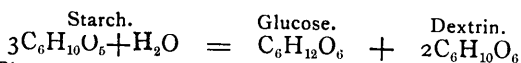


1st. The barley must be malted properly and carefully, to insure the formation of as large a quantity of diastase as possible, that by its action in mashing all the starch may be converted into sugar. The chemical change may be thus represented, the starch taking up the elements of water:



2d. The ground malt must be *mashed* carefully, with due regard to the temperature, so as to insure the largest amount of sugar being extracted with the smallest amount of water.

3d. The evaporation of the extract with a low degree of heat, to avoid charring any of the delicate constituents of the extract.

4th. The most scrupulous cleanliness must be observed at all times in and about all mash-tubs, kettles, capsules or other vessels used in its preparation.

A word as to the object of the preparation may not be out of place. It is well known that in the human economy the salivary glands and the pancreas secrete analogous principles, each having for its object the conversion of amylaceous principles into saccharine, that existing in the salivary secretion being known as ptyalin and that of the pancreatic juice as pancreatin. In the malted barley there is found a substance analogous to these, and having just as strong and subtle power of changing starch into sugar as the pepsin in the gastric secretion has the power of converting albuminous substances into peptone. This substance in malted barley is called diastase, and is formed during the process of germination or malting. A small portion of this substance has the power of converting an almost indefinite proportion of starch into sugar.

These facts being known, it is obvious that when the animal system is incapable, through deficiency of the natural secretions, of converting starch food into sugar, we must add some artificial saliva, as it were, to perform the work and make good the deficiency, and hence it is that the heavy feeling in the stomach observed after eating heartily of potatoes, corn-starch and other graminaceous or amylaceous food, is promptly removed by taking a small quantity of a good extract of malt.

Barley grown in high latitudes like Michigan, Canada and the like, is generally the best, because of its containing more starch, which, in the process of mashing, is converted into sugar, and of course, there being more sugar, the yield of extract is larger, thus making the operation more successful, pecuniarily, to the manufacturer.

The process of malting we need not describe, being familiar to us all, and for the purposes of the malt-making pharmacist may be practically ignored, it being better to purchase the malted barley of a professional maltster.

The barley, then, being properly malted, is ground coarsely,