

FAT-SATURATED ALCOHOL.

By the use of fat-saturated alcohol the meniscus can be done away with. Alcohol, being lighter than fat, floats on the top of the column, leaving a clearly defined flat line between the two.

As alcohol has a solvent action on butter-fat, however, it is necessary to saturate it with fat before using. This is done by dissolving about a small teaspoonful of unsalted butter in an 8 oz. bottle of alcohol. After adding the butter, warm and shake the bottle until no more fat will dissolve, and leave it to settle before using. Drop enough to fill a space of about 2 per cent. into the neck of each test-bottle as it is taken from the bath, and read off immediately. The alcohol will at once rise to the surface of the fat, and the meniscus will appear to float up to the surface of the alcohol. Should the line be irregular, give the bottle a shake, or add another drop of alcohol.

The best results seem to be obtained when the alcohol is prepared fresh each time it is required, and it should be warm when used. If cold, it has an inclination to form a whitish layer of cold fat on top of the column. Care must be taken not to get any undissolved fat when taking the alcohol from the bottle.

RESULT OF USING ALCOHOL.

The difference in reading the "fat" column to extreme points and reading with the alcohol added varies according to the diameter of the neck of the test-bottle, but it is always lower when alcohol is used. At the same time, it does not seem to vary with any regularity in all 30- or all 50-per-cent. bottles, so that it is not possible to make any rule for reading tests which will avoid the necessity of using the alcohol. Thirty-per-cent. bottles will vary from 0.5 to 1.5 per cent., using a 9-gramme sample, the average difference of those samples of which I have kept a record being 0.94 of 1 per cent. lower.

Read from Extreme Points.	With Fat-saturated Alcohol.
37	36
43.5	42.5
38.5	37.5
45.5	44
28	27.5
41	40
23.5	23
34.5	34
36.5	35

Using 50-per-cent. bottles and a 9-gramme sample, the result with alcohol added has been from 1 to 4 per cent. lower than when reading