

The process adopted in these analyses has been the actual weighing of each of these four classes of constituents.

In the first place the specific gravity was taken. One thousand grains accurately weighed out, and carefully evaporated to dryness in a platinum dish and weighed repeatedly till weight remained constant, the weight of dish subtracted yields the total solid constituents in 1000 grains, the difference between this weight and 1000 grains is the water lost by evaporation.

Residue exhausted with Ether is deprived of all the butter, the residue again dried and weighed gives the Cazeine Sugar, &c., and Ash.

Cazeine Sugar, &c., burnt off the residue is the Ash.

The Etherial solution evaporated till all Ether is gone, and residue weighed gives the amount of butter.

Of course this process may be still further increased by ascertaining the properties of the component parts of the Ash such as the quantities of Phosphoric acid, Lime, Chlorine, &c., the separation of Cazeine, Sugar, &c., but for purposes of ascertaining the purity I think the above is sufficient, at any rate at present; when ingenuity in adulteration is carried further, other more elaborate analysis may be necessary.

TABLE OF COMPARISON.

NAME OF AUTHORITY.	Professor Miller.	Dr. Atfield.	Sir Robert Kane.	Dr. Girdwood.	Dr. Girdwood. McDonald supply.
Water	874.00	864.00	859.10	828.90	848.00
Butter	40.00	36.00	39.30	38.58	31.60
Cheese, Cazeine, &c.....	79.00	93.00	98.70	123.79	114.00
Ash	7.00	7.00	2.90	8.73	6.40
Total	1000.00	1000.00	1000.00	1000.00	1000.00
Specific Gravity.....	1030 to 1035	1034.00	1034.80	1034.60	132.80

In the last column is the result of the average of 150 cows—during a period of 7 months, the variation being so light as not to be worthy of note.