

THE MILK-TEST ACT.

The Milk-Test Act which came into force January 1, 1911, provides that all test bottles and pipettes used, or sold to be used, for the testing of milk and cream in connection with the Babcock test must be verified by the Standards Branch of the Inland Revenue Department, Ottawa. Glassware, when verified and found to be correct within a specified limit of error, must "be ineffaceably marked with the outline of a crown having within it the initial letter of the reigning sovereign." All milk and cream test bottles and pipettes, now in use or offered for sale, must be so marked.

MAKING THE TEST.

Before starting to make a test of whole milk see that all glassware to be used is clean and bears the verification mark.

SECURING A REPRESENTATIVE SAMPLE OF MILK.

In testing milk it is necessary that the sample taken for testing represents the average quality of the quantity of milk to be tested. If such is not the case, the result of the test will, of course, be inaccurate and misleading. When milk is allowed to stand for even a short time, cream rises to the surface and in order to thoroughly mix the milk before taking a sample for testing, it is best to pour the entire quantity of milk from one vessel to another several times. If the quantity is too great to permit of pouring, it should be well stirred. After being thoroughly mixed a smaller quantity (three to six ounces) should be taken out and put into a separate vessel.

SAMPLING AND ADDING MILK TO THE TEST BOTTLE.

The sample should be brought to a temperature of 60° F. to 70° F. and then poured from one vessel to another several times. Care must be taken that all the cream mixes back with the milk and that none adheres to the sides of the vessel. In pouring allow the milk to follow down the side of the vessel into which it is being poured. By so doing there is less tendency to partially churn the sample which would render the results less accurate. After the sample is thoroughly mixed, if using the ordinary pipette, insert the lower stem of the pipette into the milk and by suction of the mouth raise the milk above the graduation mark on the pipette. Quickly cover the top of the pipette with the index finger, taking care to keep the top of the pipette and the finger dry. By slightly removing the finger allow the milk to drop slowly from the pipette until it comes exactly to the 17.6 c.c. graduation mark on the stem of the pipette. The lower stem of the pipette is now inserted into the neck of the test bottle and the sample allowed to run into the bottle. The last few drops should be expelled from the pipette into the test bottle by blowing through the pipette.

If using the "up-to-date" automatic pipette, have the glass petcock of the pipette open and insert the lower stem of the pipette into the milk. By suction on the tube leading from the large upper bulb, draw the milk up into the pipette until the lower bulb is filled and the milk is overflowing from the upper stem into the large bulb. While the milk is still overflowing into the large bulb, quickly close the petcock. The lower stem of the pipette is inserted into the neck of the bottle and the petcock is opened to allow the milk to flow into the test bottle. As with the ordinary pipette the last few drops should be expelled from the pipette into the test bottle by blowing through the pipette.

It is a rather common practice for operators of the test to blow through the pipette into the milk before drawing the sample up into the pipette. This should never be done as air is incorporated in the sample which will affect the result of the test.

While the sample of milk is measured into the test bottle, the test is based on weight. The 17.6 c.c. pipette will deliver, of average milk, a definite weight—eighteen grams—into the bottle. Since the weight of a given volume of milks of different richness is fairly constant, measuring with the pipette is quite accurate and does not introduce any appreciable error.