By means of the Quevenne lactometer we compare the density of milk at sixty degrees F. with that of pure water at sixty degrees. It has a scale graduated from fifteen to forty, and indicates a specific gravity of from 1.015 to 1.040. As it is not always convenient to have milk at sixty degrees when taking a lactometer reading, corrections for temperature are made as follows: To obtain the *corrected* lactometer reading, or reading at sixty degrees, add .1 (1-10th) to the lactometer reading for each degree in temperature above sixty degrees, and subtract .1 (1-10th) from the reading for each degree in temperature that the milk is below sixty degrees. Thus, if the lactometer reading at a temperature of sixty-five degrees be thirty-one, the corrected lactometer reading is $31 + .5 = 31.5$; if the lactometer reading be 32.5 and the temperature fifty-seven, the corrected lactometer reading is $32.5 - .3 = 32.2$. This rule is practically correct, if the temperature be kept within a range of from fifty to seventy degrees.

The lactometer reading of pure milk usually ranges from thirty to thirty-two, although it may fall as low as twenty-seven or go as high as thirty-four. The lactometer reading of skim-milk varies from thirty-three to thirty-six.

The composition of milk is about as follows:

Water	86 to 88 per cent.
Fat	3 per cent. and upwards.
Solids not fat	8.5 to 9.5 per cent.

To Find the Per Cent. of Solids not Fat (S.N.F.) in Milk.

Both the per cent. of fat and the lactometer reading at sixty degrees are required in finding this. Every per cent. of fat in milk lowers the lactometer reading by *one* from what it would be if the fat were not present. Hence, to obtain what the lactometer reading would be, if the fat were not present to interfere, we must add the lactometer reading and the per cent. of fat together. This obtained, then every reading of four on the lactometer is due to the presence of one per cent. of solids not fat in the milk. Hence the rule: To find the per cent. of solids not fat (S.N.F.) in milk, add the lactometer reading at sixty degrees (L.) and the per cent. of fat (F.) together and divide by four. Expressed briefly thus:

$$\frac{L. + F.}{4} = S.N.F. \text{ (per cent. solids not fat).}$$

L. = corrected lactometer reading, or reading at sixty degrees.

F. = per cent. of fat.