

Upon receiving cream from a patron the cream-gatherer pours it into his cream pail, measures its depth in the pail in inches and tenths of an inch, records opposite the patron's name in the cream book the amount received from him, and after mixing the cream properly puts a sample of it into the test-tube whose number on the card or rack corresponds to the patron's number in the cream book. The samples of cream are afterwards churned at the creamery in a churn known as an "oil-test" churn. The test is known as the "oil test."

*To Make an Oil Test.*

Upon their arrival at the creamery, place the samples in a warm place, as over the boiler, and leave over night to ripen thoroughly. They will not churn properly unless well ripened.

The next morning, place the samples in water at a temperature of about 90 degrees; and as soon as the cream will flow freely from one end of the tube to the other, place in the oil test churn and begin the churning. Should the cream at any time cool and thicken, place the samples in warm water to liquefy the cream again. Continue churning until there is evidence of a clear separation of the fat; then place the samples in hot water, at a temperature of from 160 to 170 degrees, for from fifteen to twenty minutes.

If the separation be complete, the fat will be clear and yellow, and there will be three distinct columns with sharp lines of division between them, viz., a column of clear fat on top, one of whey next, and one of curdy matter at the bottom. If there be not a clear separation, cool to about 90 degrees, churn again, and proceed as before.

*To Take a Reading.* There is a chart prepared for the purpose. Placing the bottle in an upright position on the "base line" of the chart, move it along until, when looking by the right side of the bottle, the top of the column of fat comes even with the uppermost slanting line on the chart. Next, still looking by the right side of the bottle, observe the line to which the bottom of the fat comes; the number on this line gives the reading.

*Meaning of the Reading.* Cream that gives a reading of 100 in the oil test will make one pound of butter for every inch of such cream in a cream pail, twelve inches in diameter; cream testing 120 will make 1.20 pounds of butter.

*Notes.*

1. Sometimes the fat, though clear, is somewhat open. In such cases, or when the fat is not clear, allow the samples to become cold, and then place in water at a temperature of about 120 degrees before taking a reading. About 120 degrees is a very suitable temperature at which to take readings.

2. An inch of cream, testing 100, (or its equivalent in cream of another grade) in a pail twelve inches in diameter, is what is known as a *standard or creamery inch*.

3. The cream gatherer should exercise great care in measuring and sampling the cream. He should make sure to have the cream properly mixed before sampling, and should fill the test tubes carefully to the mark. The test tube is about nine inches long and the mark referred to encircles the tube at a distance of five inches from the bottom.

The butter-maker should exercise equally great care in churning the samples and in taking the readings; also there must be no undue loss of fat in the butter-milk.