

percentage of moisture could, be learnt from mere inspection. In all, 105 samples of Canadian Creamery Butter were submitted to analysis in the Experimental Farms Laboratories.

SAMPLING AND METHOD OF ANALYSIS.

The samples as collected at the creameries may be taken as representing the butter as packed for export; those collected at Montreal, butters already on their way to the English market.

To avoid errors from possible lack of uniformity throughout the mass, the whole sample as received was melted at a low temperature till the butter assumed a semi-fluid or plastic condition. It was then thoroughly stirred until homogeneous, and a sample at once removed, placed on the absorbent asbestos, and weighed. From three to four grammes were taken in each case.

The drying tubes were of glass, $1\frac{1}{2}$ inches in diameter and $2\frac{1}{2}$ inches in length open at both ends, but constricted during the lower fourth to an orifice of about $\frac{1}{8}$ inch. These were loosely packed with asbestos wool to a depth of, say $\frac{3}{4}$ inch, on the top of which was placed a further wad of asbestos. The tubes with their asbestos were dried in the steam bath during the night previous to use—about 15 hours.

The cooled tube was weighed directly from the desiccator, the upper wad of asbestos carefully removed with the forceps, the semi-fluid butter placed on the lower bed of asbestos, and covered by the replacement of the asbestos wad, and the whole immediately weighed. The drying was accomplished in a steam oven which had a temperature of 96°C . to 98°C ., and through which a current of air constantly passed. The tubes were placed on racks in the oven and the drying continued for a uniform period of 20 hours. By direct experiment it was found that under these conditions all the moisture in the butter was evaporated and that there was no increase in weight due to oxidation of the fat.

Of the 105 samples analysed, 6 were from creameries in Prince Edward Island, 2 from New Brunswick, 15 from Quebec, 26 from Ontario, 26 from the North-west Territories, and 30 from warehouses at Montreal. With one or two exceptions, these butters were all manufactured in July or August.

All were in excellent condition and of first-class quality when received. The analysis was made immediately on arrival of the butter at the Laboratory. In the following particulars the data as regards moisture-content of both series have been summarized:

RANGE OF WATER-CONTENT.

Percentage of Water.			Number of Samples.
Between 7 and 8	..	..	1
8 " 9	..	..	1
9 " 10	..	..	4
10 " 11	..	..	15
11 " 12	..	..	24
12 " 13	..	..	23
13 " 14	..	..	24
14 " 15	..	..	10
15 " 16	..	..	2
16 " 17	..	..	1
Total	..	..	105