

A sample so prepared is somewhat difficult to introduce into an ordinary Babcock milk-testing bottle. When such bottles are being used the sample may be prepared by cutting the cheese plug into very thin strips, which are thoroughly mixed before the removal of a portion for determination of fat. The cutting should be carried out rapidly, and during the process of cutting and filling into the bottle the cheese should be handled by means of forceps.

ESTIMATION OF MOISTURE.

The moisture estimation is best carried out in wide flat dishes of nickel or aluminium. Tall dishes of the type used for butter-analysis are not so desirable, since they do not permit free circulation of air over the surface of the cheese, and a longer time is required for complete removal of moisture.

In cases where dishes of approximately equal weight are used the dish must be counterpoised exactly before each estimation. A quantity of about 5 grammes of cheese is suitable. It is considered preferable to weigh approximately 5 grammes for the analysis, and to use a table for calculation of the results from the loss in weight. Such a procedure involves admittedly two subtractions of figures as well as the noting of weights, instead of the method now in common use, where 5 grammes of cheese are weighed out and the figure of moisture content per cent. is obtained by a direct multiplication by 20 of the figure for loss in weight. The association considers that the loss in weight due to evaporation in adjusting the weight to exactly 5 grammes may often lead to inaccurate results.

It is important that the temperature and time of heating be carefully controlled. The greater portion of the moisture should be removed from the cheese at a temperature near the boiling-point of water, in order to prevent occasional loss of fat and curd through spitting. Where only one oven is available heating should be carried out at 100° C. (212° F.) during 1½ hours, and the temperature should then be raised to 115° C. (239-240° F.). The heating should be continued at this temperature for 4-5 hours. It is important that the time of heating should not be either too long or too short. In the one case the loss of weight is greater than that due to evaporation of free moisture from the cheese, and if the heating is not adequate free moisture will not be completely removed. It is not difficult to obtain results which agree closely, but the results may not represent accurately the moisture-content of a cheese if the time and temperature of heating have not been carefully controlled.

An alternative method, where an electric thermostatic oven is available, permits heating of the sample overnight. The samples are heated for 15 hours at 103° C. In this case preliminary heating at a lower temperature is not necessary, since spitting is not liable to occur at 103° C.

After heat treatment the dishes should be allowed to cool before being weighed. The dried cheese solids take up moisture slowly from the air. Hence it is advisable to transfer the dishes from the oven to a desiccator during cooling.

In places where electric power is available the association recommends the use of the Hearson thermostatic electric oven, which permits