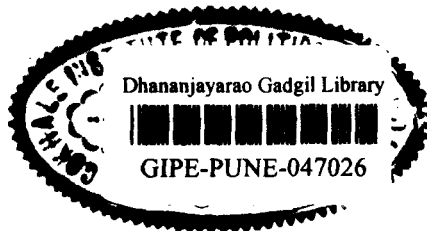
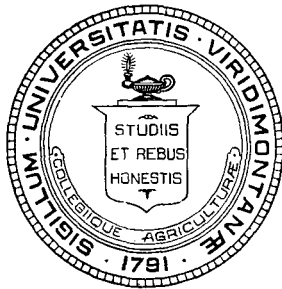


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DYES AND METHODS AS THEY AFFECT
THE METHYLENE BLUE TEST

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Three methods of conducting the methylene blue reduction test were compared, 50 to 100 replicate tests of each sample of milk being made.

1. Substantially as directed in the sixth edition of "Standard Methods of Milk Analysis."

2. Essentially according to proposed changes to be embodied in the seventh edition of "Standard Methods for the Examination of Dairy Products."

3. Fundamentally the English modified method as suggested by Wilson et al.

The data in hand suggest that the English method, which prescribes the careful inversion (not shaking) of each tube at 30-minute intervals, results in shortening the reduction times as well as in rendering them significantly more reliable as indicators. It is commonly recognized that the accuracy of the test as usually operated is impaired by the rising of the bacteria to the surface as the creaming process proceeds. The modified test yields more accurate results mainly because of the more uniform bacterial dispersion brought about by frequent inversion.

The reduction times were much the same when methylene blue thiocyanate and methylene blue chloride were used in approximately equal concentrations. Significantly longer reduction times elapsed when these dyes were used in concentrations of 1:300,000 than when used at concentrations of 1:700,000.