

largely consist of invert sugar. Such a residual solution, from which sugar crystals have been removed, is properly called molasses.

A syrup may be made by the direct solution of sugar in water, to proper consistency. Such a syrup (sugar syrup) is defined by the pharmacopoeias. The British pharmacopoeia prescribes the solution of 10 parts of sugar by weight, to make 15 parts of the syrup. This has a density of 1,330. It is evident that such a syrup may contain little or no invert sugar; and must be too costly to compete with ordinary syrup in commerce.

When starch is heated under pressure, in contact with an acid and water, a change occurs by which the starch is largely converted into dextrose (one of the components of invert sugar). More or less of the starch is, however, converted into dextrin (British gum) quite a different thing from sugar. The resultant of this process, properly freed from any excess of acid, and otherwise purified and concentrated is by courtesy, known as a syrup (glucose syrup), but is not a syrup as above defined. Since, however, it has a sweetish taste, though by no means so sweet as true syrup, it is put on the market as a syrup. Increased sweetness is given to it by addition of more or less true syrup, and, perhaps, in some cases, by addition of saccharin.

Mixed syrups, consisting of glucose syrup and true syrup, may be perfectly wholesome foods; as, indeed may be true of glucose syrup *per se*. But, in order to be perfectly honest articles of commerce, the fact of their composition should be made known to the purchaser.

The differences in taste and flavour between a true syrup and a glucose syrup, or a syrup made by mixing glucose with a true syrup, are quite well marked; and it may be urged that, so long as the purchaser finds no fault on the ground of sweetness, flavour, and other qualities that appeal to the sense of taste, there is really no ground of complaint, even should he be supplied indiscriminately with one or other of these articles. The nutritive properties (energy producing power) possessed by them may, so far as we know, be considered identical.

I believe, however, that there are many consumers who distinguish between cane syrup and glucose syrup; and in the interest of such consumers, as well as for the purpose of making a clear statement of fact, I am of opinion, that table syrups should be sold under distinctive names, as for example, maple syrup, cane syrup, glucose syrup, mixed syrup, &c.

I beg to recommend the publication of this report as Bulletin No. 177.

I have the honour to be, sir,

Your obedient servant.

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