



GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT
ON
**THE PRICE STRUCTURE OF
CATGUTS**

BOMBAY
1966

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India, Tariff (——Commission)
Report on the Price Structure
of Catguts—1966.

PERSONNEL OF THE COMMISSION

SHRI M. P. PAI *Chairman*
DR. B. G. GHATE *Member*
SHRI M. ZAHEER *Member*
PROF. K. T. MERCHANT *Member*

**PERSONNEL OF THE COMMISSION WHICH
HEARD THE CASE**

SHRI M. P. PAI *Chairman*
SHRI M. ZAHEER *Member*
PROF. K. T. MERCHANT *Member*

SECRETARY

DR. P. V. GUNISHASTRI

GOVERNMENT OF INDIA
MINISTRY OF INDUSTRY

New Delhi, the 18th August, 1966.

RESOLUTION

No LEI(A)-16(5)/65.—The Tariff Commission has submitted its Report on the price structure of Catguts on the basis of an inquiry undertaken by it under Section 12(d) of the Tariff Commission Act, 1951. Its recommendations are as follows:

- (i) The domestic demand for catguts may be estimated at 243,000 dozen for 1966, 267,000 dozen for 1967 and 307,000 dozen for 1968.
- (ii) The product of Johnson & Johnson of India Ltd., is generally considered to be of satisfactory quality but improvement is desirable and possible as regards uniformity of gauge and sterility.
- (iii) The fair selling prices as given below may be fixed for the respective categories of sutures for the years 1966 and 1967. These prices are F.O.R. destination for orders valued at or more than Rs. 1,000 and exclude dealers' commission:—

Type of Sutures (With Code Nos.)	Commission's estimated fair selling (f.o.r. destination)
1	2
(i) SUTURES (PLAIN AND CHROMIC)	Rs. 23·76 per dozen
(ii) SUTURES 'A' (STRAIGHT NEEDLES) (Code Nos. M 400, M 404 & M 405, M 407 to M 413 and M 590).	Rs. 25·59 „ „
(iii) SUTURES 'A' (CURVED NEEDLES) (Code Nos. M 416, M 417, M 470, M510, M 582, M601, M640 and M641).	Rs. 30·18 „ „

(iii)

(iv)

1	2
(iv) SUTURES 'A' (½ CIRCLE NEEDLES) (Code Nos. M 437, M 471 and M 549).	Rs. 33·12 Per dozen
(v) SUTURES 'B' (CURVED NEEDLES) (Code Nos. M 420, M 421 and M 423 to M 426)	Rs. 31·23 „ „
(vi) SUTURES 'B' (½ CIRCLE NEEDLES) (Code Nos. M 438, M 441, M 442 and M 334)	Rs. 34·19 „ „
(vii) SUTURES 'C' (½ CIRCLE NEEDLES) (Code Nos. M 445, M 446, M 449 and M 450)	Rs. 35·06 „ „

2. Government accept recommendation (1).

3. Government accept recommendation (2). To effect improvement in the quality, M/s. Johnson & Johnson of India Limited will be directed to submit samples from each batch of Catguts manufactured by them to the Assistant Drugs Controller, Bombay for getting them tested by the Central Drugs Laboratory.

4. Government accept recommendation (3) with a stipulation that the words 'for orders valued at or more than Rs. 1,000' appearing in the second sentence thereof may be omitted.

ORDER

ORDERED that the Resolution be published in the Gazette of India and a copy thereof communicated to all concerned.

D. R. SUNDARAM,

Joint Secretary to the Government of India.

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REPORT ON THE PRICE STRUCTURE OF CATGUTS

1. The Government of India in their letter No. 20(5)Tar/65, dated 19th August, 1965 have requested the Commission to enquire into the price structure of catguts of various sizes manufactured in India and to furnish its recommendations or report thereon to Government as early as possible. A copy of this letter is reproduced in Appendix I. At present Johnson & Johnson of India Ltd., Bombay is the only producer of catguts in the country and is producing catguts of the following types:—

Reference to the
Commission

1. Plain sutures
2. Chromic sutures
3. Needled sutures

Two other firms, International Franchise, Bombay and Biological Products, Hyderabad have been licensed under the Industries (Development and Regulation) Act, 1951 for the manufacture of catguts but have not as yet taken concrete steps towards commencement of manufacture. The reference to the Commission was made on a complaint to Government that the prices of catguts manufactured by Johnson & Johnson are higher by 28 to 106 per cent over the lowest quotations of similar types and varieties of imported products. The relevant data furnished by the Director General of Supplies and Disposals in this connection are given below:

TABLE I
Percentage increase in the rate of Johnson & Johnson over the rate for imported Stores

Description	Rate quoted by Johnson & Johnson	Lowest acceptable rate for imported stores	Percentage increase in the rate of Johnson over the rate for imported sutures
1	2	3	4
	(Per dozen) Rs.	Rs.	
Catgut Sterile Chromic medium size 3/0-150 cm Strand in tubes	24·80	16·00	55%
Catgut Sterile Chromic size 3/0-150 cm Strand etc.	24·80	15·00	65%

TABLE 1—Contd.

1	2	3	4
	(Per dozen)		
	Rs.	Rs.	
Catgut Sterile Chromic size 2/0-150 cm.	24·80	15·00	65%
Catgut Sterile Chromic Plain size	24·80	1·500	65%
Catgut Sterile Chromic size 1	24·80	16·00	55%
Catgut Sterile Chromic Medium Size 2/0	25·55	14·00	82·5%
Do. Size 1	25·55	14·00	82·5%
Do. Size 3	25·55	14·00	82·5%
Catgut Sterile Chromic medium size 2/0-60 mm straight eyeless intestinal needle	32·14	25·50	28%
Catgut Sterile Chromic medium size 0	32·14	25·50	28%
Catgut Sterile size 3/0-76 mm length on eyeless needle 16mm. eye curved	52·74	25·50	106%
Do. 26 mm. eye curved	52·74	25·50	106%

2. The Commission decided to include in the scope of the present inquiry all the types and sizes of catguts presently produced by Johnson & Johnson of India Ltd.

3.1. Johnson & Johnson was addressed on 14th September, 1965 for preliminary data regarding its production of different types and sizes of catguts. On the basis of this information detailed questionnaires were drawn up and issued to Johnson & Johnson, other prospective producers, importers and consumers, raw material suppliers and distributors. The Directors of Health and Medical Services of all the States, the Directorate General of Supplies and Disposals, New Delhi and the Directorate General of Armed Forces (Medical Services) were addressed for information on the price and quality of indigenous catguts. A detailed memorandum covering all the

aspects of the industry was sought for from the Director General of Technical Development. The Drugs Controller, Director-General of Health Services, Government of India and Director, Drugs Control Administration, Maharashtra Government were requested for information about quality control and specification of indigenous catguts. The Director General of Commercial Intelligence and Statistics was requested to furnish import statistics of sutures while the Collectors of Customs at the principal ports were asked for information relating to c.i.f. prices, landed costs etc. of the latest imports of catguts at their respective ports. A press note was issued on 20th October, 1965 inviting producers, importers, consumers as well as others interested in the industry to obtain copies of the relevant questionnaires from the Commission's office, and forward their replies. A list of those to whom questionnaires were issued and from whom replies or memoranda were received is given in Appendix II.

3.2. A public inquiry of the catguts industry was held on 18-1-1966 at the Commission's office in Bombay. A list of persons who attended the public inquiry is given in Appendix III.

3.3. The Commission's Senior Cost Accounts Officer has examined the cost of production of catguts manufactured by Johnson & Johnson. The Chairman and two Members of the Commission and other officers visited the factories of Johnson & Johnson at Mulund and Dharavi in October and December 1965. Details of their visits are given in Appendix IV.

4.1. India did not produce surgical catguts prior to World War II. It was at the beginning of that war, when scarcity of surgical catguts was felt owing to the stoppage of imports from abroad that a method of sterilizing catguts was developed by the Central Research Institute of the army. The Institute obtained its requirements of raw catgut from Wasan & Co. of Sialkot. Subsequently, however, when imports of surgical catguts were resumed the Central Research Institute gave up the sterilization of raw catgut. In 1943, Wasan & Co., in partnership with Lt. Col. Malone, a retired official of the Central Research Institute, established at Kasauli the firm of Wasan & Malone for sterilisation of catgut. With the partition of the country Wasan & Co. was forced to shift its factory from Sialkot to Agra. This firm supplied raw catgut to its

4. History of the industry

sister concern at Kasauli. In 1950 the capacity of Wasan and Malone for the manufacture of catgut was estimated at one lakh tubes per annum. However, it produced catgut at the rate of 30,000 tubes per annum. In 1950, the Tariff Board conducted an inquiry into the claim of the sterilised surgical catguts industry for grant of protection and concluded that there was no case for tariff protection though other forms of assistance were recommended. We have been unable to secure any information about the further history of Wasan and Malone which is defunct now.

4.2. The production of silk worm guts (non-absorbent) was undertaken in 1938 by the Sericultural Section of the Department of Industries and Commerce, Government of Madras on an experimental basis. During the last world war when imports of catguts from abroad were interrupted, Sericultural Section began to produce them on a large scale and manufactured about 75 lakh strands. After the war, however, when better and thicker guts were insisted upon by the Medical Directorate, experimental work was undertaken at Coonoor to produce such improved types and it was found that silk worms reared at an altitude of 6000 feet were suitable for the manufacture of thicker guts required for surgical purposes. Non-absorbent silk guts are, however, not within the scope of the present inquiry.

5.1. Three units have been licensed for the manufacture of catguts under the Industries (Development and Regulation)

5. Present position of the industry Act, 1951. These are:

- (i) Johnson & Johnson, Bombay;
- (ii) International Franchise, Bombay (Now known as Crookes Interfran Ltd.); and
- (iii) Biological Products, Hyderabad (Now known as Biological Evans Ltd.).

Of the above, only Johnson & Johnson is at present manufacturing catguts. We have been informed that the licence granted to International Franchise (Crookes Interfran Ltd.), Bombay has been cancelled.

5.2. Johnson & Johnson of India Ltd. is a public limited company registered at Bombay in 1957. It started the manufacture of catguts in July 1962 as part of its activity. Other products of the Company comprise toiletries, tooth-brushes;

gynecic therapeutics, surgeon's requisites and pressure sensitive adhesive tapes. The Chief executive is a Managing Director. The manufacture of catguts is undertaken in two phases at two places, the initial processes at Dharavi and the subsequent stages of production, viz., winding, needling, sterilisation, packing in vials, etc. at Mulund—both within the city limits of Bombay. The table below shows the details of labour employed for the manufacture of sutures:—

TABLE 2
Labour employed by Johnson & Johnson of India Ltd. for the manufacture of sutures

Particulars of labour	1962	1963	1964	1965
(i) Workers	82	182	111	149
(ii) Technical Staff	7	7	9	11
(iii) Non-Technical Staff	9	9	9	9
TOTAL	98	198	129	169

5.3. The authorised and paid-up capitals of the Company as on 31-10-1965 stood at Rs. one crore and Rs. 24 lakhs respectively, all in equity shares of Rs. 100 each. Rs. 18 lakhs of the paid up capital is held by non-Indians (Johnson & Johnson, New Brunswick, New Jersey, U.S.A.) and Rs. six lakhs by Indians—Stock Traders Private Ltd., Bombay. The investment of the Company in the catgut manufacturing department has varied from time to time. The average investment in the manufacture of catguts during 1964 and 1965 has been reckoned by the Company at about Rs. 37 lakhs and Rs. 48-50 lakhs.

6.1. The licensed capacity of Johnson & Johnson is 10,000 dozen per month, i.e., 120,000 dozen per annum on a single shift basis. On the basis of three shifts, after making allowances for breakdowns and stoppages, and the normal fall in production during night shifts, the full capacity will be in the region of 300,000 dozen per annum.

6.2. Johnson & Johnson at present produces three main types of catguts.

1. Plain sterilised surgical catgut.
2. Chromic sterilised Surgical catgut.
3. Needled sutures.

The Company also manufactures black braided silk gut which is not within the scope of present inquiry. The production of various varieties of catguts during 1962 to 1965 according to sizes is given as under:

TABLE 3
Statement showing production of different types and sizes of catguts from 1962 to 1965 (Jan.-Sept.)

Sutures	1962	1963	(Figures in dozens)	
			1964	1965 (Jan.-Sept.)
<i>A. Plain</i>				
S 100 5/0	97	—	147	260
101 4/0	1396	—	246	569
102 3/0	6430	8354	2928	4471
103 2/0	10223	26770	4758	19249
104 0	10324	24411	5912	14948
105 1	6359	12588	8157	7271
106 2	1682	3089	2957	1567
107 3	576	637	678	367
108 4	135	—	—	—
SUB-TOTAL	37222	75849	25783	48702
<i>B. Chronic</i>				
110 5/0	149	—	23	189
111 4/0	1422	—	858	520
112 3/0	12798	5103	3944	6478
113 2/0	13903	28749	6894	13055
114 0	17299	25278	20826	20826
115 1	23847	35957	23177	22012
116 2	12082	21008	21102	10544
117 3	9229	6837	7340	1145
118 4	279	183	—	—
SUB-TOTAL	91018	123115	84164	74769
Total guts (A plus B)	128240	198964	109947	123471
Needled sutures	3594	24837	17534	20120

The year 1963 showed the maximum production for all three varieties of catguts and this is said to be due to an anticipated increase in demand due to the Chinese attack in 1962. The producer has also attributed the variations in production to fluctuating demand and inferior quality of raw materials.

7.1. Sterilised surgical catgut consists of sterile strands prepared from the longitudinally split submucous membrane of the small intestine of sheep or other herbivorous domesticated animals. The following are the different types of catguts:—

7. Process of manufacture

- (i) "Plain" surgical catgut which is made from sterilised surgical catgut not treated to prolong the process of digestion in the human system.
- (ii) "Hardened" surgical catgut which is sterilised surgical catgut treated with a suitable hardening agent designed to prolong its resistance to digestion. One type of 'hardened' surgical catgut is known as 'Chromicised' surgical catgut due to its treatment with chromium salts.
- (iii) "Needled sutures" (both plain and chromic). An eyeless curved needle is attached to the suture by a specialised method. This variety gives some special advantage in use.

7.2. It takes a period of about eleven days to process raw sheep casings into dry suture strands. Johnson and Johnson procures casings from all over the country. Those coming from nearby sources and reaching the factory within two hours are known as "green casings" and are kept preserved in ice. Those coming from distant places like Calcutta, Delhi and Madras are salted for preservation before despatch and they come packed in containers or wooden casks, securely lined with polythelene film and immersed in saline water. On arrival at the factory, these are washed as thoroughly as possible in profuse running water and all extraneous matter removed. Green and salted casings are washed separately. In this process the casings get lengthened. On the external layer of the casing there is a cord throughout the length and this has to be removed and discarded and the tubular membrane alone used. This splitting requires skilful handling. Each casing is split up into two parts as the inner half and the outer half of the intestines differ in length

and if stretched without such treatment will not have a smooth surface, but a wrinkled one. This splitting is done by a simple machine consisting of a bent clip which orients the inner wall and the outer wall against a vertical knife which divides the casing into two parts. These two parts which vary in length are processed separately. At this stage the ribbons undergo a final chemical cleaning known as 'collagen purity' process. Collagen is the organic material constituting the intestine. The two ends of each strand of spilt casing are now attached to two cotton loops and are hung under tension in a horizontal position for drying. Strands of equal length are then grouped separately in lengths of 5 ft., 10 ft. and 15 ft. As the individual strands thus obtained vary in diameter also, it becomes necessary to combine two or more strands together to get catgut of a particular size. The twisting is done by fixing the bunch of strands with the required number at one end and putting a predetermined number of twists on them with a twisting machine. This also requires great skill on the part of the worker. Thereafter, the catgut undergoes either of the following two processes:—

(i) *Plain catgut*.—The twisted catgut is given a chemical treatment so that the gut strings become hard. The strings are later suspended in a horizontal position under controlled temperature and humidity. The strings which require some hardness and stiffness in this conditioning process now become dimensionally stable.

(ii) *Chromic process* (True Chromicising Process).—Here also, a similar treatment is given in a bath but the bath contains chromium salts. Unlike plain catgut which is of a cream colour, the chromic catgut is dark brown and almost black. Chromic catgut is slow in absorption in the human system. Johnson and Johnson calls this process "Ribbon chromicising" and claims that it is an exclusive process whereby surgical gut is chromicised in the ribbon form before being twisted into a single strand and thus ensures a uniform rate of absorption.

7.3. The next process (in the case of plain as well as chromicised catgut), comprises gauging the dry gut for the proper diameter. Although the strands of approximately same type are grouped together the individual variation from one strand to another is of a wide range. Moreover, the surface of the gut is rough and uneven. To make all guts of the same

size, the strands are polished by mild abrasion over an emery surface. The abrasion is continued upto the degree required to get the diameter within tolerable limits. The process of gauging and polishing is repeated till the correct diameter is obtained and the strand acquires a smooth glossy surface. This strand, still known as raw gut, is now ready for sterilisation and filling in hermetically sealed glass tubes. As the present method is slow, Johnson and Johnson intend to have a modified process known as the true gauging process by means of an electronic machine which gauges, polishes and counts simultaneously in a much shorter time. The guts coming out after this gauging are subjected to a single process of polishing. The electronic machine meant for this process has just been erected and is about to be commissioned.

7.4. Raw guts gauged and polished are now wound up on a slat and inserted in a thoroughly cleaned tube, with a label indicating the name of the marker and other essential details like batch number, size, date of manufacture etc. The wound catgut is then kept in a tube immersed in a sterilising fluid (which is a mixture of a number of chemicals). It is to be noted that the label also remains submerged in the fluid along with the catgut and therefore the material of the label as well as the ink should remain perfectly stable to the fluid as also to the sterilising process. After this process the sealed tubes of catgut are subjected to a process of incubation in a closed chamber maintained at a controlled temperature, and a careful watch is kept of the growth of any bacteria in the tube. After the incubation process, a 100 per cent inspection is carried out to check the sterility of the finished goods. In case there is any bacterial growth in any part of the lot, the whole lot is rejected.

7.5. Details of the quality control checks adopted in Johnson and Johnson at every stage of manufacture detailed above are discussed separately in paragraph 10.2.

8.1. The principal raw material for the manufacture of catguts is the intestine or casing of domestic bovine animals procured indigenously. The other raw materials include special eyeless needles, isopropyl alcohol, ethylene oxide, sodium benzeate, slats, glass tubes and other packing materials. Needles, ethylene oxide,

isopropyl alcohol and slats are imported while other items are available indigenously.

8.2. In the west the casings consist of the intestine of bovine animals and of sheep. "Ethicon" which is a leading manufacturer of catguts has a world-wide organisation to collect such casings. A large percentage of casings has to be discarded in the process of manufacture as only healthy casings free of all defects may pass out in the final stage as finished catguts. In India, casings of the goat are the main raw material though a small quantity of casings of sheep is also used. Till 1962 casings used to be imported by Johnson and Johnson from England and Australia.

8.3. Johnson and Johnson informs us that there is no organised source of purchase of intestine in the country and it purchases its requirements from butchers and slaughter houses from all parts of the country. Nearby sources like the slaughter houses in the city and at Deolali, Nasik and Poona are regularly and fully tapped. Paid agents of the Company also regularly despatch casings from distant sources like Delhi, Ambala, Bangalore and Madras. Those coming from near about sources and reaching the factory within two hours (green casings) are kept preserved in ice. Those coming from distant places arrive salted for preservation. There is no fixed price for the intestine and quality also varies from one lot to another.

8.4. Johnson and Johnson has drawn our attention to the following difficulties faced by it in connection with the procurement of this raw material:

(i) The market for sheep and goat intestines is a restricted market dominated by uneducated vendors who are sometimes unprincipled and have no respect for contracts, and whose whims and pleasures play a large part in determining prices.

(ii) The quality of sheep and goat intestines varies tremendously—there is wide variation not only from time to time during the year but also from place to place in the country. The poor quality of the intestines is principally due to poor health of animals in India and lack of hygienic conditions and

adequate facilities in the slaughter houses. In the West and Australia, not only are animals fed and reared better, but even slaughter is done in age groups, and the intestines recovered and treated in well organised slaughter houses immediately after slaughter.

(iii) Raw casings reach the factory from a very large number of unorganised butchers. There is no price control under-standing, central negotiating body or anything of this nature. Payment has always to be made in cash against delivery to butchers, if not in advance. The unit has therefore prayed that the Government may organise this industry on a hygienic and scientific basis.

(iv) A large number of casing has to be rejected on account of "ghoti", a cancerous growth in the intestines of many animals.

(v) The inferior quality of material also results in sub-standard and unwanted codes. These will be known only after polishing and gauging. Quite often a string that meets the code requirement, fails in tensile strength and the whole batch has to be rejected. It is not possible to determine this factor in the initial process as the quality in this regard is only determinable at a very late stage in the production process, after much expense has already been incurred and which then becomes a total loss.

8.5. As regards other raw materials, the producer has not reported any difficulties though he has stated that their prices are also constantly rising.

9.1. In its last Report in 1950, the then Tariff Board had estimated the annual requirement of
9. Domestic demand catguts as below :—

(i) absorbable sutures: 15 lakh tubes.

(ii) non-absorbable sutures: 10 lakh strands.

The Board further estimated that the demand for absorbable sutures would go up to 20 lakh tubes per annum during the succeeding three years.

9.2. During our present investigation, we have received data regarding sales of indigenous catguts as well as imports of catguts during the last four years. On the basis of these figures the apparent consumption of catguts has been worked out as under:

TABLE 4
Apparent Consumption of Catguts

(Figures in dozen)

Year	Sales of indigenous catgut	Imports	Apparent consumption (2+3)
1	2	3	4
1962	121544	38840	160,384
1963	155394	22458	177,852
1964	151169	26010	177,179
1965 (Jan.-Sept.)	128475	15961	144,436

9.3. Johnson and Johnson has estimated that the demand for catguts during the years 1966, 1967 and 1968 would be 243,000 dozen, 267,000 dozen and 307,000 dozen respectively. The above estimates are based on the present rate of consumption and are applicable only to absorbable sutures. The firm has also given details of the estimates in terms of different classes of consumers as in table 5.

TABLE 5
*Estimated demand of Catguts (according to different classes
of Consumers) furnished by Johnson & Johnson*

(In dozen)

Year	D. G. S. & D. (Defence)	D.A.D.G.'s	Central Government Hospitals	State Govt. Hospitals	Municipal Hospitals	Private Hospitals and Nursing Homes	Total
1966	16,200 (7)	27,000 (11)	10,800 (4)	151,200 (62)	16,200 (7)	21,600 (9)	243,000 (100)
1967	17,800 (7)	29,700 (11)	11,800 (4)	166,300 (62)	17,800 (7)	23,600 (9)	267,000 (100)
1968	20,500 (7)	34,100 (11)	13,600 (4)	191,100 (62)	20,500 (7)	27,200 (9)	307,000 (100)

NOTE.—Figures in brackets indicate percentages.

9.4. No useful information relating to the estimates of demand has been furnished by any of the consumers and importers. The total requirements of all types of catguts during 1965, 1966, 1967 and 1968 have been estimated by the Director General of Technical Development at 200,000, 220,000, 250,000 and 300,000 dozen respectively. The estimates of Johnson and Johnson who has at present a virtual monopoly, based on field studies by its staff appear to be realistic and therefore are accepted by us as the probable demand in the immediate future.

10.1. The quality of the surgical catgut depends mainly upon its tensile strength, uniformity of gauge, sterility and the time taken for absorption. These qualities have to be stable at least over the five year period prescribed under the Drugs and Cosmetics Act.

10.2. Johnson & Johnson follows the British Pharmacopoeia Standards in the manufacture of catguts. It has a modern laboratory and qualified chemists under the superintendence of a qualified quality control manager and research administrator. The following are some of the important stages where the unit claims to have introduced quality control:—

- (i) Every casing is examined for minute perforations, by introducing water into the casing.
- (ii) By what it terms the "collagen purity" process, the ribbons are given a chemical cleaning after splitting. This ensures tensile strength and ability of absorption of the guts in the body.
- (iii) The strands are minutely examined for any foreign particles and for uniformity in length.
- (iv) The tubes and other media are subjected to steam sterilisation.
- (v) The tubes are placed in bond for a "quarantine period" of three weeks. During this period, samples from each batch go through a series of tests in the quality control laboratories. The tubes are released only after these tests are successfully completed.
- (vi) The manufactured gut is put to a diameter test; readings are taken at four different points on the same gut. If there is the slightest discrepancy, the whole batch is rejected.

- (vii) The tensile strength of sutures is tested on a special testing machine.
- (viii) Sterility of the tube is tested by breaking the suture tube and testing the contents. The strands are transferred into media specially prepared to encourage growth of microbes but at the same time allowing no bacteria from air to enter. The transfer is done in a room specially kept sterile by special physical and chemical processes. If any microbial contamination is detected in any strand the entire batch is rejected.
- (ix) Every care is taken to ensure that the packaging is pilfer proof and that sutures remain sterile till the moment of use.

In short, Johnson and Johnson claims that its quality control tests settle more rigid specifications than those set forth by U. S. P. and B. P. and that consumers have expressed general satisfaction with the quality of its products. The unit has however admitted having received several complaints from its customers relating to diameter variation and that in order to ensure accurate control on diameter variation, the unit has installed highly sophisticated electronic equipment costing Rs. 5.50 lakhs. Other general complaints relate to knot extrusion, delayed/quick absorption and tensile strength and these are all attended to. The producer has commented that these problems are mostly due to the quality of the basic raw material *i.e.*, intestine, which is difficult to control.

10.3. Johnson and Johnson has stated that it takes into account the specific requirements for different branches of surgery and has been examining the possibilities of catering for such requirements. In this connection it has made the following remarks:—

- (a) *Heart Surgery*.—We have been able to determine the local requirements of cardiac surgeons and are now engaged with a proposal to experiment and manufacture 10 different codes of needle sutures.
- (b) *Ophthalmic Surgery*.—One new code of eyeless needled suture is being considered for production. The possibilities of manufacture of size 6/0 gut is being studied and investigated.

- (c) *Plastic Surgery*.—Three new codes of eyeless needled sutures are under research and investigation.
- (d) *Gastro-intestinal surgery*.—Two codes of eyeless needled sutures are under research and investigation.
- (e) *Genito-Urinary Surgery*.—The possibilities of manufacturing Ribbon gut is being examined.”

10.4. The Drugs Controller, Government of India, has informed us that import, manufacture, sale and distribution of surgical catguts are governed by the provisions and rules under Drugs and Cosmetics Act, 1940. According to this Act, State Drugs Control authorities issue licences for the manufacture and sale of catguts on certain conditions. The standard specifications for the catguts, as recognised under the Drugs and Cosmetics Act, are given in the Indian Pharmacopoeia, 1955 where length, diameter, tensile strength, sterility and methods of testing are laid down.

10.5. The Director General Armed Forces Medical Services, and the D.G.S. & D. have stated that the product of Johnson and Johnson is satisfactory. The Medical College Hospital, Calcutta, the Irwin Hospital, New Delhi, the St. George's Hospital, Bombay, are amongst hospitals which consider the product satisfactory. Complaints regarding uniformity of gauge, friability and elasticity have been received from the Sassoon General Hospital, Poona and the Bombay Hospital, Bombay. The Kamla Nehru Hospital prefers imported catgut but considers the indigenous product satisfactory. The view of the K.E.M. Hospital, Bombay, is similar. At the open enquiry, however, doubts were expressed by the representatives of the St. George's Hospital and the Bombay Hospital, amongst others, on the sterility of the product and the percentage of infection put as high as 5 per cent. We therefore addressed 53 surgeons of Bombay of whom ten have replied. Only two of them expressed doubts on sterility, and four on delays in absorption which could lead to infection but the general view is that the sutures are satisfactory. On an overall view of the evidence, we consider that the product of Johnson and Johnson is of satisfactory quality, but that improvement is desirable and possible as regards uniformity of gauge and sterility. The electronic grinding plant now being commissioned and the proposed irradiation plant should meet the requirements in this respect. Other defects appear

to be inherent in the raw casings and improvement would depend on the setting up of modern slaughter houses in the country, and research into the treatment of the casings. However the Central Leather Research Institute, Madras, has given us the opinion that the intestines of Indian sheep and goats are of good quality and are considered better on account of smaller fat content. The improvement of livestock itself is a wider issue which in the present context is academic.

11.1. For the purpose of import control policy surgical catguts are classified under "Medical including Surgical instruments, equipment and appliances and parts thereof not made mainly of rubber and not made mainly of glass" under Sl. No. 93-94 (e) of Part V of Import Trade Control Schedule. According to the latest import control policy *i.e.*, for April 1965-March 1966 the quota for established importers for this group of items is 5 per cent. Quota for catguts only is not separately indicated in the Red Book. It has also been mentioned in the Red Book that applications for additional licences from established importers of surgical ligatures and sutures for import of surgical ligatures and sutures may be considered by the Chief Controller of Imports, New Delhi, in consultation with the Directorate General of Health Services, New Delhi, against the ceiling for drugs and medicines.

11.2. *Imports.*—There are no published data about import statistics of catguts for the years 1962, 1963, 1964 and 1965 (Jan.-March). The Director General of Commercial Intelligence and Statistics, Calcutta, has informed us that before April 1965 "catguts" was not specified as a separate item in the Indian Trade Classification on the basis of which foreign trade statistics of India are maintained. Since April 1965, the D.G.C.I. & S. has started maintaining import statistics of catguts (sterile and non-sterile). The Drugs Controller, Government of India, has furnished us with statistics of imports of catguts, by quantity and value for the last four years which are given in table 6.

TABLE 6

Statement showing the Countrywise Imports of Catguts during the Financial Years 1961-62, 1962-63, 1963-64 and 1964-65

Country	Year 1961-62		Year 1962-63		Year 1963-64		Year 1964-65	
	Qty. in doz.	Value in Rs.	Qty. in doz.	Value in Rs.	Qty. in doz.	Value in Rs.	Qty. in doz.	Value in Rs.
Switzerland	652	4,006	525	3,953	261	2,001	76.66	1,002
Austria	421	2,409	7,373	43,026	8,006	45,982	5,974	32,817
West Germany	6,946	41,912	6,046	40,110	6,483	43,860	10,675	64,640
East Germany	4,523	25,066	4,644	26,003	2,666.3	14,562	985	5,973
United Kingdom	10,510	1,18,518	12,298	1,29,100	3,266	42,039	5,394	62,969
U. S. A.	2,036	35,612	3,308	55,805	1,675	30,250	2,289	43,128
Japan	6,604	37,374	4,646	29,559	100	610	617	4,140
TOTAL	31,692	2,64,897	38,840	3,27,556	2,44,57.5	1,79,304	26,010.66	2,14,669

11.3: *Exports*.—There appears to have been no exports of catguts.

- 12.1. The principal consumers of surgical catguts are
12. Selling system
- (i) Director General, Armed Forces Medical Services, New Delhi,
 - (ii) Central Government Hospitals,
 - (iii) State Government Hospitals,
 - (iv) Quasi Government Hospitals, and
 - (v) Private Surgical Nursing Homes and Hospitals.

Johnson and Johnson has no sole selling agents. It sells principally through its wholesalers and sometimes directly to its customers and normally follows the principle of first-come first served. It resorts to occasional deviations according to exigencies reported to it by its field staff and sales managers. All requirements of the Armed Forces receive priority. The firm has a network of 16 distributors spread all over India for the sale of ETHICON sutures. The names and full addresses of these distributors are given in Appendix V. Of the 16 distributors, territorial limits have been assigned in the case of the following five distributors as shown against each:—

(i) Allied Surgical Emporium (Agencies), Lucknow.	Uttar Pradesh.
(ii) Accurate Traders, Gauhati	Assam.
(iii) Kanchanlal Vadilal & Co., Bombay	Madhya Pradesh, Rajasthan, Maharashtra.
(iv) South India Surgical Co., Bangalore	Mysore.
(v) South India Surgical Co., Madras	Madras & Kerala.

The terms of trade stipulate that the distributors should strictly adhere to the unit's regular prices while effecting supplies to their customers. Normal delivery period varies from time to time and code to code and also when there is a sudden shift in demand. As the production cycle is of about 15 weeks, a sudden increase in demand cannot be met in less than 18 weeks.

12.2. *Sales Service*.—Johnson and Johnson has reported that it renders the following kinds of sales service, in connection with the marketing of its products:—

- (i) Advice on—
 - (a) proper storage of sutures;
 - (b) proper sterilisation of outside of glass tubes;
 - (c) proper removal of suture from glass tube and conditioning pre-operatively in the operation theatre;
 - (d) the right needle-suture combination available and appropriate for specialised surgical procedures as in ophthalmic heart, plastic, gastro-intestinal, brain, etc., surgery.
- (ii) In the event of complications being observed on a patient after surgery and reported to it, its representative investigates the matter thoroughly for complaints on tensile strength, fraying, diameter variation, burst abdomen, knot extrusion etc. If there is any suspicion of the sutures being at fault, representative samples are examined thoroughly in its own laboratory—methods involve physical, chemical, micro-biological and microscopic tests. The slightest doubt results in complete withdrawal of the whole batch of sutures/needled sutures.
- (iii) Occasionally a customer receives unsatisfactory or damaged material. Its representative is trained to examine whether it is due to bad shipment or is a product complaint.

13. The following table shows the prices charged by Selling prices Johnson & Johnson for different types of catguts during the years 1963 to 1965.

TABLE 7

Prices charged by Johnson & Johnson for different types of Catguts during the years 1963 to 1965.

Product	Price per dozen (Rupees)			
	Jan. to Mar. 10, 1963	Mar. 11 to Dec. 31, 1963	1964	1965
1	2	3	4	5
A. Trade Sutures (Plain and Chromic)	27.00	27.55	27.55	27.55

TABLE 7—contd.

1	2	3	4	5
<i>A.—Trade—Contd.</i>				
Needled Sutures—				
Grade "A"	36·04	39·00	39·00	39·00
„ "B"	39·92	43·20	43·20	43·20
„ "C"	46·60	50·00	50·00	50·00
„ "D"	53·24	56·00	56·00	56·00
„ "E"	59·88	64·00	64·00	64·00
 <i>B. D.G.S. & D. and D.G.A.F.M.S.</i>				
Sutures (Plain and Chromic)	22·50	24·80	24·80	24·80
Needled sutures	—	Trade price less. 20%	—	—

NOTE.—Prices of certain codes of needled sutures were reduced as follows :—

(a) September 1963	(b) October 1965
M 412 } From Rs. 64·00	M 437 } From Rs. 56·00
M 413 J. to Rs. 39·00	M 470) } to Rs. 50·00
	M 471) From Rs. 64·00
	to Rs. 50·00

Details of selling prices are given in Appendix VI.

14. Information regarding c.i.f. prices and landed costs etc. was called for from the Collectors of Customs at the principal ports and a few importers of surgical catguts; [I. C. T. Item No. 77(2)], whose names were furnished by the producer. The figures furnished by the Collector of Customs, Bombay, Glaxo Laboratories

India Ltd., Bombay and Drugs Controller, Govt. of India, are given in Appendix-VII.

15. The Government reference requires us to enquire into the price structure of catguts and to furnish our recommendations. In settling a basis for prices

Price structure it is normal to take into account expenses and economies likely to arise on account of improvements in quality and plans for expansion of production in hand and in prospect. This case, however, presents certain difficulties arising out of the fact that the manufacturer's plans include a variety of new investment which may result in a change of both location and process. At present Johnson & Johnson conducts the wet process at Dharavi and the subsequent processing of the strands at Mulund. The company is thinking of a change of location of the wet room operation which would involve a capital expenditure of over Rs. 6 lakhs. Next, there are a series of improvements, either immediately necessary or in hand, which concern better storage of the casings and improved grinding of the twisted catguts to secure more precise control of the diameter of the suture strand. Sophisticated equipment for the latter purpose is already under test-runs after erection. Again the firm intends to replace the present method of chemical sterilisation with an advanced irradiation process to keep pace with latest developments abroad, which would amount to a complete change in process involving the discarding of the existing plant for sterilisation and the erection of a completely new and expensive plant estimated to cost Rs. 17 lakhs. Lastly, it proposes to set up the manufacture of needles in the country at a capital cost of Rs. 9 lakhs. This would increase the cost of needles substantially in the immediate future though there would be the compensation of an immediate saving in foreign exchange which is estimated to be at the level of about Rs. 3.01 to Rs. 5.77 per dozen needled sutures. We deal with these proposals in greater detail in the succeeding paragraphs. We have, however, taken all aspects into consideration and decided that for the purpose of the present study of the cost structure we should take into account only such items of improvement and modernisation as are either in hand or are likely to be implemented within the next two years and that we should leave out of account such development plans as will only be started in the latter part of 1967.

16.1. The actual costs for sutures for the year 1964 and for the period of first six months in the year 1965 have been examined by our Senior Cost Accounts Officer. We have discussed these costs and the data furnished by the company in respect of future production and expenses with representatives of the company and have framed our estimates for the years 1966 and 1967.

16.2. As indicated earlier the area in which the wet room of the company is located is to be converted into a residential area by the Bombay Municipal Corporation, and consequently, the premises in which the wet room operations are being carried on at present, would have to be shifted to some other suitable locality. The company wishes to locate the wet room at a place near the abattoir for which the Maharashtra Government have some plans so that the deterioration of the casings before being put into cold storage may be minimised. Unfortunately there is no certainty as to when this abattoir will come into being or where it will be located. The company's proposal to introduce by about the middle of the year 1967 a new process of sterilising the sutures, viz., by irradiation at an additional investment of about Rs. 15 lakhs in plant and building is now concrete. Substantial portions of the existing machinery and plant, may also be replaced to keep abreast of the more advanced methods adopted by its associates abroad, both in the wet house and in the final processing of sutures. It is difficult to visualise all the economies that might be achieved by the location of the wet house near the abattoir together with a modern cold storage, the financial effect of the adoption of up-to-date sophisticated processes or the effects on the rates of post-manufacture losses caused by defective sterilisation. For all these reasons we have as indicated earlier thought it preferable to fix the prices for a period of two years only viz., upto the end of 1967 and not for three years as is our usual practice. When new plant and equipment other than the erection of which is in hand, is installed and the irradiation process is operated for a few months, the costs could be examined afresh and a fresh set of prices proposed on a more realistic basis in relation to the actual experience so gained. We have, however, satisfied ourselves that with the prices proposed to be fixed now no actual loss will be incurred in the last few months of 1967 when it is proposed to change over to the new system of production

and sterilisation. Moreover, as will be explained in paragraph 16.5.2. the present estimates contain a provision which should act as a cushion to absorb a proportion of any extra expenditure that may be necessary when the new sterilisation process is put into effect and a re-examination of costs could be done, if necessary. On a shift of the wet house from the present location to a new place, the present indications are that there may be some saving in the cost of production due to the avoidance of heavy repairs and maintenance charges of the present leased premises.

16.3. In framing the estimates we have taken into account all the proposed additions to plant and machinery for improvement of quality. In addition we have taken into account the cost of a cold storage plant to be located at the present site of the wet house, for which orders have already been placed. The plant together with the building is estimated to cost about Rs. 75,000.

16.4. According to the programme furnished by the company, besides a warehouse costing Rs. 6 lakhs substantial additions are proposed to be made to the equipment, furniture and fixtures, air-conditioning, etc. to the various service and non-productive departments. The cost of additions to furniture and fixtures and air-conditioning appear to be out of proportion to the total of such expenditures in any of the past several years. We have, however, taken into consideration all these proposed additions except that we have restricted the expenditure for air-conditioning only to the two essential service departments of Research & Development and Quality Control. This is not to say that the air-conditioning in other non-productive departments should not be carried out but that it would be unreasonable to allow for all such expenditure in the course of one or two years when in the recent past the annual expenses were much lower.

16.5.1. The sale of sutures plain and chromic has been estimated at 182,000 dozen and 199,000 dozen respectively for the years 1966 and 1967 and those of needled sutures at 24,575 dozen and 28,150 dozen. The net good production after allowing for desired changes in the inventories has been estimated at 186,000 dozen and 204,000 dozen of sutures respectively for the two years 1966 and 1967, and 25,000 dozen and 29,000 dozen of needled sutures respectively. Wastages at various stages of production as also for deterioration after

manufacture have been suitably estimated taking into consideration the actual wastages in the year 1964 and the period of first six months of 1965. Extra personnel required has been provided for excepting for the part required in connection with setting up of the new irradiation plant. Suitable provision has been made for normal annual increments of the staff as also a provision for probable increase that may take place as a result of revision of the pay scales for persons employed in the wet room which, it is understood is due in 1966. Suitable increases have been provided for in all other expenses including welfare expenses taking into consideration the actual expenses for the past two periods. Suitable provision has also been made in respect of liability of the company in respect of gratuity. The increases and extra allowances made are liberal and hence no further allowance for contingencies is called for under the above heads.

16.5.2. Apportionment of expenses of various service departments at the factory have been made on agreed bases except that such a base could not be adopted for the apportionment of the engineering department expenses. In our view such apportionment in this department should be made on the basis of records kept of jobs actually done and services rendered to the different productive departments which would not necessarily have any relation to the original cost of the plant and machinery of the department. In the absence of such data, the expenses of the engineering department have been allocated on the basis of original cost of plant and machinery in the different productive departments. As a result of this unsatisfactory method of allocation the amount allocated to sutures production has risen from about Rs. 61,000 in the year 1964 to more than Rs. 160,000 in the year 1967 due to fresh addition of machinery and plant to the sutures department. Without being dogmatic on how much extra provision should be made for the additional plant and machinery in this department, it is obvious that the burden on the other productive departments has been reduced since the apportionments are from the same pool of total expenses of the engineering department. Consequently, the profits on the products in the other departments may be expected to be higher and in our view should act as a set-off against any extra expenses that may be incurred on account of the introduction of sterilisation by the process of irradiation. On these considerations we have not attempted any

correction of the amount of the expenses of the engineering department apportioned to the sutures departments.

16.5.3. Raw materials have been taken at the latest available rates together with 2 per cent of the cost by way of contingency to meet any variation in the prices or other incidentals included under raw materials in the next two years which we cannot at present foresee.

16.5.4. Depreciation has been provided for at income-tax rates with shift allowance where applicable.

16.5.5. Both in the case of general administrative expenses and of selling expenses the amount asked for by the company's representatives were proportionately more in relation to production and sales than the actuals during the last two costed periods. We feel that the management should see that administrative and fixed selling expenses do not increase more than the so called variable expenses in relation to production and sale. The necessary economy may be achieved either by a careful check of expenses or by increase of production and sale proportionately greater than the increase in expenses. Obviously, the latter course is preferable since not only the incidence of these last mentioned elements, but also those of production costs are thereby likely to come down. While estimating the sales volume for sutures the company proposes to peg the sale of other products to only about 2.85 times the sale of sutures on the basis of actual performance of the two costed periods. We are of the view that while the volume of sales of suture can only rise in relation to its basic demand, the sale of the other products should be elastic and much more responsive to increased sales effort. As a result of the pegging mentioned above the estimated sales volume for 1966 has increased only by about 6.7 per cent in relation to the results of the first six months of 1965 and for 1967 by 9.9 per cent over the sale of 1966. As against this, the average rate of increase in sales from year to year over the period of three years from 1961 to 1964 was about 22.5 per cent, though the increase in sale in 1964 over 1963 dropped down to only 8.7 per cent. In the first half of 1965 the rate of increase again picked up to about 12.1 per cent over 1964. While we consider the sales estimated for sutures for 1966 and 1967 to be reasonable, we do not see why the increase in total sales should be estimated so low. Since we are concerned in the present inquiry with the costs allocable to

sutures only, we have, without altering the proposed sales volume, estimated the increase in administrative and fixed selling expenses in such a way that the increases are not in proportion to the production and sales, but somewhat less.

16.6. In allocating the administrative expenses we have taken into consideration the extra care that would be necessary on the part of the management for production of sutures, an item to be absorbed internally, compared to the other items which are mostly for external application only. We have also taken note of the fact that as yet there is no organised market for casings which is the raw material for sutures and that there is a need for continued search for fresh sources of the raw materials. After carefully considering all aspects we have decided to weight upwards the production costs of sutures by 50 per cent for the purposes of distribution of administrative expenses to the different categories of products of the company.

16.7. In the same way, we consider that the selling efforts required for sale of sutures is of a nature different from what is required in the other cases. Indeed whilst after sales service and pre-sale advice which is largely in the shape of distribution of printed technical literature would be necessary, the effort to sell would be small. A substantial portion of the sutures is purchased by the Government departments for which no selling effort would be required. After careful consideration, we have weighted the sales value of sutures downwards by 50 per cent for purposes of allocation of selling expenses to the different products. We are satisfied that the amounts so allocated would be adequate to cover, besides normal selling expenses, the educational campaign desired to be carried out by the company especially in respect of the needled sutures (whose present volume of sales is comparatively small). Provisions for advertisement and freight to destination have been made separately.

16.8. As the company wishes its costs to be kept confidential our Senior Cost Accounts Officer's report on the actual costs together with the details of the Commission's Estimate are being sent to the Government as a separate enclosure to this report.

16.9. We have assessed the working capital required at 5.5 months' cost of production for plain sutures and 7.5.

months' cost of production for needed sutures, excluding depreciation. The latter figure is higher because stocks of needles, which are imported and are of various types, have to be large in relation to sales and stocks of manufactured needed sutures have to be retained in stock longer to meet the diversified and relatively small demand,

16.10. We consider that a return of 15 per cent on the capital employed comprising net fixed assets allocable to the sutures department (in ratio of the allocation of depreciation) and working capital would be adequate to cover the commitments of the company in respect of interest on loans, legal liability in respect of bonus, Corporation taxes (recently increased to 55 per cent, etc.) leaving a residue which would enable the company to declare a reasonable dividend and provide for adequate reserves. The return on the net fixed assets has been distributed to the different types of suture in the ratio of depreciation included in the cost of production. The return on working capital has been added separately. As regards needed sutures, the present prices of which are well above costs, the company has pressed the point that these are developmental items where surgeons' preferences and surgical practices change rapidly, and both obsolescence and advance could also be rapid. The total sales of needed sutures are however a small fraction of total sales of sutures and whilst a larger margin of profit would not hurt the consumer, the margin suggested by us would not be unfair to the producer.

16.11. The fair selling prices have thus been arrived at for the two years 1966 and 1967 and the weighted average of these selling prices have been taken on the basis of estimated sales for the two years which is exhibited in the attached statement No. 8. We recommend that these prices be fixed for the respective categories of sutures for the years 1966 and 1967. These prices are F. O. R. destination for orders valued at or more than Rs. 1,000 and exclude dealers' commission.

16.12. We do not suggest any retail prices and have not been asked to do so. However, to give an idea to Government of what they should be in accordance with the present rates of discount allowed by the company from its list prices, we have shown in statement No. 9 the approximate retail prices for the various codes of sutures.

TABLE 8

Statement showing estimated fair selling prices f.o.r. destination of various types of Sutures

(Rs./dozen)

Particulars	Sutures (without needles)	Sutures 'A' (straight needles)	Sutures 'A' (curved needles)	Sutures 'A' ($\frac{1}{2}$ circle needles)	Sutures 'B' (curved needles)	Sutures 'B' ($\frac{1}{2}$ circle needles)	Sutures 'C' ($\frac{1}{2}$ circle needles)
1	2	3	4	5	6	7	8
Raw materials (including wastage and provision for contingencies)	6.6317	9.1589	11.9091	13.4994	12.6654	14.2730	14.9016
Conversion Charges							
(a) Depreciation	0.8274	0.6721	0.7119	0.7519	0.7123	0.7511	0.7501
(b) Other conversion charges	9.1108	7.8737	8.3457	8.7951	8.3457	8.7948	8.7946
WORKS COST	16.5699	17.7047	20.9667	23.0464	21.7234	23.8189	24.4463

1	2	3	4	5	6	7	8
Administrative Expenses (including provision for gratuity)	2.1844	2.3042	2.7143	2.9752	2.8065	3.0715	3.1501
Selling, advertisement, freight & forwarding	2.5059	2.6703	3.1606	3.4707	3.2732	3.5877	3.6830
Total	21.2602	22.6792	26.8416	29.4923	27.8031	30.4781	31.2794
Return	2.5043	2.9123	3.3366	3.6269	3.4232	3.7135	3.7838
F. O. R. DESTINATION PRICE (for consignments valued at Rs. 1000/- or more)	23.7645	25.5915	30.1782	33.1192	31.2263	34.1916	35.0632

TABLE 9

Statement showing Commission's estimated fair selling prices and retail prices at Company's rates of discount.

(Rs./dozen)		
Type of Sutures (with Code Nos.)	Commission's estimated fair selling price (f.o.r. destination)	Approximate retail prices at company's rates of discount
1	2	3
1 SUTURES (PLAIN AND CHROMIC)	23.76	26.40
2 SUTURES 'A' (STRAIGHT NEEDLES)—		
(i) Code No. M 400	25.59	28.37
(ii) Code Nos. M 404 & M 405	25.59	28.37
(iii) Code Nos. M 407 to M 413	25.59	28.37
(iv) Code No. M 590	25.59	28.37
3 SUTURES 'A' (CURVED NEEDLES)—		
(i) Code Nos. M 416 & M 417 & M 470	30.18	33.46
(ii) Code Nos. M 510 & M 582	30.18	33.46
(iii) Code Nos. M 601 M 640 & M 641	30.18	33.46
4 SUTURES 'A' (‡ CIRCLE NEEDLES)—		
(i) Code Nos. M 437 & M 471	33.12	36.72
(ii) Code No. M 549	33.12	36.72
5 SUTURES 'B' (CURVED NEEDLES)—		
(i) Code Nos. M 420 & M 421	31.23	34.62
(ii) Code Nos. M 423 to M 426	31.23	34.62

1	2	3
6. SUTURES 'B' (1/2 CIRCLE NEEDLES)—		
Code M 438, M 441 & M 442 (Code Nos. M 334 & M 335)	34.19	37.90
7. SUTURES (1/2 CIRCLE NEEDLE)		
(i) Code Nos. M 445 & M 446 .	35.06	38.87
(ii) Code Nos. M 449 & 450	35.06	38.87

17. Our conclusions and recommendations are summarised as under :—
 Summary of Conclusions and Recommendations

(1) The scope of the present inquiry includes all types and sizes of surgical catguts presently produced by Johnson & Johnson of India Ltd.

[Paragraph 2]

(2) The present capacity of Johnson & Johnson of India Ltd., for the manufacture of catguts is 300,000 dozen per annum on a three shift basis. The total production of plain and chromic sutures was 128,240 dozen in 1962, 198,964 dozen in 1963, 109,947 dozen in 1964 and 123,471 dozen in the first nine months of 1965. Production of needled sutures was 3,594 dozen, 24,837 dozen, 17,534 dozen and 20,120 dozen respectively during the same period.

[Paragraphs 6.1 and 6.2]

(3) The domestic demand for catguts is estimated at 243,000 dozen for 1966, 267,000 dozen for 1967 and 307,000 dozen for 1968.

[Paragraph 9.4]

(4) The product of Johnson & Johnson of India Ltd., is generally considered to be of satisfactory quality but improvement is desirable and possible as regards uniformity of gauge and sterility.

[Paragraph 10.5]

(5) The fair selling prices as given under table No. 8 may be fixed for the respective categories of sutures for the years 1966 and 1967. These prices are F. O. R. destination for orders valued at or more than Rs. 1,000 and exclude dealers' commission.

[Paragraph 16.11]

18. We wish to express our thanks to the manufacturer, consumers and importers of surgical catguts as well as various surgeons and Government Departments for their co-operation in conducting this inquiry.

M. P. PAI,
Chairman

M. ZAHEER,
Member

K. T. MERCHANT,
Member

P. V. GUNISHASTRI,
Secretary

BOMBAY,
Dated 5th April, 1966.

APPENDIX I
(Vide Paragraph 1)
No. 20(5)-Tar./65.
Government of India.
Ministry of Commerce.

New Delhi, the 19th August, '65.

From
Shri S. Banerjee,
Deputy Secretary to the Government of India.

To
The Secretary,
Tariff Commission,
C. G. O. Building,
101, Queen's Road,
Bombay-1.

SUBJECT.—*Reference to the Tariff Commission for inquiry into the price structure of Catguts (various sizes).*

Sir,

I am directed to say that the prices of the indigenously manufactured Catguts are reported to be much higher than the prices of imported Catguts of similar quality and sizes.

.....

The following 3 firms have been licensed under the Industries (Development and Regulation) Act, 1951 for manufacture of Catguts :—

- (1) Messrs. Johnson & Johnson, Bombay.
- (2) Messrs. International Franchise, Bombay.
- (3) Messrs. Biological Products, Hyderabad.

The prices of Catguts manufactured by Messrs. Johnson and Johnson, Bombay, are alleged to be higher by 28% to 106% than the lowest quotations of the similar variety of imported Catguts. It has, therefore, been desired by the Ministry of Industry and Supply in consultation with the Ministry of Petroleum and Chemicals and the Directorate General of Technical Development that the Tariff Commission may be requested to enquire into price structure of indigenously manufactured catguts. I am to request the Tariff Commission under Section 12(d) of the Tariff Commission Act, 1951 to inquire into the price structure of catguts (various sizes) and furnish its recommendation/Report thereon to Government as early as possible.

Yours faithfully,
Sd/- (S. Banerjee).

Deputy Secretary to the Govt. of India.

APPENDIX II

[Vide Paragraph 3.1]

List of firms, bodies and Government Departments to whom the Commission's questionnaires and letters were issued and from whom replies or memoranda were received.

*Indicates those who replied or sent memoranda.

@Indicates those who replied that they were not interested.

A. PRODUCER

*Johnson & Johnson of India Ltd., Post Box No. 6531, Bombay-26.

B. PROSPECTIVE PRODUCERS:

1. Biological Evans Limited, 18/3, Azamabad, Hyderabad-20, (A.P.).

@2. Crookes Interfan Ltd., 254-D, Dr. Annie Besant Road, Worli, Bombay-18.

C. IMPORTERS :

1. Bombay Surgical, Medical, Agency Ltd., Princes Street, Bombay.

2. M/s. V. A. Patel & Co., Princess Street, Bombay.

3. M/s. Seba Sama Baya, 194, Landsdown Road, Calcutta.

4. M/s. R. L. Hansraj & Co., 132, Nayaniappa Naik Street, P. T. Madras.

5. The Surgical & Orthopaedic Stores, 33, College Street, Calcutta-12.

6. The New Surgical Trading Co., P. O. Box 2621, Bombay.

@7. Mr. S. Patrick Whaley, P. O. Box 602, Bombay.

*8. M/s. Philips Electrical Co., (India) Ltd., Philips House, Heysham Road, Calcutta-20.

9. The Scientific and Surgical Traders' Association, 128, Princess Street, Bombay.

*10. Imperial Chemical Industries Ltd., Ballard Estate, Bombay.

*11. Parry & Co., Madras.

*12. Glaxo Laboratories, 252, Dr. Annie Besant Road, Worli, Bombay.

*13. Orient Scientific & Chemicals, 397/6, Mangaldas Bldg., Kitchen Garden Lane, Bombay-2.

*14. Bhagat Medical Stores, 405, Kalbadevi Road, Bombay-2.

15. Imperial Surgical Co., India House, Opp. G. P. O., Bombay-1.

*16. Bombay Surgical Co., New Charni Road, Bombay-4.

17. Arun & Co., 59, Nagdevi Street, Bombay-2.

18. All India Medical Corporation, 185, Princess Street, Bombay-2.
- *19. Jagjivandas & Co., Kesava Baug, Princess Street, Bombay-2.
- *20. Bhagat & Co., 70, S. Devji Street, Bombay-2.
- *21. M. Shas' & Co., Kanji Mansion, Sardar Patel Road, Bombay-4.
- *22. Ezra Brothers, Mustafa Building, Sir P. M. Road, Bombay-2.
23. Capco (Pvt.) Ltd., Meher HSE, Cawasji Patel Street, Bombay-1.
- *24. Purshotam Laxmichand, Bulakhidas Building, Mangaldas Building, Bombay-2.

D. CONSUMERS

- *1. Superintendent, J. J. Group of Hospitals, Bombay-1.
- *2. Dean, K. E. M. Hospital, Parel, Bombay.
- *3. Medical Officer-in-Charge, Cama & Albless Hospitals, Bombay.
- *4. Superintendent, St. George's Hospitals, Frere Road, Bombay.
- *5. Superintendent, Goguldas Tejpal Hospital, Carnac Road, Bombay.
- *6. Dean, Sassoon Hospital, Poona-1.
- *7. Secretary, Medical College Hospitals, 88, College Street, Calcutta.
- *8. Presidency General Hospital, 244, Lower Circular Road, Calcutta.
- *9. Superintendent, Government General Hospital, Madras.
10. Seth Vadilal Sarabhai General Hospital and Seth Chinai Maternity Home, Ellis Bridge, Ahmedabad.
11. The Civil Surgeon, Sholapur.
- *12. The Civil Surgeon, Surat.
13. The Medical Superintendent, Ishwari Memorial Hospital, Banaras.
14. The Civil Surgeon, Ballia.
- *15. The Director General of Armed Forces (Medical Services), New Delhi.
- *16. The Superintendent, Kamla Nehru Memorial Hospital, Allahabad (U. P.).
- *17. The Superintendent, Mahatma Gandhi Memorial Hospital, Parel, Bombay.
- *18. The Superintendent, Tilak Memorial Hospital, Sion, Bombay-22.
- *19. The Superintendent, Bombay Hospital, Near Liberty Cinema, Bombay.
20. The Superintendent, Wellington Hospital, New Delhi.

- *21. The Superintendent, Irwin Hospital, New Delhi.
- *22. The Superintendent, Safdarjang Hospital, New Delhi.
- *23. The Surgeon-General with the Government of Maharashtra, Contractor Building, Ballard Estate, Bombay-1.
- 24. The Superintendent, Government General Hospital, Bangalore.
- 25. The Superintendent, Government General Hospital, Patna.
- 26. The Superintendent, Government General Hospital, Trivandrum.
- 27. The Superintendent, Government General Hospital, Bhopal.
- 28. The Superintendent, Government General Hospital, Lucknow.
- *29. The Superintendent, Government General Hospital, Chandigarh.
- 30. The Superintendent, Government General Hospital, Jaipur.
- *31. Director General of Supplies & Disposals, N. I. Building, Parliament Street, New Delhi.
- 32. The Director, Central Government Health Scheme, Wellington Hospital, New Delhi.
- *33. The Superintendent, Government General Hospital, Calcutta.
- 34. The Regional Director, Employees State Insurance Scheme, ESIC building, Near Strand Cinema, Bombay-5.
- 35. The Dean, Grant Medical College, Bombay.
- 36. The Dean, B. J. Medical College, Poona.
- 37. The Dean, Medical College, Nagpur.
- *38. The Dean, Medical College, Aurangabad.
- 39. The Dean, Medical College, Miraj.
- 40. The Civil Surgeon, Vathal Sayanna General Hospital, Thana.
- *41. The Civil Surgeon, General Hospital, Ratnagiri.
- *42. The Civil Surgeon, General Hospital, Kolaba, Alibag.
- *43. The Civil Surgeon, Jalgaon.
- 44. The Civil Surgeon, General Hospital, Dhulia.
- *45. The Civil Surgeon, Harris General Hospital, Nasik.
- *46. The Medical Officer, Incharge, Cottage Hospital, Dahanu.
- 47. The Medical Officer, Incharge, Cottage Hospital, Mangaon, Distt. Kolaba.
- *48. The Medical Officer, Incharge, Cottage, Hospital, Kalwan, Distt. Nasik.
- *49. The Medical Officer, Incharge, Cottage Hospital, Chopda, Distt. Jalgaon.
- *50. The Medical Officer, Incharge, Central Hospital, Sub-Township No. 3, Ulhasnagar, Distt. Thana.
- *51. The Civil Surgeon, Ripon General Hospital, Ahmednagar.

- *52. The Civil Surgeon, General Hospital, Sholapur.
- *53. The Civil Surgeon, General Hospital, Sangli.
- *54. The Civil Surgeon, General Hospital, Satara.
- *55. The Civil Surgeon, C. P. R. General Hospital, Kolhapur.
- *56. The Superintendent, Hospital for Diseases of Chest Camp, Aundh Camp, Poona.
- *57. The Medical Officer, Incharge, Services Hospital, Kolhapur.
- *58. The Civil Surgeon, Nagpur.
- 59. The Superintendent, Mayo General Hospital, Nagpur.
- 60. The Medical Superintendent, Daga Memorial Hospital, Nagpur.
- *61. The Dean, Medical College Hospital, Nagpur.
- 62. The Medical Superintendent, Mental Hospital, Nagpur.
- 63. The Civil Surgeon, King Edward Memorial Hospital, Wardha.
- 64. The Civil Surgeon, General Hospital, Chanda.
- *65. The Civil Surgeon, District Hospital, Amravati.
- *66. The Medical Superintendent, Dufferin Hospital, Amravati.
- 67. The Civil Surgeon, District Hospital, Yeotmal.
- *68. The Civil Surgeon, General Hospital, Bhandara.
- 69. The Civil Surgeon, District Hospital, Bhir.
- 70. The Civil Surgeon, District Hospital, Parbhani.
- 71. The Civil Surgeon, General Hospital, Parbhani.
- 72. The Civil Surgeon, General Hospital, Nanded.
- 73. The Civil Surgeon, General Hospital, Osmanabad.
- 74. The Medical Officer, Incharge, T. B. Clinic, Sassoon General Hospital, Poona.
- 75. The Medical Officer, Incharge, T. B. Clinic, Sholapur.
- 76. The Medical Officer, Incharge, T. B. Clinic, Akola.
- 77. The Medical Officer, Incharge, T. B. Clinic, Chanda.
- 78. The Medical Officer, Incharge, T. B. Clinic, Nagpur.
- *79. The Medical Officer-incharge, T. B. Clinic, Nagpur.
- *80. The Medical Officer-incharge, T. B. Clinic, General Hospital, Nagpur.
- *81. The Medical Officer-incharge, T. B. Clinic, Parbhani.
- *82. The Medical Officer-in-Charge, T. B. Clinic, Latur.
- *83. The Medical Officer-incharge, T. B. Clinic, Jalna.
- 84. The Medical Officer-incharge, T. B. Clinic, Aurangabad.
- 85. The Medical Officer-incharge, T. B. Clinic, Nanded.
- *86. The Medical Officer-incharge, Cottage Hospital, Jawahar.
- *87. The Medical Officer, Incharge, Cottage Hospital, Sawant-wadi, Distt. Ratnagiri.

88. Director of Medical Services, Government of Andhra Pradesh, Hyderabad.
 89. Director of Health Services, Government of Assam, Shillong.
 90. Director of Health Services, Government of Bihar, Patna.
 91. Director of Health & Medical Services, Government of Gujarat, Ahmedabad.
 92. Director of Health Services, Government of Kerala, Triyandrum.
 - *93. Director of Health Services, Government of Madhya Pradesh, Bhopal.
 - *94. Director of Medical Services, Government of Madras, Madras.
 95. Director of Medical Services, Government of Mysore, Bangalore.
 96. Director of Health Services, Government of Orissa, Bhubaneswar.
 97. Director of Health Services, Government of Punjab, Chandigarh.
 98. Director of Health Services, Government of Rajasthan, Jaipur.
 - *99. Director of Medical & Public Health Deptt., Government of Uttar Pradesh, Lucknow.
 100. Director of Health Services, Government of West Bengal, Calcutta.
 101. Director of Medical Services, Himachal Pradesh, Simla.
 102. Superintendent, Medical Services, Delhi.
 103. Director of Health Services, Government of Jammu & Kashmir, Srinagar.
 - *104. Government Royapettah Hospital, Madras-14.
- E. RAW MATERIAL SUPPLIERS:**
- *1. Ajay Textiles, Mehra Estates, Vikroli, Bombay.
 - *2. Dhondi Patloo Bhosle, 67, Modi Street, Bombay-1.
- F. DISTRIBUTORS :**
- *1. Kanchanlal Vadilal & Co. 11 Mangaldas Road, Princess Street, Bombay-2.
 - *2. Jagjivandas & Co., Keshav Baug, Princess Street, Bombay-2.
 - *3. Bombay Surgical Co., New Charni Road, Bombay-4.
 4. Jai Hind Surgical Agency, Post Box No. 120, East Dhalgarwad Corner, Ahmedabad.
 - *5. Shree Ambica Medical & Surgical Stores, Opp. Clock Tower, Surat.
 - *6. Oriental Surgical Works, Bhagirath Palace, Chandni Chowk, Delhi.
 - *7. Eastern Surgical Co., 3791 Netaji Subash Marg, Daryani, Delhi-6.

- *8. Laxmi Medical Agencies, Grain Market, Ambala (Cantt).
- 9. Caulson & Co., 1st Bridge, Srinagar.
- *10. H. Mukerjee & Banerjee Surgical Pvt. Ltd., 39-1 College Street, Calcutta-12.
- *11. Unique Surgical Works, Exhibition Road, Patna-1.
- 12. Bharat Hospital Supplies, P. B. No. 82. Cantonment Road, Cuttack-1.
- *13. South India Surgical Co., No. 128, Nyniappal Naick Street, Madras-3.
- *14. South India Surgical Co., 71/1 & 2, A. S. Street, Bangalore-2.
- 15. Allied Surgical Emporium, Lalbaug, Lucknow.

G. GOVERNMENT DEPARTMENT :

- *1. Directorate General of Technical Development, Udyog Bhavan, Maulana Azad Road, *New Delhi*.
- *2. Director General of Commercial Intelligence & Statistics, Council House Street, *Calcutta-1*.
- *3. Collector of Customs, *Bombay*.
- *4. Collector of Customs, *Madras*.
- *5. Collector of Customs, *Calcutta*.
- *6. Collector of Customs, *Cochin*.
- 7. The Drug Controller of India, Directorate General of Health Services, Government of India, Patiala House, *New Delhi*.
- *8. The Chief Controller of Imports and Exports, *New Delhi*.
- *9. The Joint Chief Controller of Imports and Exports, New C. G. O. Building, New Marine Lines, *Bombay-1*.
- *10. Director, Central Research Institute, *Kasauli P. O. (Punjab)*.
- *11. The Central Leather Research Institute, *Madras*.
- *12. Director of Drugs Control Admn., Maharashtra State, Manekji Wadia Building, M. G. Road, *Bombay-1*.
- *13. The Government Analyst, C/o Hoffkine Institute, *Parel, Bombay*.
- 14. Government Analyst, Central Drugs Laboratory, *Lucknow*.
- 15. The First Secretary (Commercial) to the Embassy of India in Germany, 262, Koblenzer Strasse, *BONN (W. Germany)*.
- 16. The Indian Trade Commissioner, Caltex House, 10th Floor, 167-187, Kent Street, *SYDNEY*.
- *17. The Counsellor Commercial to the High Commission of India in U. K., Aldwych, Commerce Department, *London, W. C. 2*.
- 18. The Counsellor (Commercial) to the Embassy of India, 2107, Massachusetts Avenue, N. W. Washington-8, *D. C. (U.S.A.)*.

APPENDIX III
(Vide Paragraph 3*2)

*List of persons who attended the Commission's public inquiry on
18-1-1966*

I—Producers :

<ol style="list-style-type: none"> 1. Shri H. S. Krishnamurthy 2. „ V. S. Palekar 3. Dr. S. R. Aggarwal 4. Dr. A. H. Desai 5. Shri S. Srinivasan 	} Represent-	Johnson & Johnson
	ing	of India Ltd., Post Box No. 6531, Bombay-36.

II—Prospective Producers :

Dr. P. A. Desai	„	Biological Ivans Ltd., 18/3, Azamabad, Hydera- bad-20 (A. P.).
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III—Importers :

Shri P. R. Choksy	„	Glaxo Laboratories, 252, Dr. Annie Besant Road, Worli, Bombay-18.
„ N. C. Dalal	„	The Scientific & Surgical Instrument Manufactu- rers' & Traders' Associa- tion, 43, Princess Street, Bombay.

IV—Consumers :

Dr. Soni	„	Superintendent, J. J. Group of Hospitals, Bombay.
Dr. Jagose	„	Superintendent, St. Georges' Hospital, Frere Road, Bombay.
Dr. Parke	„	The Superintendent, Mahatma Gandbi Memo- rial, Hospital Parel, Bom- bay.
<ol style="list-style-type: none"> 1. Shri D. R. Singh 2. „ A. P. Lulla 	} „	The Superintendent, Bombay Hospital, Near Liberty Cinema, Bombay.

V—Distributors :

1. Shri M. C. Shah } 2. ,, K. V. Shah }	Representing	M/s. Kanchanlal Vadilal & Co. 41, Mangaldas Road, Princess Street, Bombay.
Shri Shashikant	„	M/s. Jagjivandas & Co., Keshav Bag, Princess Street, Bombay.
Shri Damodar Rao	„	M/s. Bombay Surgical Co., New Charni Road Bombay-4.

VI—Raw material suppliers :

Shri V. K. Mehra	„	Ajay Textiles, Mehra Estate, Agra Road, Vikroli, Bombay-79.
Shri Bhosle	„	Dhoudi Patloo Bhosle, Boat Hard Road, Mazagaon, Bombay-10.

VII—Government Departments :

Dr. P. P. Gupta	„	Directorate General of Technical Development, Udyog Bhavan, Maulana Azad Road, New Delhi.
Shri K. L. Dawar	„	Collector of Customs, Custom House, Bombay.
Shri V. N. Solanki	„	Director of Drugs Control, Admn., Maharashtra State, Manekji Wadia Building, Mahatma Gandhi Road, Bombay-2.
Shri L. V. Dharmadhikari	„	Directorate General of Supplies & Disposals, National Insurance Bldg., Parliament Street, New Delhi.
Shri Mangal Sain	„	Directorate General of Armed Forces, (Medical Services), New Delhi.

APPENDIX IV

(Vide Paragraph 5*3)

Visits of the Commission and its Officers to Johnson and Johnson of India Ltd., Bombay

By whom visited	Date of visit
1. Shri M. P. Pai, Chairman.	} 15-12-1965
2. Dr. B. G. Ghate, Member.	
3. Prof. K. T. Merchant, Member.	
4. Dr. P. V. Gunishastri, Secretary.	
5. Shri S. K. Basu, Senior Cost Accounts Officer.	} 27-10-65 to Mulund Unit and 28-10-65 to Dharavi Unit.
6. Shri S. Saha, Technical Director (Chemicals).	
7. Shri Gyan Prakash, Assistant Director, (Investigations).	

APPENDIX V
(Vide Paragraph 12.1)

Names and addresses of the distributors appointed by Johnson and Johnson of India Ltd.

1. Ms. Kanchanlal Vadilal & Co., 41, Mangaldas Road, Princess Street, *Bombay*.
2. M/s. Jagjivandas & Co., Keshav Baug, Princess Street, *Bombay-2*.
3. M/s. Bombay Surgical Co., New Charni Road, *Bombay-4*.
4. M/s. Jaihind Surgical Agency, Post Box No. 120, East Dhalgarwad Corner, *Ahmedabad*.
5. Shree Ambica, Medical & Surgical Stores, Opp. Clock Tower, *Surat*.
6. M/s. Oriental Surgical Works, Bhagirath Place, Chandni Chowk, *New Delhi*.
7. M/s. Eastern Surgical Co., 3791, Netaji Subash Marg, Daryaganj, *Delhi-6*.
8. M/s. Laxmi Medical Agencies, Grain Market, Ambala (Cantt.)
9. M/s. Caulson & Co., 1st Bridge, Srinagar (J. & K.).
10. M/s. Allied Surgical Emporium (Agencies), Lal Bagh, *Lucknow*.
11. M/s. H. Mukherjee & Banerjee Surgical Pvt. Ltd., 39-1, College Street, *Calcutta-12*.
12. M/s. Unique Surgical Works, Exhibition Road, *Patna-1*.
13. M/s. Bharat Hospital Supplies, P. B. No. 82, Cantonment Road, *Cuttack-1*.
14. M/s. Accurate Traders, Pan Bazar, *Gauhati*.
15. M/s. South India Surgical Co., No. 128, Nyniappa Naick Street, *Madras-3*.
16. M/s. South India Surgical Co., 71/1 & 2, A. S. Street, *Bangalore-2*.

APPENDIX-VI
(Vide Paragraph 13)

Statement showing the latest prices of different types and sizes of Ethicon Catguts

SOURCE : Published price list of Johnson & Johnson.

I. Sterilised Surgical Gut, Plain.

Code	Size	Price per box of 12 tubes.
S. 100	5/0	Rs. 27.55
S. 101	4/0	Rs. 27.55
S. 102	3/0	Rs. 27.55
S. 103	2/0	Rs. 27.55
S. 104	0	Rs. 27.55
S. 105	1	Rs. 27.55
S. 106	2	Rs. 27.55
S. 107	3	Rs. 27.55
S. 108	4	Rs. 27.55

II. Sterilised Surgical Gut, Chromic.

Code.	Size	Price per box of 12 tubes.
S. 110	5/0	Rs. 27.55
S. 111	4/0	Rs. 27.55
S. 112	3/0	Rs. 27.55
S. 113	2/0	Rs. 27.55
S. 114	0	Rs. 27.55
S. 115	1	Rs. 27.55
S. 116	2	Rs. 27.55
S. 117	3	Rs. 27.55
S. 118	4	Rs. 27.55

III. Eyeless Needled Sutures.

Code.	Needle	Suture & Size	Price per box of 12 tubes.
<i>GRADE A</i>			
M. 407	Intestinal Straight 50 mm	Chromic 3/0	Rs. 39.00
M. 408	Intestinal Straight 50 mm	Chromic 2/0	Rs. 39.00
M. 409	Intestinal Straight 50 mm	Chromic 0	Rs. 39.00
M. 410	Intestinal 50 mm	Chromic 1	Rs. 39.00
M. 412 and M. 413			Rs. 39.00
<i>GRADE B</i>			
M. 404	Intestinal Straight 45 mm	Chromic 2/0	Rs. 43.20
M. 405	Intestinal Straight 45 mm	Chromic 0	Rs. 43.20
M. 423	Intestinal Curved 45 mm	Chromic 3/0	Rs. 43.20
M. 424	Intestinal Curved 45 mm	Chromic 2/0	Rs. 43.20
M. 425	Intestinal Curved 45 mm	Chromic 0	Rs. 43.20
M. 426	Intestinal Curved 45 mm	Chromic 1	Rs. 43.20
M. 449	Intestinal $\frac{1}{2}$ Circle 45 mm	Chromic 2/0	Rs. 43.20
M. 450	Intestinal $\frac{1}{2}$ Circle 45 mm	Chromic 0	Rs. 43.20

Code	Needle	Suture & Size	Price per box of 12 tubes
<i>GRADE C</i>			
M. 400	Intestinal Straight 40 mm	Chromic 2/0	Rs. 50.00
M. 416	Intestinal Curved 30 mm	Chromic 2/0	Rs. 50.00
M. 417	Intestinal Curved 30 mm	Chromic 0	Rs. 50.00
M. 420	Intestinal Curved 40 mm	Chromic 2/0	Rs. 50.00
M. 421	Intestinal Curved 40 mm	Chromic 0	Rs. 50.00
M. 438	Intestinal $\frac{1}{2}$ Circle 25 mm	Plain 3/0	Rs. 50.00
M. 441	Intestinal $\frac{1}{2}$ Circle 30 mm	Chromic 2/0	Rs. 50.00
M. 442	Intestinal $\frac{1}{2}$ Circle 30 mm	Chromic 0	Rs. 50.00
M. 443	Intestinal $\frac{1}{2}$ Circle 40 mm	Chromic 2/0	Rs. 50.00
M. 446	Intestinal $\frac{1}{2}$ Circle 40 mm	Chromic 0	Rs. 50.00
<i>Black Braided Silk</i>			
M. 333	Intestinal $\frac{1}{2}$ Circle 30 mm	2/0	Rs. 50.00
M. 334	Intestinal $\frac{1}{2}$ Circle 30 mm	0	Rs. 50.00
M. 583	Circle round bodied 35 mm	3/0	Rs. 50.00
M. 471	16 mm Curved Cutting	3/0	Rs. 50.00

Code	Needle	Suture & Size	Price per box of 12 tubes
<i>GRADE D</i>			
M. 437	Intestinal $\frac{1}{2}$ Circle 20 mm	Chromic 3/0	Rs. 50.00
M. 470	Eyecurved 16 mm	Plain 4/0	Rs. 50.00
M. 510	Eyecurved 22 mm	Plain 3/0	Rs. 56.00
<i>Black Braided Silk.</i>			
M. 549	$\frac{1}{2}$ Circle round bodied 16 mm	4/0	Rs. 56.00
M. 580	Eye Stallard's corneo- scleral 12 mm	5/0	Rs. 56.00
M. 581	Curved round bodied 16 mm	5/0	Rs. 56.00
M. 582	Curved round bodied 16 mm	4/0	Rs. 56.00
M. 590	Arterial Straight 20 mm	5/0	Rs. 56.00
M. 595	Arterial curved 10 mm	5/0	Rs. 56.00
M. 596	Arterial curved 20 mm	5/0	Rs. 56.00
<i>GRADE E</i>			
M. 600	Eye curved cutting 16 mm (Double needed)	Plain 4/0	Rs. 64.00
M. 601	„	Plain 3/0	Rs. 64.00
<i>Black Braided Silk.</i>			
M. 640	Eye Curved cutting 16 mm (Double needed)	5/0	Rs. 64.00
M. 641	„	4/0	Rs. 64.00
M. 642	„	3/0	Rs. 64.00

APPENDIX VII
(Vide Paragraph 14)

Statement showing C.I.F. prices and landed Costs of imported catguts

(Price per dozen in Rs.)

Sl. No.	Type and specification of catgut	Origin of import	Date of import	C. I. F. price per dozen tubes	Customs duty	Clearing charges	Landed cost	Selling price	Remarks
1	2	3	4	5	6	7	8	9	10
<i>A. Collector of Customs, Bombay.</i>									
1.	Boilable chromic No. 000	Austria	October 1965	5.28	1.85	0.27	7.40		a) Customs duty is at 25% plus 10% regulatory duty.
2.	Boilable plain No. 000	—do—	—do—	5.45	1.91	0.27	7.63		b) Clearing charges are at 5% on C. I. F.
3.	Boilable chromic No. 2	—do—	—do—	6.62	2.32	0.33	9.27		c) All information relate to surgical catgut.
4.	Boilable plain No. 3	—do—	—do—						
5.	Boilable chromic No. 3	—do—	—do—	7.50	2.63	0.38	10.51		
6.	Boilable plain No. 3	—do—	—do—						

B.—Glaxo Laboratories India (Private) Ltd.

7. Sterilon catguts 5ft.
medium hard B.P.
non-boilable A &
H fig. No. 19002.

Size 1.	U. K. London	1.12	1964	13.05	3.90	0.15	17.10	30.00	Selling price is F.O.R. destination price.
2.	—do—	1.12	1964	13.60	4.08	0.15	17.83	30.00	„
1/0	—do—	1.12	1964	13.05	3.90	0.15	17.10	30.00	„
2/0	—do—	1.12	1964	13.05	3.90	0.15	17.10	30.00	„

8. Sterilon Intestinal
sutures in straight 50
mm needles.
A & H fig. No. 19036

Size. 1/0	} U. K. London	1.12	1964	15.66	4.70	0.20	20.56	38.00	„
2/0									
3/-									

9. Sterilon Intestinal
sutures on half circle
50 mm needles A & H
Fig. No. 19040, 19042 }
19044 and 19046 }
Size 2/0 }

15.66 4.70 0.20 20.56 38.00 F.O.R. destination price.

C. Drugs

Directorate General of Health

April, 1965—December, 1965.

Country	Type	SIZE	
		000	00
1	2	3	4
1) Switzerland	Plain	..	..
	Chromic	..	..
2) Austria	Plain	5.18	5.46
	Chormic	5.29	5.46
3) West Germany	Plain	4.98	5.35
			5.63
	Chromic	4.98	5.35 5.63
4) East Germany	Plain	4.833	4.888
	Chromic	4.833	4.888
5) U.K.	Plain	..	12.88
	Chromic	..	12.88
6) U.S.A.	Plain	..	..
	Chromic	..	..
7) Japan	Plain	..	..
	Chromic	..	..

Controller

Service, Government of India

SIZE				
0	4	3	2	1
5	6	7	8	9
8.14
..	8.87
5.96	..	7.53	6.63	6.30
5.96	..	7.53	6.63	6.30
6.34	7.36	..	7.02	6.69
5.52	7.36	5.91	7.02	6.69
6.34				
5.333	..	7.333	..	..
5.333	..	7.333	..	5.833
..
12.88	12.88
12.88	..	12.88	12.88	12.88
..
19.68	19.68	..
..
..

1	2	3	4
<i>April, 1964—March, 1965</i>			
1) Switzer- land	Plain	..	..
	Chromic	..	13·04
2) Austria	Plain	4·61	4·68
	Chromic	..	4·68
3) West Germany	Plain	4·51	4·68
	Chromic	4·51	5·35
		5·01	4·51
4) East Germany	Plain	..	4·888
	Chromic	..	..
5) U.K.	Plain	14·38	14·38
	Chromic	14·38	10·03 14·38
6) U.S.A.	Plain	..	..
	Chromic	..	..
7) Japan	Plain	4·98	4·98
	Chromic	..	4·98

5	6	7	8	9
..
..
5.38	5.76
5.38	..	6.86	..	5.76
4.51	..	4.51	4.51	4.51
5.52	..	7.02	..	6.68
4.51	..	6.86	5.85	6.74
5.19	..	5.85	..	5.85
..	5.833
..	6.666	5.833
6.69	..	14.38	14.38	..
..	..	14.38	14.38	..
..
..
4.98	..	4.98	4.98	4.98
4.98	..	4.98	4.98	4.98