

LABORATORY
OF THE
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TABLE SYRUPS

OTTAWA, March 18, 1909.

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Acting Deputy Minister of Inland Revenue.

SIR,—I have the honour to report upon 75 samples of syrup, purchased throughout Canada in January of this year. The collection was intended to be exclusive of maple syrup, or of imitations of maple syrup (which have received consideration in Bulletins 141 and 155), but a few samples of this class of goods have been inadvertently purchased by our inspectors.

Table II contains classified statements of the results of analysis, which will be found, together with other information, in Table I.

Thirty-nine (39) of the 75 samples herein reported, consist essentially of Corn-Starch Glucose; but varying amounts, usually from 5 to 10 per cent of cane sugar are present in these. Twenty-three (23) samples are essentially cane sugar syrups, although several of them contain notable amounts of glucose. The remaining thirteen (13) samples are mixtures, containing very considerable proportions of cane sugar usually about 30 per cent.

Owing to the non-existence of legal standards for syrup, it is impossible to pronounce definitely upon individual samples.

This report will serve the purpose of showing what table-syrup (omitting maple syrup) is, as now sold in Canada.

The following explanations, bearing upon the question of defining syrup, are of interest here.

When the sugar-containing sap or juice of a plant (maple tree, sugar cane, &c.) is evaporated to a consistence such that not more than about 30 per cent of water remains, the result is a syrup. This assumes that no sugar has been removed in the process. The necessary heating of the sap or juice has the effect of causing some change in the nature of the contained sugar. Cane sugar is more or less changed to *invert sugar* (a mixture of dextrose and levulose).

If the sap is, at some stage of the process of evaporation, allowed to cool, so that the sugar crystallizes, and the sugar crystals are removed, the residual liquid will still be sweet, in consequence of having sugar in solution, but the dissolved sugar will more