

Of course the amount of extractive to cold water will be affected by the method of carrying out the extraction. This is described in Bulletin No. 95, p. 24, as it was employed by me in the work recorded in Bulletins 95 and 137. It involved the use of a mechanical shaker and centrifuge, and genuine gingers yielded about 20 per cent of extractive. The cold water extraction, as now reported, has been made by treating 5 grammes of the sample with 250 cc. of water, in a glass flask, which is shaken by hand at intervals of half an hour during eight hours; allowed to stand over night when an aliquot part by volume of the solution is evaporated in platinum to constant weight. This method is less effective in exhausting the ginger, but has the advantage of being available in laboratories not equipped with the mechanical devices required for carrying out the first method described. The normal extractive, by this method, appears to be about 15 or 16 per cent of the weight of the ginger (dry).

It is interesting to note that the low extractive recorded in the accompanying table, for certain samples, is usually correlated to the presence of foreign starchy matters. Where a low extractive is not explained by presence of foreign starch, the only explanation available would seem to be the previous extraction of the rhizome.

The requirements of the British Pharmacopœia in the matter of extractive would appear to be entirely too low.

I have not seen any investigatory work on ginger since 1909, which materially alters the conclusions above recorded.

The cold water extractive in the samples now reported, has been made by the same method used in Bulletin 184, and normal samples should yield about 16 per cent of extractive, calculated upon the dry material.

Six samples of the present collection are found to contain foreign starch, and are therefore adulterated under the Act (Sec. 3a).

Sixteen other samples contain less than 14 per cent of extractive to cold water. These must be judged to contain more or less of exhausted ginger, if we apply the results of investigatory work recorded on the preceding pages. In the absence of a legal standard for cold water extractive, I am unable to pronounce them adulterated under the terms of the Act; but they cannot be regarded as of less than doubtful quality. Eight of these samples yield less than 12 per cent to cold water, thereby indicating a very considerable admixture of exhausted rhizomes.

I beg to recommend publication of this report as Bulletin No. 236.

I have the honour to be, sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*