perature. The filters with their contents are then weighed (between watch glasses) the more or less lumpy mass carefully transferred to a small mortar, ground up, returned to the filter, and again dried for an hour or two. The second weighing should not materially differ from the first, and gives the dry, insoluble matter.

In order to show how constant is the extractive matter so obtained, I quote the following work done on four samples. The second estimation was made after an interval of three weeks during which the samples had stood on the heating coils of the laboratory. It will be seen that, by this treatment, they had lost about one-third of their natural hygroscopic moisture.

| No. | Moisture. | Extractive. | Calculated on Dry Substance | Mean. |
|---|---|---|---|---|
| 20360—(*a*) | 11·24 | 17·48 | 19·7 | 20·0 |
| —(*b*) | 7·14 | 18·76 | 20·2 | |
| 17957—(*a*) | 10·74 | 17·46 | 19·6 | 20·5 |
| —(*b*) | 7·20 | 19·80 | 21·4 | |
| 17949—(*a*) | 11·60 | 12·66 | 14·3 | 14·0 |
| —(*b*) | 8·12 | 12·68 | 13·8 | |
| 17964—(*a*) | 12·30 | 13·24 | 15·1 | 15·2 |
| —(*b*) | 7·78 | 14·32 | 15·5 | |

It should be noted that 17957 (*a*) is the result of extraction with only 100 cc. of water; the other extractions represent two treatments with water.

When a sample of ginger is treated with water, as described, the re-dried sample always has a distinctly darker colour than the original. Duplicates which have been similarly treated, yield residues, leaving exactly the same colour. Whether or not it would be safe to infer that a dark coloured sample of ginger had undergone washing and drying, would require larger experience than I have had. But I think it safe to regard dark coloured samples with suspicion; and to insist upon their yielding a normal percentage of extractive matter to cold water.

In the accompanying table it will be noted that the first six samples have a good colour, and with the exception of No. 5, which contains about 20 per cent of wheat flour —yield an extractive of at least 19 per cent of their dry weight. The mean extractive for samples 1 to 6 (omitting No. 5) is 19·7 per cent, the extremes being 18·7 and 21·4 per cent.

Since the remaining samples yield a decidedly lower extractive, under similar treatment, there can be little doubt that they represent ginger rhizomes which have been more or less exhausted with water before grinding; or an admixture of ginger which has been fully exhausted and re-dried. This would account for the decidedly darker colour of these samples.

If these samples represent a natural and unadulterated ginger, of a lower grade than that represented by the other samples, we should have evidence of the fact in our possession. I have not met an authenticated sample of ginger which gave less than about 19 per cent of extractive to cold water, when treated as above described.

A. McGILL.