability of, Ec 226

Subject Index

Stabilizers

- effect on chocolate products, C 1169
- for bread, C 1167
- for cake, C 1167
- for ice cream, C 1166, C 1167
- for peanut butter, C 1164
- gums from seaweed for food products, T 279
- in foods, esters of sorbitan and fatty acids as, C 1168
- in ice cream manufacture, C 1165

Standards

- drug, research related to court cases, C 248
- food, research related to, C 247
- research related to court cases, C 248

Staphylococcus

- unidentified growth factor for a strain of, B 123

Starch(es)

- anomalous linkage in, C 110
- changes due to temperature, C 820
- development during growth of wheat kernel, C 475
- effect of cooking on alkali number of, C 954
- enzyme action on, C 213
- from grain sorghums, T 217
- from plants indigenous to southwest, Ec 242
- gelatinization characteristics of, C 118
- granule formation, properties and composition of, C 116
- in agricultural products, enzymic digestion of, C 828
- molecular structure of, C 115
- molecule and its derivatives, study of, C 113
- molecule, chromatographic separation of branching products, C 109
- molecule, size and shape, C 111
- native, action of amylolytic enzymes on, C 209
- optical behavior of, C 115
- organic synthesis by organisms, C 108
- physical properties as related to dry food mixes, C 211
- potato, and its derivatives, C 117
- retrogradation, studies on, C 112
- role in bread staling, C 819
- role in determining quality characteristics of flour, C 487
- studies on, C 107, C 478
- synthesis by methylation, C 108
- by organisms, C 108
- tapioca and its products, C 117
- thermophilic free, C 119
- treated, action of amylolytic enzymes on, C 209

Starvation

- experimental, human, deficiencies and rehabilitation, P 806
- human and rehabilitation, P 1092
- partial, metabolism of proteins and amino acids in, P 192

Steatorrhea

- absorption of nitrogen, effect of casein on, P 1093
- preparations for nutrition of patients with, T 349

Sterile lamps

- for destroying molds and bacteria in refrigeration systems, B 183

Sterilization

- agents for dairy use, B 188, B 189
- agents for food, action of, C 1142
- of apple juice, B 79
- of equipment, by chemical compounds, B 26
- of food, B 19
- canned, B 12, B 16, B 17
- equipment for, T 23
- infant, packed in glass, B 13
- of milk cans, B 184
- study of, B 26

Steroid(s)

- compounds, chemistry and metabolism, P 427, P 428
- effect on body protoplasm, P 430
- hormones, effect on human metabolism, P 431
- metabolism of, P 651
- production in man, effect of age, P 653
- protein anabolic properties of, P 666
- in labor, identification of, P 652
- metabolism, P 426
- relation to carcinogens, P 912
- secretion in health and disease, P 429

Sterols

- from natural sources, identification and characterization of, C 59
- from plants indigenous to southwest, Ec 242
- in tissues, effect of biotin and cholesterol in diet, P 787
- metabolism of, P 424
- natural, affecting calcium and phosphorous metabolism in guinea pigs, P 619
- production and role in nutrition, P 424

Stew

- frozen, pre-cooked, production and bacteriology of, B 53
- in army camps, thiamine in, C 931

Stilbesterol

- diethyl, functions in cattle, P 1356

Stomach

- function in health and disease, P 109
- silent cancer of, P 925

Storage

- and marketing of farm and garden crops, Ec 315
- of vitamin B complex, factors influencing, P 528
- refrigerated, odor removal in, T 46
- zero, evaluation of, Ec 269

Strawberries,

- ascorbic acid in, C 876
- carotene in, C 876
- juice, concentrated, factors affecting quality, T 170
- new varieties through breeding, P 1539, P 1540

Subject Index

- Strawberries
 - processing in dry sugar, C 1065
 - varieties, adaptability and freezing, C 637
 - vitamin C in, C 426
 - vitamins in, effect of quick freezing on, C 1017
- Strontium
 - an adjuvant in treatment of bone healing, P 884
- Succinic
 - oxidase activity, P 628
 - system, effect of calcium on inhibition of, by tocopherol phosphate, P 465
- Sucrose
 - chemistry of, C 90
 - crystallization rates of, C 81
 - in dairy products, C 290
 - in supplementary diet for malnourished children, P 182
 - oxidations of, C 92
 - synthesis of, C 89
 - utilization by plants, P 1465
 - utilization of, P 352
- Sugar(s)
 - absorption, P 351
 - alcohol compounds, C 103
 - amino acid systems, browning reaction in, C 709
 - analysis of, C 84
 - cane, fat soluble vitamins in, clinical importance of, C 528
 - by-products, wax and fatty, Ec 172
 - juices, proteins in, C 525
 - vitamins in, C 525
 - chromatographic adsorption of, C 86
 - corn, nutritive value of, C 529
 - derivatives, C 96
 - as insecticides, Ec 102
 - in food products, C 522
 - new, T 245
 - polymerizable, C 95
 - dietary, effect on vitamin B complex biosynthesis, P 774
 - distribution, C 523
 - effect of kind and concentration on quality of frozen fruit, T 488
 - effect on fruits, T 483
 - effect on preserving quality of frozen fruits, T 487
 - flavor of, C 85
 - from sugar cane juice, T 79
 - glucose derivatives from, C 94
 - in citrus fruits, C 422
 - in frozen fruits, T 489
 - in white potatoes during refrigeration, C 803
 - in World War II, a book, Ps 68
 - industry in Western Europe, recovery of, an article, Ps 67
 - maple, C 531
 - methods of analysis, C 82
 - metabolism, P 348, P 349
 - study with isotopes, P 388
 - mixtures in cacao products, C 548
 - physical characteristics of, C 83, C 85
- Sugar(s)
 - polysaccharides in, C 88
 - production of, T 244
 - products, analysis of, C 84
 - vitamins in, C 527
 - refining, methods for new and improved, C 87
 - production of synthetic cracked bone for, T 342
 - reaction products, identification and isolation of, C 51
 - solutions from pear cannery wastes, Ec 198
 - study by infra red methods, C 48
 - sterile invert, T 253, T 254
 - sweetness of, C 85
 - comparative studies, Ps 41
 - theoretical papers on, C 82
 - utilization, P 352, C 523
- Sulfa
 - drugs, effect on excretion of fecal fat, P 443
 - use in early nutrition of calf, P 1255
- Sulfur
 - dioxide and sodium benzoate binary mixtures, preservative action of, C 1154
 - metabolism, P 472
 - effect of amino acids in nephrosis, P 1060
- Sunflower seed meal
 - biologic efficiency, effect of processing, P 257
 - growth value, P 263
- Supply
 - demand and prices of California farm products, Ec 254
- Surface active agents, C 1172
 - application to food industry, C 1174
 - in food products, C 1173
 - in processing, C 1175
- Surgery
 - effect on serum proteins, P 203
 - fluid electrolytes for, P 98
 - human serum albumin, effect on post-operative patient, P 344
 - minimal parenteral requirements related to oral liquid concentrate intake P 101
 - protein requirements in, P 98
- Surgical cases
 - nutritional disturbances in, P 1095
 - recovery rate as affected by diet and ambulation, P 1096
 - use of dry milk products in, P 1094
- Swine
 - availability of phosphorous in supplements, P 1344
 - baby pig feeding, P 1343
 - cull peas for fattening of, P 1328
 - distiller's by-products for fattening of, P 1326
 - economical plants for pasture of, P 1323
 - effect of condiments on food utilization of, P 1329
 - effect of feeding thioracil on gain and thyroid weight, P 1357, P 1358
 - effect of rations on growth of, C 611
 - effect of rations on quality of meat, C 611

Subject Index

Swine

- effect of thyroprotein feeding, P 1358
 - effect of vitamins A and B on growth and disease prevention, P 1338
 - fed garbage, analysis of vitamin intake of, C 613
 - growth related to thyroid status, P 1361
 - niacin supplements for, P 1341
 - nutrition, use of distiller's by-products, Ec 240
 - protein supplements with corn for, P 1324
 - requirements, P 1330, P 1331
 - amino acids, P 1334
 - and analysis of feeds, P 1332
 - protein, of pigs on forage, P 1333
 - vitamin B complex factors, P 1340, P 1342
 - vitamins, effect of environment, P 1336
 - vitamins, for growth, P 1335
 - vitamins, of brood sow, P 1255, P 1337
 - tryptophane deficient and supplemented feeding, P 1325
- Sympathectomy
- effect on digestive tract, P 114
- Synergists
- in preventing rancidity of fats, C 1116
- Synthesis
- bio, of amino acids using isotopes, P 219
 - carbohydrate, in tissue metabolism, P 347
 - lactose, involving galactose metabolism, P 375
 - of certain body constituents, role of acetates, P 361
 - of liver protein, P 222
 - of organic compounds with carbon isotopes, P 221
 - protein, biologic, using isotopes, P 218
 - vitamins, P 219
- Syrups
- bland, table, from citrus peel paste, T 173
 - cane, ash constituents in, C 526
 - calcium in, C 526
 - iron in, C 526
 - phosphates in, C 526
 - commercial, kojic acid formation from, C 534
 - inverted, used in freezing of fruit, T 486
 - maple, C 532
 - processed, from grain sorghums, T 217
 - starch, product development, T 259

T

Tapioca

- starch and products, C 117

Tartrates

- precipitation, bacterial spoilage and prevention, B 219

Taste

- perception and preference of average consumer, Ps 42

Tea

- cocoa, and coffee, in World War II, a book Ps 76
- processing of, T 421

Teeth (See also dental)

- effect of vitamin D development in hypothyroid rats, P 1101
- fluoride and phosphate metabolism, P 491
- study of diet effects on surface patterns by microscopy, P 971

Temperature

- air, possible effect on calcium metabolism, P 459
- body, effect of diet on control, P 160
- cold, acclimatization, relation to adrenocortical function, P 585
- acclimatization, relation to ascorbic acid metabolism, P 585
- effect on requirements, P 93
- effect on eggs, dehydrated and frozen liquid, C 980
- environmental, physiological effects, P 96
- low, effects on requirements of rat, P 94
- subnormal, effect on blood levels of vitamin A, P 516
- effect on phosphorous metabolism in rats, P 471

Testosterone

- methyl, effect on calcium retention during growth, P 659
- effect on nitrogen retention during growth, P 659
- production of, C 237
- propionate and anterior pituitary, growth hormone effects, P 649
- comparison with growth hormone, P 647
- growth stimulant in mouse, P 650
- growth stimulant in rat, P 648
- in treatment of burns, P 885

Tetrahymena

- factors for growth of, C 200

Tetrosan and Isothan, Q 15

- effectiveness as germicide, B 200

Therapeutic

- action of certain South American plants, T 346
- clinical evaluation of, T 312
- development of new, T 328
- from vegetable sources, T 343-T 345
- improvement of flavor, T 367

Thiamine

- analogues, P 734, P 736, C 157
- antivitamin effects, P 734
- as potential antagonists, P 736
- and natural derivatives in body fluids and liquids, B 148
- and other B vitamins, ratio to other constituents of muscle tissue, P 723
- and pyramin in man, P 15
- antagonists, P 733
- assay methods, C 156
- microchemical, B 149
- availability, P 536
- in certain medicinal products, P 537
- changes in skeletal muscle, P 720
- chloride, in bread, canned, stability of, C 906
- synthetic procedures for manufacture of, C 130

Subject Index

Thiamine

- deficiencies, effect on conversion of protein to glucose, P 828
- effect on normal and diabetic rats, P 827
- in dogs, P 862
- in mammals, P 825
- diets low in, preparation, P 826
- effect of different levels of intake, P 14
- effect of suboptimal intake on utilization of milk proteins, P 234
- effect of supplement on health of children, P 533
- effect of supplement on learning ability of children, P 533
- excretion on low thiamine diet, P 534
- for aging women, P 108
- fortification, C 1091
- hypervitaminosis in alloxan diabetes, P 988
- in baked goods, unleavened, factors affecting, C 952
- in baking non-yeast breads, C 951
- in beans, lima, factors affecting, C 687
- fresh cooked and canned, retention of, C 897
- in biscuits, for improvement of nutritional value, C 1100
- in breads, quick, unleavened, factors affecting, C 952
- yeast, factors affecting, C 953
- in broilers, effect of grains in feed, C 615
- finished for market, C 615
- in cereal products, stability of, C 466
- in chicken, effect of method of preparation, C 935
- in corn meal products, C 469
- in corn varieties, C 663
- in eggs, cooked, stability of, C 928
- in foods, tropical, C 270
- in fruits and vegetables, C 413
- in kale varieties, raw and cooked, C 658
- in lamb, effect of frozen storage on, C 858
- in metabolism, relation of ascorbic acid, P 744
- in peanuts, losses during processing of, C 1078
- in peas, Alaska field, C 452
- effect of blanching variables, C 1071
- in pork, effect of cooking, C 746
- factors influencing, C 354
- from garbage fed hogs, C 613
- loin, effect of frozen storage, C 858
- in potatoes, C 443
- in rice, factors affecting, C 705
- in spinach, fresh cooked and canned, retention of, C 897
- in split peas, cooked, loss of, C 943
- in turkeys finished for market, C 615
- in variety meats, effect of cooking methods on, C 933
- in vegetables, canned, effect of commercial operations on, C 896
- cooked, C 919
- frozen, C 919

Thiamine

- home canned, effect of storage, C 893
 - institutionally prepared, effect of cooking and holding on steam table, C 939
 - in wheat varieties, effect of environment on, C 702
 - inhibitor, activity in plant materials, P 732
 - intakes and urinary excretion in pregnancy, P 67
 - levels in children, survey, P 1241
 - loss in quantity cookery, C 923
 - losses in cooking meat in army messes, C 929
 - metabolism in normal and diabetic, P 538
 - in normal men under stress, P 532
 - nutritive status with respect to, in Hawaii, P 1201
 - of yeasts, utilization of, P 535
 - relation to cardiac disease, P 889
 - requirements for reproduction and lactation, P 66
 - retention in cooking meat and potatoes together in army camps, C 931
 - role in mammalian organism, P 531
- ### Thiocarbamates
- effect on thyroid activity, P 770
 - effect on vitamin A in tissues, P 770
- ### Thiopyrimidines
- goitrogenic manufacture for feed, T 369
- ### Thiouracil
- and other thyroid inhibitors in fattening dairy calves, P 1348
 - and propyl thiouracil, effect on growth and fattening of lambs, P 1364
 - compounds, as anti-thyrototoxic agents, P 1104
 - effect of feeding on gain in swine, P 1357, P 1358
 - effect on fattening and food requirements of poultry, P 1365
 - effect on growth and fattening of steers, P 1349
 - effect on growth and gains in pigs, P 1360
 - in calf feeding, P 1257
 - physiological effects on sheep, P 1363
- ### Threonine
- as a source of amide nitrogen, P 295
 - dl, synthesis of, C 42
 - in feed proteins, C 387
 - in milk proteins, C 387
 - requirement of growing chick, P 1423
- ### Thyroid
- activity as affected by thiocarbamates and iodinated proteins, P 770
 - activity, effect on cholesterol metabolism in atherosclerosis, P 1155
 - disorders, hyperthyroid rats, effect of vitamin B complex, P 1102
 - hyperthyroid rats, effect of vitamin D on tooth development, P 1101
 - hyperthyroidism, dietary factors which protect against, P 529
 - hypothyroidism, relation to arterial disease, P 1149

Subject Index

Thyroid

- effect in inducing weight loss in test animals, C 239
- function and iodine metabolism, P 494, P 495
- gland preparations, methods to measure potency of, C 239
- hormones, studies with radioactive iodine, P 641
- influence on intestinal secretion, P 640
- metabolism of iodine, effect of vitamin A, P 768
- preparations, cardiac effect of, P 888
- proteins, analysis of, C 27
- relation to appetite, P 637
- role in phosphorus metabolism studies with radio-phosphorus, P 470
- role in vitamin A storage, P 767
- secretion excess, effect on utilization of vitamin A, P 769
- status, relation to growth and food utilization in swine, P 1361
- stimulants and depressants, effect on growth and fattening of swine, P 1359

Thyroprotein

- effect of feeding to dairy cattle, P 1350, P 1351
- effect of feeding to swine, P 1358
- effect on fattening and food requirements of poultry, P 1365

Thyrotoxicosis

- and treatment with anti-thyroid compounds, P 1104
- metabolism of radio-iodine in, P 495

Thyroxin

- analogues, biological activity of, C 238
- synthesis of, C 238
- effect on vitamin A storage in liver, P 766
- like materials in feeding farm animals, P 1347

Tin

- in metal containers packed with food, solubility of, T 520

Tissue(s)

- amino acid pattern, effect of carcinogens on, P 913
- animal, amino acids in health and disease, P 671
 - enzyme mechanism of hydrogen transport in, P 630
 - enzyme systems concerned, P 624
 - enzyme system which oxidizes hexose, P 369
 - peptide bond synthesis in, P 681
- body, amino acids in, P 304
- brain nutrition, P 717
- cells, embryonic, requirements of in vitro, P 26
- chemical composition, effect of growth, P 139
- connective, effect of ascorbic acid deficiency, P 850
- choline, related to intake, P 556
- culture, metabolism of nucleosides in, P 216
- requirements for, P 28

Tissue(s)

- function of vitamins in, C 361
 - growing, rate of metabolism, P 679
 - growth in vitro, with reference to cancerous tissue, P 920
 - lesions associated with prolonged choline deficiency, P 847
 - lipids in, effect of diet, P 410
 - living, mechanism of protein synthesis in, P 677
 - lymphoid, effect of desoxypyridoxin, P 735
 - metabolic functions of, P 365
 - metabolism and carbohydrate synthesis, P 347, P 365
 - in relation to intake of choline and pantothenic acid, P 557
 - of hypersensitive and normal animals, P 675
 - related to carbohydrate synthesis and breakdown, P 676
 - of rats, affected by pork pregnancy disorder, P 73
 - plant and animal, microscopy of, P 670
 - proteins, effect of diet in new born calf, P 1308
 - effect of various deficiencies on, P 809
 - isolation of, P 678
 - respiration, action of serum on, P 674
 - and fat metabolism, P 433
 - sterols in, effects of biotin and cholesterol in diet, P 787
 - synthesis and metabolic antagonists, P 726
 - in relation to amino acid utilization, P 333
 - necessity of nine essential amino acids, P 238
 - utilization of essential amino acids in, P 673
 - vitamin A in, effect of subnormal temperature on, P 516
 - vitamin E in human, P 595
- Tobacco mosaic**
- breeding peppers for resistance, P 1572
- Tocopherols (See vitamin E)**
- Tomato(es)**
- acidity, C 447
 - ascorbic acid in, C 446
 - breeding, new varieties, P 1514 - P 1520
 - disease resistance, P 1562, P 1575, P 1577
 - canned, ascorbic acid in, C 898
 - cannery, breeding for higher vitamin C, C 657
 - relation of maturity to color, lycopene, beta-carotene in, C 697
 - relation of maturity to storage losses in, C 697
 - relation of maturity to vitamin C in, 697
 - quality, effect of fertilizers in, C 581
 - effect of potash and magnesium on, C 582
 - effect of three different fertilizers used in Ontario, Ec 87
 - fertilization program, Ec 92
 - fertilizer application, method for, Ec 93
 - fertilizer for, Ec 80
 - major and minor element studies, Ec 82
 - major element studies, Ec 81

Subject Index

Tomato(es)

- fresh, ascorbic acid in, C 598
- frozen, effect of physical and chemical properties on quality of, C 1025
- grown in Texas, commercially and home canned, ascorbic acid in, C 901
- in Ontario, effect of manganese and boron on, Ec 88
- juice, ascorbic acid losses in manufacture, factors affecting, C 900
- new food accessory in, C 448
- Nebraska, nutritive value of, C 430
- nitrogen for, Ec 83
- nutritive value of, effect of fertilizer on, C 581
- plant food leaching problem, Ec 91
- production, crop rotation in relation to, Ec 86
- products, catsup, preserves, chili sauce ascorbic acid in, C 905
- products, mold count technique for, B 80
- provitamin A pigments in, C 445
- spraying of, Ec 118
- varieties, effect of different fertilizer treatments, Ec 84
- yields, effect of fertilizer, C 581
 - effect of manganese sulphate added to soil on, Ec 89
 - quality of fertilizer for optimum, Ec 94
 - sub-soil plowing in relation to, Ec 85
- yields and quality, effect of rate of fertilizer application, Ec 90

Tortilla

- flour, stabilization of, T 196

Toxemia

- of pregnancy, effect of dietary instruction in reducing incidence, P 61

Toxic

- factor in cottonseed pigments, P 1111, P 1112
- in linseed meal and effect of destruction, P 1110

Toxicity

- metal poisoning, relation of nutrition to, P 1132
- of agene (nitrogen trichloride) used for bleaching flour, P 1119-P 1121
- of chlorinated hydrocarbons, in relation to lipotropic substances, P 800
- in relation to protein intake, P 800
- of DDT to farm animals, P 1383
- of non essential amino acids, P 763
- of vitamin A₂, P 522
- studies, chemical warfare agents in food and water, P 1114, P 1115
- cottonseed pigments and cottonseed pigments glands, P 1111
- Crotalaria spectabilis, factors influencing, P 1108
- factor in singletary peas causing lathyrism in rats, P 1107
- insecticides, P 1118
- latex from some species used in chewing gum, P 1113
- tung nuts, P 1109
- vetch used as emergency food, P 1106

Toxicity

- tests, for emulsifiers and stabilizers used in foods, P 1123-P 1125
- of drugs and other preparations, P 1131
- of promising antioxidants, P 1126
- of propyl gallate, P 1127
- of quaternary ammonium compounds, P 1128, P 1129
- of rodenticides, P 1130

Toxicology

- effects of insecticides and chemicals on fish, Ec 154

Trace Elements

- from ion exchange in manufacture of bland syrup, Ec 197
- function in nutrition, P 485
- in wheat and wheat products, C 479

Trace metal

- contamination, effect on milk fat deterioration, C 728

Transmethylation, P 309

Tri-glycerides

- effect of melting point on utilization, P 130

Trout

- abundance in streams, relation to insect prevalence, Ec 133
- anemia in, cause and cure, Ec 148
- lake, life history, propagation, and effect of turbidity, Ec 139
- streams, effect of water-use projects on, Ec 145

Tryptophane

- dl, synthesis of, C 42
- deficiency, factors affecting growth, P 765
- in swine, P 1325
- effect on rats on low protein, pyridoxine free diet, P 778
- free and acetylated for nitrogen balance, P 301
- in poultry feeds, availability for chick, P 1424
- in vegetable products, by microbiological methods, B 142
- intake, relation to niacin utilization, P 550
- intermediary metabolism, P 298
- into niacin, P 750
- metabolism, P 848
- by liver brei, P 300
- niacin metabolic relationship in niacin deficiency, P 748
- niacin-pyridoxine relation, P 753
- niacin-pyridoxine-fat relations, P 752
- relation to pellagra, P 13
- restricted intake, effect on blood levels on low B complex intake, P 823
- restriction in maternal diet, effect on offspring, P 79
- role of vitamin B₆ in conversion of indole to, T 115
- supplement to natural proteins, T 348
- urinary excretion of, P 299

Tubercle bacillus

- carbohydrates, relation to immunity and disease, P 1139
- catalogue of its chemical derivatives, C 29

Subject Index

Tubercle bacillus
 chemistry of, C 29
 synthesis and inhibition of B complex
 vitamins by, B 113

Tuberculin
 chemistry of, C 30

Tuberculosis
 arrested, food consumption and require-
 _ments by women, P 104
 course of, relation of nutrition, P 1135,
 P 1136
 effect of protein deficiency on, P 1029
 metabolism of vitamin C and vitamin P
 in, P 1138
 resistance to, relation of nutrition, P 1134,
 P 1137

Tumor(s)
 as related to vitamins, P 940
 as related to vitamins and minerals, P 941
 dietary factors affecting formation, P 935
 in rats, amino acid content of blood and
 urine, P 935
 liver, in mice, formation and inhibition,
 P 937
 liver, in rats, formation and inhibition,
 P 936, P 938, P 939
 mammary, milk agent in mice, biological
 characteristics, P 930
 milk agent, chemical characteristics,
 P 931
 protein and methionine in rat liver tumors,
 P 935
 resistance to incidence related to riboflavin
 retention, P 935
 spontaneous and induced effect of vitamin
 E, P 942

Tung meal and nuts
 isolation and removal of toxic principle in,
 C 450 P 1109

Turkey
 canned, new procedure for packing, effect
 on vitamins in, C 889
 cut-up, new cookery methods for, C 734
 demand, supply, price, and marketing,
 Ec 301
 economic production, Ec 300
 finished for market, thiamine, riboflavin,
 pantothenic acid, and amino acids in,
 C 615
 merchandizing, alternative methods, Ec 302
 parts on retail market, uses of, Ec 303
 products, freezing of, T 446

Turnip greens
 ascorbic acid in, effect of environment,
 C 699
 carbohydrate storage in, effect of
 environment, C 699
 carotene in, effect of environment, C 699
 cooked, ascorbic acid in, C 944
 minerals in four varieties, C 408
 nutritive value of, effect of processing,
 C 1040
 raw, ascorbic acid in, C 944
 vitamins in, effect of location on, C 698
 yields, comparison of four varieties, C 408

Tyrosine
 l, synthesis of, C 42

U

Ulcer
 comparative utilization of various protein
 foods in, P 1142
 gastric, protein hydrolyzates in treatment,
 P 1140
 peptic, comparison of various treatments,
 P 1141
 stomach, function of vitamin E, P 1143
 stomach, prevention and cure, P 1143

Ultraviolet rays
 for sterilization of milk cans, B 184

Undulant fever
 (Brucellosis), P 1144

Unidentified factors
 animal growth factor for chicks, P 613
 in distiller's dry solubles, C 199
 dietary, P 609
 in animal protein supplements, P 612
 investigation of, C 195
 microbiological studies of, B 159
 of liver extracts, C 604
 of milk and products, C 604
 of milk, relation of diet to the potency,
 C 603
 of milk, source of, C 603
 study with germ-free chickens, B 164
 for animal reproduction, P 621
 in requirements of chicks, P 1446
 in requirements of poultry, for reproduction,
 P 1447
 in requirements of rabbit, P 44
 in requirements of rat and pigeon, P 39
 possible, required by birds, P 1439

Urea
 protein sparing action in nephrosis, P 1059

Uric acid
 excretion, of high protein diets, P 205
 effect of intake of sugar alcohols, P 205

Urinary calculi
 relation of calcium content of diet, P 1145

Urine
 changes due to vitamin E deficiency, P 600
 choline in, related to intake, P 556
 folic acid in, P 573
 folic acid in, of college women, P 549
 of rats, effect of pork pregnancy disorder
 on, P 73
 phenolic bodies in, P 206, P 207
 riboflavin in, of college women, P 542
 vitamin K metabolite in, P 605
 wastage of amino acid nitrogen, effect of
 rate of administration, P 341

Utilization
 biological, of nutrients in common foods,
 P 162
 food, economy of, P 161
 economy of, related to fat, P 438
 inheritance of efficiency, P 163
 of amino acids, P 332, P 333

Subject Index

Utilization

- of amino acids of casein hydrolysis, P 188
- of ascorbic acid in oxidized and reduced forms, P 744
- of ascorbic acid from green leafy vegetables, P 581
- of ascorbic acid, pure, and from foods, P 584
- of calcium and phosphorus, search for unknown factor enhancing, P 620
- of dehydroascorbic acid, P 578
- of foods, use of isotope technique, P 164
- of iron, by man, P 480
- of iron, in different forms, P 479
- of iron, in foods, P 481
- of liver protein, P 222
- of milk proteins, P 231
- of milk proteins, effect of suboptimal thiamine and riboflavin intake, P 234
- of milk proteins, growth promoting effect, P 232
- of milk proteins, in food combinations, Ec 159
- of niacin, on known intake of niacin and tryptophane, P 550
- of nutrients, affected by protein in diet, P 239
- of nutrients, affected by protein in diet, P 239
- of pantothenyl alcohol, P 553
- of protein, effect of lactose on, P 372
- of soybean proteins and minerals, P 259
- of special proteins in human feeding, P 242
- of sugars, P 352
- of sulfur in foods, P 473
- of thiamine of yeasts, P 535
- of triglycerides, effect of melting point, P 130
- of vitamin A, P 523
- of vitamin A, effect of fats and antioxidants on, P 511, P 512
- of vitamin B complex, factors influencing, P 528
- of yeast nutrients, P 535

V

Vaccenic Acid

- and other fatty acids, effect on growth, P 418
- in butter, summer and winter differences, C 605
- role in growth, P 416

Vagotomy

- effect on digestive tract, P 114

Vascular System

- capillary permeability, effect of citrin on, P 608
- degenerative diseases, relation to nutritional status, P 1147
- problems dealing with fragility, P 1148
- literature on, Ps 72
- relation of vitamin C to, P 582

Veal

- loaves, frozen, effect of storage time on quality, C 859
- loaves, frozen, effect of temperature on quality, C 859

Vegetables

- amino acids in, C 428
- breeding and development of new varieties, P 1472
- canned, effect of environment on quality, C 895
- effect of handling methods on quality, C 895
- mineral composition, effect of temperature of blanching on, C 882
- nutritive value of, factors affecting, C 896
- chemical composition of, C 633
- composition of, effect of environment on, C 573
- cooked, thiamine in, C 919
- cooking and freezing rates of, T 56
- cooking of, effect on vitamin content, C 1067
- crops, breeding and cultural tests, P 1471
- effect of chemical treatment for plant disease on palatability and nutritive value, P 1558
- improvement of, P 1473
- production under artificial light, P 1463
- dehydrated, and stored, deterioration of, C 988
- nutritive factors, effect of processing and storage, C 989
- yields and costs, Ec 345
- dried, ascorbic acid in, C 986
- carotene in, C 986
- consumer packing of, T 580
- freezing and adaptability of, C 633
- fresh, and processed, effect of fertility levels on quality of, Ec 95
- fresh, quality, effect of harvesting on, C 690
- quality, effect of preparation for market and storage on, C 690
- frozen, ascorbic acid in, factors affecting, C 1021
- effect of blanching on quality, C 1069
- enzymes reactivated after thawing, C 1029
- factors affecting texture of, C 1024
- flavor changes in, C 1019
- in pack, role of oxidative enzymes in, C 878
- objective methods for quality and maturity of, C 427
- quality of, factors affecting, C 1021
- sodium in, C 1028
- thiamine in, C 919
- garden, vitamin C in, factors influencing, C 435
- green leafy, ascorbic acid from, human utilization of, P 581
- growth of, soil and weather, C 572
- home canned, factors affecting quality, B 72
- storage of, effect on vitamin content, C 893

Subject Index

Vegetables

- lipids in, C 431
- lipids in, role in deterioration, C 757
- low cost, vitamins in, C 429
- oils, flavor of, C 61
 - fractionation of, C 60-C 62
- marketing, grades and standards for, Ec 337
- methods of freezing, C 640
- methods of handling, C 640
- minerals in, C 408
- minerals in, effect of environment on, C 691
- minerals in, effect of quantity cooking on, C 936
- nutritive value of, effect of climate, soil treatment, variety on, C 689
 - effect of old fashioned versus modern methods of cooking, C 938
 - effects of processing, C 1040
 - effects of soil and weather on, C 572
 - effects of soil treatments, C 571
- of Pacific Northwest, canning and freezing technology, T 383
- packaging of, T 579
- preservation of freshness in marketing of, Ec 335
- problems of packing, shipping and marketing, Ec 334
- processed, ascorbic acid in, C 648
- processing of, effect on vitamin content, C 1067
- products, tryptophane in, B 142
- proteins, biological efficiency of, effect of processing on, P 257
 - concentrates, deficiencies of, P 253
 - deficiencies of, P 255, P 260
 - effect of heat, P 265
 - foods from, Ec 210
 - regenerative value for blood protein, P 248
- purees and juices, freezing of, T 477
- soup, dehydrated, T 416
- souring of, microorganisms responsible, B 78
- storage of, comparison of glass and tin packed, for flavor, color, vitamin content, C 1037
 - deterioration in pigments, C 877
 - effect on vitamins, C 649, C 1067
- thiamine in, effect of institutional cooking and holding on steam table, C 939
- tissues, extraction of pectin from, effect of complex phosphates on, T 393
- tropical and subtropical, methods of wrapping, handling, transporting and storage of, T 581
- varieties, best adapted to freezing, C 639
 - green, for freezing, C 639
 - grown in Great Plains, Rocky Mountain regions, nutritive value of, C 654
 - nutritive value of protein of, C 395
 - treatment for conserving maximum ascorbic acid, C 639
- vitamin C in, factors affecting, C 688

Vegetables

- vitamins in, effect of environment on, C 691
 - effect of processing, C 649
 - effect of quantity cooking on, C 936
 - effect of variety on, C 650
 - vitamins in home canned, effect of 6-12 months storage, C 893
 - vitamin losses, during cooking and holding, C 937
 - vitamin retention in, effect of blanching on, C 1072
 - waste, animal feeds from, Ec 205
 - waste, freezing preservation of edible foods from, Ec 201
 - vitamins from, Ec 203, Ec 204
 - Wyoming, varieties, for freezing, C 639
 - yield and quality, effect of soil structure on, C 563
 - yield and quality, factors affecting, P 1474
- ### Vision
- role of vitamin A and related substances, P 524
- ### Vitamin A
- absorption, from mineral oil, C 150
 - absorption, in animal organism, C 142
 - in celiac, P 892
 - in children, normal and with cystic fibrosis of pancreas, P 184
 - in infants, comparison of water soluble, a dispersion form, and vitamin A in oil, P 170
 - in infants and children, in health and disease, P 185
 - in various skin diseases, effects of, P 819, P 848
 - of fat and water-soluble preparations by children, P 185
 - activity in butter, effect of season on, methods of standardizing, C 606
 - activity of blood, of dairy cattle, effect of vitamins and minerals, P 704
 - aldehyde, content of retina on different intake levels, P 525
 - and carotene in tissues, effect of thio-carbamates and iodinated proteins, P 770
 - and carotene metabolism in diabetes, P 983
 - and carotene, normal range in blood, P 701
 - and D tablets, T 311
 - and related substances, role in vision, P 524
 - antagonists, possible, P 733
 - assays, of seal liver oils, C 775
 - spectrographic methods of estimating, C 144
 - spectrophotometric method, C 146
 - associated fat factors of, T 318
 - balance, and liver storage, P 506
 - bioassays, C 143
 - bioassays of fish liver oil, C 143
 - biochemistry in animal tissue, P 524
 - biological potency and toxicity, P 522
 - blood content in dairy cattle, effect of certain vitamins on, P 704
 - blood levels, conditions affecting absorption, P 515

Subject Index

Vitamin A

- effect of mineral oil, P 513
- effect of sub-normal temperature, P 516
- related to intake, P 517
- related to source, P 515
- chemical method, in mixed feeds, C 142
- chemistry of, C 135
- colorimetric determinations, C 133
- concentrates, supplementing dairy rations, effect on milk production, C 1081
- deficiency, effect on bone structure, P 820
- effects on storage of vitamin A, P 769
- effects on tissue structure, P 769
- effects on utilization of vitamin A, P 769
- in arthritides, P 802
- in chronic wasting, P 802
- in heart disease, P 802
- in metabolic disturbances, P 802
- maternal and malformations in offspring, P 65
- relation to skin diseases, P 819
- vitamin A therapy for, P 822
- effect of antioxidants on, P 511
- effect on growth and disease prevention in suckling pigs, P 1338
- effect of high intake of, on vitamin A content of human milk, C 597
- formation from carotene, site of, P 509
- formed from carotene, in animal body, P 508
- formed from carotene, in chicks, relation of thyroid gland, P 510
- formed from carotene, in pregnant rats, relation of thyroid gland, P 508
- formed from carotene, in rat, effect of antithyroid drugs, P 508
- formed from carotene, in rat liver, P 507
- from beta carotene, enzymatic method for, P 627
- from natural sources, methods of purification, C 149
- functions, possible relation to essential amino acids, P 745, P 746
- in blood, effect of therapy on, P 688
- in butter, C 302
- in butter and margarine, comparative stability, C 761
- in butter, creamery, in Indiana, C 314
- in butter, creamery, in Ohio, effect of storage on, C 763
- in butter, Floridin method for, C 333
- in butter, market, C 316
- in butterfat, effect of breed on, C 623
- in butterfat, effect of stage of lactation on, C 623
- in carrots, effect of low temperature on, C 1026
- in carrots, fresh blanched, dehydrated and stored, C 984
- in cheese, C 316
- in chicken, effect of method of preparation, C 935

Vitamin A

- in colostrum of dairy cows, factors affecting, P 1303
- in eggs, Floridin method for, C 333
- in feeds, chemical method for, C 142
- in fish liver oils, C 368
- in fish liver oils and concentrates, effect of various temperatures on decomposition, C 774
- in fish liver oils, bioassay of, C 143
- in fish livers, effect of freezer storage, C 775
- in fish livers, improved methods of determining, C 775
- in fish livers, more efficient use of, C 775
- in foods, stabilization, extraction, purification and degradation of, C 138
- in food plants, in Puerto Rico, effect of seasonal variations, C 682
- in legumes and grasses for poultry, C 511
- in margarine, method of estimation, C 333
- in milk, C 302
- in milk, effect of breed on, C 623
- in milk, effect of stage of lactation on, C 623
- in milk, method of estimation, C 333
- in milk powder, differential oxidation of, C 766
- in nutrition of beef cattle, P 1275, P 1278
- in nutrition of dairy calves, P 1276, P 1277
- in oily and water soluble preparations for children, P 184
- in pharmaceuticals, stabilization, extraction, purification and degradation, C 138
- in plantain, determination of, C 503
- in poultry feed, Floridin method for, C 333
- in retina, on different intake levels, P 525
- in sweet corn, fresh blanched, dehydrated, and stored, C 984
- gastrointestinal stability, P 523
- identification of vitamin A₂, C 136
- influence on iodine metabolism by thyroid gland, P 768
- intake related to body store and well being, P 520
- isolation of vitamin A₂, C 136
- levels, and absorption tests in sprue, P 1091
- levels, in children, survey study, P 1241
- losses, in manufacture of spray dried and sterilized milk products, C 975
- metabolism, P 500-P 503
 - effect of antioxidants on, P 512
 - effect of physical state, P 512
 - effect of soy bean lecithin on, P 514
 - in animal organism, C 142
- methods for estimating, C 134, C 333
- natural oils, improving the quality of, T 317
- newly synthesized, P 503
- nutritional status and enzymatic activity, P 628
- of foods, differential oxidation of, C 766
- physiological function, P 522

Vitamin A

- physiological function, studies with radio carbon, P 521
- potency of biological materials, chemical methods for, C 301
- potency of butterfat, chemical methods for, C 301
- potency of butterfat, relation of diet to, C 598
- potency of milk, chemical methods for, C 301
- potency of milk, relation of diet to, C 598
- precursor, echinenone as a, C 152
- preformed, extraction of, C 148
- preformed, storage of raw materials containing, C 782
- preparation of high potency sterilized emulsion of, T 321
- pro-vitamin A pigments in tomatoes, C 445
 - methods of estimating, C 144
- products, stability of, C 781
- protection, antioxidants in food for, C 1128
- protective effect of xanthophyll, P 523
- requirements, of male and female, P 11
 - of poultry, P 1431 - P 1433
 - of turkeys, P 1444
- role in vision, P 524
- stability, effect of fats and antioxidants on, P 511
 - in powdered milk products, C 978
 - in processing and storage of margarine, C 767
 - methods of determining, C 134
- stabilized, in feed supplements, C 824
- storage, effects of vitamin A deficiency, P 769
 - in liver, effect of thyroxin, P 766
 - role of thyroid, P 767
- synthesis of, C 137, C 140
- synthesis of a very active compound of, C 141
- synthesis of, containing isotopes, C 147
- synthesis of, containing radiocarbon, C 147
- synthetic, commercial production of, T 322
- synthetic methods for, C 139
- utilization, P 523
 - effect of diabetes mellitus, P 996
 - effect of excess thyroid secretion, P 769
 - effect of vitamin A deficiency, P 769

Vitamin B₁ (See thiamine)

Vitamin B₂ (See riboflavin)

Vitamin B Complex

- activity in relation to fats, P 23
- addition to flour, effect of, C 1108
- and macrocytic anemia, P 875
- assay methods, C 154, C 155
- availability and conservation in enriched white and cornbread and grits, C 1106
- biosynthesis, P 12
- effect of dietary sugars, P 774
- blood levels on restricted intake and low tryptophane, P 822
- chemistry of, C 171
- deficiencies, P 12
 - amino acid replacement, P 824

Vitamin B Complex

- effect of type of fat, P 785
- effect on growth and disease prevention
 - in suckling pigs, P 1338
- effect on hyperthyroid rats, P 1102
- in diabetes, P 984
- in icterus, P 1026
- in paralysis in dogs, P 842
- relation to oral disease, P 835
- effect on growth in room and cold temperature, P 529
- effect on protein utilization, P 776, P 781
- for dietary and therapeutic use, T 339
- function, P 543, C 171
- function of, in metabolism of microorganisms, B 111, B 112
- in apple, C 418
- in canned meat, amount retained after processing and storage, C 885
- in diet, relation to metal poisoning, P 1132
- in foods, by microbiological and chemical methods, C 274
- in grains and forage crops, effect of fertilizer on, C 586
- in hemoglobin synthesis, P 706
- in home canned foods, retention of, C 881
- in lamb, effect of frozen storage on, C 858
- in man, saturation, methods of estimating, P 527
- in meat, effects of canning, C 887
- in meat, factors influencing, C 352
- in meat, stored, factors affecting loss of, C 849
- in nutrition, P 526
- in pork loin, effect of frozen storage on, C 858
- isolation of, C 171
- members, interrelationships in requirements of turkey poults, P 1441
- newer members, action mechanism, P 563
- newer members, antianemia activity, P 566
- of enriched and unenriched corn meal and grits, value of, C 1002
- requirements, P 13
 - of cotton rat, P 34
 - of different genetic strains of mice, P 31
 - of horse, P 1309
 - of infant, P 81
 - of poultry, P 1435
 - of rabbit, P 44
 - of turkey, P 1434
 - of young calves, P 1279
- retention, after stewing in various ways, C 931
- retention on various diets, P 530
- role in action of hormones, P 661
- synthesis of, and inhibition of, by tubercle bacilli, B 113
- tablets, T 311
- technology of, T 324
- unknown components, identification and isolation of, C 182

Vitamin C (See ascorbic acid)

Vitamin D

- active materials, comparative efficacy, P 593

Subject Index

Vitamin D

- and calcium in sufficient amount, other factors inhibiting calcium metabolism, P 460
 - and D₂, D₃ distinguished from vitamin D, P 590
 - assay for detection of D₂ and D₃, P 590
 - assays in animals, C 188
 - assays, of hays and other roughage, C 513
 - colorimetric determination, C 133
 - deficiency in hypothyroid animals, effect on tooth development, P 1101
 - effect on tooth development in hypothyroid rats, P 1101
 - in blood of dairy cattle, P 703
 - in infant nutrition, P 84
 - in milk, biological assays, C 252
 - intake, optimum, for bone development of infants and children, P 85
 - method, new, for determination, C 186
 - preparation of high potency, sterilized emulsion of, T 321
 - pure crystalline compared with reference cod liver oil, P 592
 - D₃, relation to availability of phosphorus, P 591
 - relation to calcium and phosphorus, in reproduction of dairy cattle, P 1286
 - requirements, of children, P 86
 - of turkeys, P 1444, P 1445
 - response to, effect of dietary factors, P 589
 - D₂, stability in feeds and supplements, C 825
 - D₃, stability in feeds and supplements, C 825
 - studies in dairy calves, P 1276
 - D₂, studies on, C 189
- ### Vitamin E
- activity in relation to fats, P 23
 - and cholesterol, effect in experimental renal insufficiency, P 1151
 - and menopause, P 602
 - and potassium, metabolic function, P 793
 - balance studies with radio carbon, P 599
 - concentrates, commercial production of, T 327
 - concentrates, production of, for food and pharmaceutical industries, T 327
 - deficiencies, effect on fertility and growth, P 38
 - effect on heart in guinea pigs, P 856
 - effect on heart in rabbits, P 855
 - effect on heart in rats, P 854
 - effect on monkey, P 857
 - in arthritides, P 802
 - in chronic wasting, P 802
 - in heart disease, P 802
 - in metabolic disturbances, P 802
 - pigment associated with, P 853
 - urine changes due to, P 600
 - effect on cholesterol metabolism in arteriosclerosis, P 1155
 - effect on experimental hepatic injury, P 1053
 - effect on growth and incidence of tumors, P 942

Vitamin E

- effectiveness of alpha, beta, delta, gamma tocopherols, P 597
 - enzyme interrelation, P 784
 - function in muscle metabolism, P 724
 - in food plant by-products, C 343
 - in human foods, C 279
 - in human milk, chemical determination and occurrence of, C 308
 - in laboratory diets, C 278
 - in livestock feeds, analyses for, C 521
 - in muscular dystrophy, P 1004, P 1006-P 1010
 - in nutrition and reproduction of dairy cattle, P 1281
 - in prevention of abortion, P 866
 - in Puerto Rican foods, P 857
 - in tissues and organs, human, P 595
 - in vegetable oils, C 343
 - interaction with protein, P 780
 - interconversion in chickens, P 598
 - metabolic function of, P 594, P 595, P 596, P 598
 - methods, quantitative, for tocopherols, C 190
 - natural occurring, isolation of, C 191
 - physiological function of, P 784, P 1143
 - physiological function, mechanism of, P 598-P 601
 - potency of colostrum, C 601
 - potency of milk, C 601
 - protection of liver against chlorinated hydrocarbons, P 601
 - relation to carotene utilization, P 742, P 743
 - role in cardiac disease, P 890
 - serum levels, effect on pregnancy, P 60
 - significance in human fertility, P 602
 - sparing effects on amino acids and proteins, P 760
 - supplementation of dairy cows, C 600-C 602, P 1280
 - synthesis, manufacture of alpha tocopherol, C 130
 - synthesis of, containing radiocarbon, C 147
 - containing isotopes, C 147
 - tocopherol phosphate, inhibition of succinic oxidase system, calcium effect on, P 465
 - treatment of climacteric syndrome, P 602
- ### Vitamin inhibitors
- analogues of pyridoxine, thiamine, riboflavin and biotin, P 736
 - and other antagonists, isosterism, P 730
- ### Vitamin K
- and liver, P 604
 - effect on hypoprothrombinemia, P 1047
 - metabolite in urine, attempt to identify, P 605
 - synthetic procedures for manufacture of, C 130
 - utilization in hypoprothrombinemic animals, P 603
- ### Vitamin M (See Folic Acid)
- ### Vitamin P
- biological and chemical tests, and compounds related to, C 194

Subject Index

Vitamin P

- compounds, C 192
- effect of rutin on anaphylactic and histamine shock, P 606
- effect on various diseases, P 858
- in tuberculosis patients, P 1139
- like substances, effect on animal organisms, P 607

literature translations, Ps 72

Vitamins (general), C 81

- administration in geriatrics, P 107
- analytical methods for, C 125
- and amino acids, relation to choline deficiency, P 755
- and geriatrics, P 106
- assays, C 121, C 272
 - for commercial services, C 367
 - methods, C 122-C 124, B 147
 - methods, chemical, for foods, C 126
 - methods, development of procedures, C 127
 - microbiological, B 143, B 145, B 158
- biological tests, for qualitative estimation of, B 112
- biosynthesis, by microorganisms, P 308
- biosynthesis, using isotopes, P 219
- bound, characterization of compounds containing, C 167
- concentrates, in margarine manufacture, C 1083
- concentrates, oil-soluble, production of, T 315
 - separation of, from liver, C 178
- concentration of new, C 172
- deficiencies, and abnormalities in offspring, P 64
 - and vitamin A in psoriasis, P 977
 - changes produced by, P 816, P 817
 - clinical studies, P 804, P 805
 - effect of respective vitamins on, P 822
 - effect on bone development in children, P 859
 - effect on nerves, P 818
 - effect on protein utilization, P 250
 - effect on susceptibility of monkeys to infection, P 1030
 - methods for diagnosing, P 814
 - relation to loss of hair or hair color, P 840
 - relation to resistance to infection, P 816
- development of, as therapeutic agent, T 328
- effect of feeding on rate of gain and quality of carcass, beef cattle and lambs, P 1352
- effect on psychiatric disturbances, P 1067
- effect on specific action of nutrients, P 668
- effect on utilization of lipids in frog, P 788
- enzyme studies connected with, P 626
- excretion in intravenous alimentation, P 336
- fat soluble, absorption from aqueous solutions, C 132
 - chemistry and physiology of, C 131
 - destruction of, in rancidification of fats, C 737

Vitamins (general)

- in sugar cane, clinical importance of, C 528
- technology of, T 316
- water solubilized, in celiac disease of infants, P 893
- water solubilized, use in dermatitis, P 974
- for enrichment of canned citrus products, C 1084
- for enrichment of foods, C 1107
- for enrichment of grain products, C 1104
- for enrichment of milk products, C 1082
- from plants indigenous to southwest, Ec 242
- function of, in tissues, C 361
- gums as dispersing agents for, in foods, T 277
- hormone relationship in alcoholism, P 868
- in apples, effect of refrigeration, ripening, and handling methods, C 871
- in Army rations, C 260
- in Arctic foods, C 271
- in blueberries, C 419
- in blueberries, effect of canning and quick freezing on, C 1017
- in candy, C 760
- in canned chicken, difference in old and new packs, C 889
- in canned chicken, effect of packing, C 889
- in canned fish, C 896
- in canned foods, effect of storage temperature on, C 785
- in canned foods, factors affecting, C 880
- in canned fruits, effect of storage temperatures, on, C 788
- in canned fruit juices, effect of storage time and temperature, C 789
- in canned turkey, difference in old and new packs, C 889
- in cereal grains, a survey, C 465
- in corn, various portions of, C 468
- in diet of college women, P 446
- in eggs, dehydrated, effect of handling, C 980
- in eggs, factors affecting, C 610, C 627
- in feedstuffs, analytical methods for, C 520
- in foods, reasons for variability in retention, C 275
- in food products of meat packing company, C 363
- in fruits and vegetables, as related to handling, transportation and storage, C 784
- in fruits and vegetables, effect of canning, cooking and freezing, C 948
- in fruits and vegetables, processed, microbiological assay, C 1070
- in fruits and vegetables, survey of, C 409
- in fruit varieties, to determine nutritive value, C 416
- in honey, C 530
- in horticultural crops, factors affecting synthesis, C 678
- in lima beans, factors affecting, C 687

Subject Index

Vitamins

- in lima beans, factors affecting, C 653
- in lima beans, grown in South, factors affecting, C 407
- in low cost vegetables, C 429
- in meat, after frozen storage, effect of thawing methods on, C 921
- in meat, effects of periods of storage, C 847
- in meat, effects of rate of freezing, C 847
- in meat, dehydrated and stored, C 982
- in meat, and products, C 379
- in milk, effect of certain feeding practices on amount, C 593
- in muscles, various, of animal, cause of variation, P 722
- in peaches, effect of canning on, C 894
- in peanuts and products, microbiological assay of, C 459
- in plants, effect of location factors on, C 681
- in plant foods, C 269
- in potatoes, C 440
- in poultry meat, influenced by nutritional factors and processing, C 616
- in raspberries, effect of freezing on, C 1017
- in raw foods, data on factors causing variability, C 679
- in rice, milled, effect of processing, T 216
- in rutabagas, effect of storage on, C 631
- in rutabagas, effect of varietal differences on, C 631
- in squash, blue hubbard, effect of freezing and dehydration on, C 1017
- in strawberries, effect of quick freezing on, C 1017
- in string beans, effect of canning and freezing on, C 1017
- in sugarcane juices, C 525
- in sugar products, C 527
- in sweet chocolate bars, C 760
- in tablet form, T 311
- in turnip greens, effect of location on, C 698
- in vegetables, effect of cooking on, C 1067
- in vegetables, effect of environment on, C 691
- in vegetables, effect of processing on, C 649, C 1040, C 1067
- in vegetables, effect of quantity cooking on, C 936
- in vegetables, effect of storage on, C 1067
- in vegetable varieties, as variety characteristics, C 650
- in vegetable varieties, grown in Great Plains and Rocky Mountain regions, C 654
- in wheat and wheat products, C 479
- interrelations, P 497
 - with amino acids, P 761
 - with amino acids and other nutrients, P 764
- isolation of, C 130
- known and unknown, microbiological studies, B 144

Vitamins

- losses, in canned meat products, C 1058
 - in certain vegetables, during household and quantity cooking and holding of, C 937
 - in fresh meat products, C 1058
 - in frozen foods, C 1003
 - in processed fruits and vegetables, factors affecting, C 786
 - in smoked meat products, C 1058
- metabolism of, P 497-P 499
 - effects of hydrocarbons, P 799
- new, effects of, P 816
- packaging of pharmaceutical dosages, T 591
- preparations, stabilized, T 313
- production, by fermentation by molds and bacteria, B 228
- production, by yeasts, B 101
- products, development of, for use in foods, feeds, pharmaceuticals, T 308
 - evaluation of, for feed industry, T 314
 - for lay and professional use, methods of providing, T 311
- purification of, C 130
- relation to bacteria metabolism, B 109
- relation to enzyme storage, P 200
- relation to essential amino acids, P 756
- relation to fat metabolism, P 433
- relation to tumor origin and growth, P 940, P 941
- requirements, alteration produced by natural foods, P 796
 - as affected by diets, P 25
 - effect on growth and condition of fishes, Ec 156
 - effects of hydrocarbons, P 799
 - effect of intestinal microorganisms, B 162
 - in alloxan diabetes, P 986
 - in convalescence, P 103
 - in infections and metabolic diseases, P 102
 - minimum, of adults, P 9
 - of dairy calves, P 1255, P 1274
 - of man, P 10
 - of microorganisms, B 116
 - of poultry, P 1427-P 1430
 - of rats, P 1430
 - of unicellular animal organisms, B 120
- retention, between harvesting and canning of raw stocks, C 780
 - by vegetables, effect of blanching on, C 1072
 - effect of cooking time, pressure and water on, C 922
 - effect of seasoning on, C 922
 - in frozen fruits and vegetables, effect of processing and storage on, C 800
 - in variety meats, effect of different methods of cooking on, C 930
- rich yeasts, from fruit wastes, Ec 199
- stability, in beef stored in freezer, C 853
 - in fats, P 23
 - in food products, in storage, C 779

Subject Index

Vitamins

- stability, in pork stored in freezer, C 853
 - in vegetable varieties, during and after storage, C 650
 - in vegetable varieties, processed by various methods, C 650
 - structure of, C 130
 - study on, C 254
 - synthesis, T 309, C 130
 - compounds related to, C 128
 - intestinal, effect of distiller's dried solubles in chick, B 176
 - intestinal, effect of surgical removal of intestine, B 167
 - intestinal, effect of synthetic vitamins on, B 176
 - microbiological, B 145, B 146
 - systems, relation to protein utilization P 251
 - supplements, for pea proteins in diets, P 254
 - in geriatrics, P 1013
 - in infant nutrition, P 75
 - testing analogues of vitamins, C 129
 - unidentified, discovery of, B 112
 - growth factor for microorganisms, B 158
 - interrelations with enzymes, proteins, and amino acids, P 777
 - required by herbivora, P 1282
 - utilization, in various diseased conditions, P 1100
 - water soluble, applied assay methods, C 153
 - water soluble, ingested by fowl, effect on storage of these in tissues, C 618
- Vitellin, C 23

W

Walnut

- hulls as source of vitamin C, Ec 246
- trees, effect of soil treatment on growth of, Ec 66

Water

- balance disturbance on high fat diets in rats, P 1050
 - influence of hormones, P 636
- chemical agents in, detection and removal, C 1147
- consumed, relation to reproductive span, P 147
- in Indiana, iodine in, C 569
- intake, relation to caloric intake in rats, P 133
- reduced intake, effect on protein metabolisms, P 193
- requirements for mammals, P 22

Watermelon

- balls, freezing of, T 481

Wax

- and fatty by-product from sugarcane, Ec 172

Weakfish

- abundance, migration, effect of pollution, Ec 144

Weed Control, Ec 6, Ec 7

- on non-irrigated lands, Ec 9
- use of calcium cyanamid, Ec 8
- use of chemical herbicides, in, Ec 10, Ec 11
- use of fertilizer materials in, Ec 11

Weight

- effect of antivitamin on, P 731
- gain as index of protein value, P 228
- loss, in test animals by thyroid, C 239
 - sodium excretion with, P 487
- of body and organs of mouse stimulated by growth hormones, P 649
- potentials of rats, differences due to diet variations, P 36
- reduction, high protein diets for, P 199

Whale

- oil and whaling during and after the war, a pamphlet, Ps 78

Wheat

- and flour, transportation costs, milling and baking in Kansas, Ec 347
- and products, trace elements in, C 479
- vitamins in, C 479
- cereal and flour, milling of, C 499
- enzymes of, relation to baking characteristics, C 482
- evaluation of different varieties, C 492
- factors influencing biochemical properties of, C 489
- factors influencing quality of, C 474
- flour, C 478
 - baking quality factors in, C 493
 - bleaching, C 1134
 - bleaching with gases, physical aspects of, C 1135
 - curing agents for, C 1134
 - effect of absorption of water on bakery products, C 494
 - effect of addition of vitamin B complex, C 1108
 - enriched, nutritional significance of the use, C 1095
 - enriched, value of, C 1095
 - enrichment with vitamins, C 1107
 - enrichment with vitamins and minerals, C 1104
 - enzyme relation to baking characteristics, C 482
 - fat in, C 497
 - improvement of, T 204, T 205, T 207, T 583
 - Michigan, C 665
 - milling, by impact action, T 219
 - mixes prepared, study of, T 223
 - mixtures, baking at high altitudes, C 925
 - non-protein constituents of, C 488
 - non-starch constituents of, C 488
 - nutritive value of, C 273
 - packaging of, T 583, T 584

Subject Index

Wheat

- pentosans in, relation to mineral matter, C 486
- physical properties in relation to strength, C 495
- products, nutrients in, as related to average American diet, C 485
- flour protein, action of proteolytic enzymes on, C 482
- alteration due to maturing, C 483
- changes due to heat, fermentation, and storage, C 821
- enzyme relations in, T 211
- physical and chemical properties, C 668
- sulphydryl groups of, changes due to storage, oxidation, baking, C 821
- flour, refined, enrichment by dried cultured food yeasts, C 1097, C 1101
- relation of granulation and particle size of properties of, T 210
- role of starch and protein in quality, C 487
- strength of, C 495
- germ, in biscuits for improvement of nutritional value, C 1100
- keeping quality of, T 159
- processing of, T 159
- gluten for plasma protein regeneration, P 240
- dehydration of, T 422
- proteins in, analysis of, C 490
- grasses, Kansas, nutritive value, C 481
- improvement of, effect of fertilizer, C 585
- kernel, changes in amylases during growth of, C 478
- growth of, C 475
- inorganic composition of different parts, C 480
- inorganic composition, relation to milling procedures, C 480
- spectrochemical techniques for, C 480
- structure, C 477
- Michigan, C 665
- North Dakota, varietal differences, effect on protein and starch, C 666
- nutritive value of, C 273
- oxidases in, C 462
- pentosans in, relation to mineral matter, C 486
- physical quality in relation to milling, T 214
- physical properties of, factors influencing, C 489
- products, enzymes in, gasometric and colorimetric methods for, C 482
- properties of, evaluation for quality in baked products, T 208
- proteins, biochemical studies of amino acids in, C 491
- metabolism, P 244
- qualities of, C 403
- quality, tests for characterizing varieties, C 487
- relationship of environment and variety to quantity of amino acids in, C 671

Wheat

- varieties, baking qualities, C 672
- breeding for superior baking properties, C 688, P 1548, P 1550
- effect of environment, C 703, C 704
- evaluation of new, C 670
- evaluation of quality by baking, T 206
- flour proteins of, C 668
- inherent protein properties due to, C 667
- milling quality, C 672
- North Dakota, differences in quality characteristics, C 666
- nutrient value of, C 702
- relation of inorganic components to milling and nutritive value, C 704
- relation of specific characteristics to utilization of flours, C 703
- thiamine in, effect of environment, C 702
- vitamins in, effect of environment, C 702
- Western, behavior of, C 669
- Western, methods of characterization, C 669

Whey

- and fermentation products in poultry nutrition, Ec 165
- and products, methods for processing of, T 64
- as fermentation medium, B 231
- concentrates, delactosed, T 113
- constituents, isolation of, C 300
- demineralized, production of, T 114
- use in cookery, Ec 166
- fat analysis, comparison of methods, C 288
- lactates from, T 112
- milk, chemistry of casein and globulin fractions from, C 386
- nature of anti-gizzard erosion factor in, C 202
- powder, use in manufacture of ice creams, T 111
- products, value in animal and human nutrition, Ec 167
- properties and uses of, T 110
- protein studies, C 12
- seasonal variations in, C 13
- utilization, Ec 164

Whitefish

- life history, propagation, and effect of turbidity, Ec 139

Wine

- chemistry of flavor of, C 550
- flavor of, influence of yeasts and bacteria, B 215
- pectic enzymes in making of, C 218
- relation to maturity of grapes to quality of, C 686
- stability, role of traces of heavy metals in, C 1170
- stability and retention of color in, C 553
- yeasts and bacteria of, B 215, B 216, B 218

Work

- capacity of horses and mules as measured by cardiorespiratory response, P 1310
- requirements for men at, P 6, P 88

Subject Index

Wrappers

- for drinking straws, improvement of, T 592
- for food products, improvement of, T 560
- for meat, for the freezer, T 570
- protective, for foods and packages, T 510

Wrapping

- of vegetables, tropical and subtropical, methods of, T 581

Wulzen factor (See antistiffness)

X

Xanthophyll

- protective effect on vitamin A stability, P 523

storage by poultry, C 617

Xanthopterin

- supplements for lactation, P 32

Y

Yeast(s), T 330

- action in dough, B 225
- analysis, procedures for, B 149
- and bacteria in musts, influence of microorganisms on wine flavor, B 215
- and yeast derivatives, B 212
- as sole source of protein, P 268
- as supplement to Puerto Rican ration, P 273
- baker's, production of, improving process for, T 336
- biochemistry, of, B 214
- biological value of different types, P 270
- cultures, genetics and biology of, T 333
- diets with different levels for optimum growth, P 272
- digestibility coefficient, P 270
- dried, active, improvement of production processes, T 331
 - active, improvement of, by processing and strain selection, T 334
 - active, improvement of stability and quality of, T 332
 - active, protective packaging of, T 590
- brewer's, comparison with enriched bread, for pellagra reduction, C 1089
- cultured, enrichment, to refined corn meal, C 1097, C 1101
- cultured, enrichment, to refined wheat flour, C 1097, C 1101
- incorporation into processed foods, C 1088

Yeast(s)

- production of, strain and growth process, T 335
- evaluation as high protein food, P 267
- extracts, in manufacture of antibiotics, B 238
- Flor, in sherry making, B 218
- food, as protein sources, P 275
- food, production of, B 100
- food value of, B 101
- goods, frozen, improving shelf life of, T 589
- growth factors in, C 198
- high protein feed from, Ec 241
- high riboflavin development, of, T 338
- hydrolyzates, P 315
 - growth factors in, C 198
 - preparation of, with lactalbumin, as dietary supplement, T 340
 - protein, for therapeutic use, T 339
- in biscuits, for improvement of nutritional value, C 1100
- in food and pharmaceutical products, P 267
- in grapes and wines, spoilage by, B 217
- in hot roll mix, stabilization of, T 228
- in human diet, P 269
- manufacture of, T 339
- metabolic activities of cells, B 102
- nutrition of, B 101
- nutritional products from primary grown, T 337
- nutritional requirements of, B 100
- nutritive value of, C 500
 - effect of growing media on, P 270
 - effect of heat on, P 270
- physiology, formation of formic, lactic, and acetic acids, B 213
- production of, commercial, T 333
- production of alcohol by, T 333
- production of riboflavin by, B 177
- production of vitamins by, B 101
- proteins, amino acid deficiencies of, P 268
- protein and vitamin rich yeasts, from fruit wastes, Ec 199
- requirements and effects in wines, B 216
- Rhototorula aurantiaca, B 152
- studies on, C 254
- utilization, of nutrients of various types, P 535
 - of nutrients, effect of alcohol, boiling, drying, P 535

Z

Zein

- amino acids in, B 108