

Acid supplied for testing is not always of the proper strength. If the test is carefully and properly made, a dark-coloured or burned reading indicates that the acid is too strong, while a light-coloured or curdy reading indicates that the acid is too weak. If the acid is only slightly too strong, satisfactory results may be obtained by using somewhat less than 17.5 c.c., and if the acid is only slightly weak, using a little more than 17.5 c.c. will give satisfactory results. Acid that is much too strong or much too weak cannot be used satisfactorily. Acid, if left exposed to the air, becomes weaker by absorbing moisture from the air, consequently acid of the correct strength should be kept stoppered when not in use. Acid, which is too strong, will in time weaken to the correct strength if left uncorked. If a cork stopper is used, the acid will char the cork and the acid becomes dark. A glass-stoppered bottle is preferable.

COMPOSITE SAMPLES OF MILK.

A composite sample of milk is a quantity of milk composed of several smaller samples taken from different sources and should represent the average quality of the different quantities from which the samples are taken.

Cheese factories, which divide the proceeds on a basis of the test, use the composite sample and the great majority test only monthly.

A tightly stoppered bottle is provided for each patron, and some means provided to identify each patron's bottle. A convenient way is to gum a label bearing the patron's name, or a number to designate the patron, to each bottle. If the label is covered with two coats of shellac, the bottle may be washed without injury to the label.

THE USE OF A PRESERVATIVE.

Some chemical is used as a preservative to prevent souring and other fermentations. Since nearly all strong preservatives suitable for this purpose are very poisonous, some colouring matter is mixed with the preservative which gives the sample a distinctive colour and thereby indicates that the sample is unfit for use as a food. Preservative may be purchased in tablet form from the dairy supply houses. These commercial tablets are usually composed largely of corrosive sublimate and are very satisfactory. Powdered corrosive sublimate is also very efficient. If this is used a small proportion of magenta should be mixed with the corrosive sublimate to colour the sample.

In case one is troubled with mould growing on the walls of the bottle a few drops of formaldehyde may be added to the sample. This will prevent the growth of mould.

THE QUANTITY OF PRESERVATIVE TO USE.

The preservative is added to the bottle before any sample is put in. No definite quantity of preservative can be said to be the correct quantity. The correct quantity to use is the least that will preserve the sample efficiently, and this depends on:

- (a) the quantity of milk that will be in the sample bottle;
- (b) the length of time over which a sample extends;
- (c) the temperature at which the sample will be kept;
- (d) the degree of ripeness of the milk composing the sample.

An excess of corrosive sublimate affects the casein in such a manner that it seems more difficult to dissolve and more shaking is required in mixing the milk and acid in the test bottle.

SAMPLING MILK FOR THE COMPOSITE JAR.

The sample of milk added each day to the composite jar should not only represent the average quality of the quantity from which it is taken, but should also be proportionate to the quantity.