

bles for the per cent. of fat in the cream. If the cream is quite rich use three bottles, by dividing one pipette of cream into three bottles, diluting it by adding two pipettes of water equally divided among the three bottles, and then proceed with each bottle as in testing milk, and when completed add the fat of the three bottles for the per cent. of fat in cream. Where a delicate scale is available cream may be tested by weighing about five grams in the bottle, and then multiply the reading by 18, and divide by the weight in grams taken, same as in cheese.

**21. A Good Gathered Cream Test.** Cream may be tested in ordinary bottles by using a pipette having a capacity of 6.04 c.c. which will deliver about six grams of average cream or one third of the weight of the usual sample. When this pipette is used about 12 c.c. water should be added to the cream in the bottle before adding the acid. The usual amount of acid should be taken and the test completed in exactly the same way as with milk. The reading should be multiplied by three to obtain the per cent. of fat in the cream.

#### TESTING CHEESE.

**22. How to Take the Sample.** Where the cheese can be cut a narrow wedge reaching from the edge to the center of the cheese will more nearly represent the average composition of the cheese than any other sample. This may be chopped quite fine, with care to avoid the evaporation of water, and the portion for analysis taken from the mixed mass.

When the sample is taken with a cheese tryer, a plug taken perpendicular to the surface, one-third of the distance from the edge to the center of the cheese should more nearly represent the average composition than any other. The plug should either reach entirely through or only half through the cheese. For inspection purposes the rind may be rejected, but for investigations where the absolute quantity of fat in the cheese is required, the rind should be included in the sample. It is well when admissible, to take two or three plugs on different sides of the cheese, and after splitting them lengthwise with a sharp knife, take portions of each for the test.

**23. How to Make the Cheese Test.** For the estimation of fat in cheese, about five grams should be carefully weighed and transferred as completely as possible to a test bottle. From 12 to 15 c.c. of hot water are then added, and the bottle shaken at intervals, keeping it warm, until the cheese has become softened, and converted into a creamy emulsion. This may be greatly facilitated by the addition of a few drops of strong ammonia to the contents of the bottle. After the contents of the bottle have become cold the usual amount of acid should be added and the bottles shaken until the lumps of cheese have entirely dissolved. The bottles are then placed in the machine and whirled, the test being completed in the same manner as with milk. To obtain the per cent. of fat the reading should be multiplied by 18, and divided by the weight in grams, of cheese taken.