



Glucose fructose syrup: How is it produced? (Infographic)

Last Updated : 01 December 2021

In the EU, wheat and maize are commonly used raw materials in starch production, each accounting for about 35%. Another commonly used source is potato.

There are varying methods of milling grains. Maize is wet milled, meaning that it is first steeped in water. Wheat can be wet or dry milled.

Glucose-fructose syrup is made from starch in a process that mimics how our bodies digest starches. Both the enzymes that break down starch into maltodextrins and then maltodextrins down into glucose, and the ones that convert glucose into fructose, are present in the human body.

Glucose-fructose syrup is made of glucose and fructose, typically containing 42% fructose. Unlike in sucrose (table sugar), which is made of linked chains of glucose and fructose in a 50:50 ratio, the molecules in glucose-fructose syrup are not linked together.

Download the printable PDF version [here](#).

GLUCOSE-FRUCTOSE SYRUP



How is it produced?

1



FARMING

Wheat and maize are the most commonly used crops.

2



HARVESTING

Crops are harvested and stored.

3



MILLING & SIEVING

After grains are crushed in a mill, sieving separates a starch and protein mix from the other cereal components.

4



CENTRIFUGING

Water is added to the mixture, which is then centrifuged to separate the starch from the proteins.

5



BREAKING DOWN OF STARCH

Starch is made of many linked glucose molecules: cutting these links with enzymes (mimicking the body's natural process of digesting starch) produces glucose syrup.

6



ISOMERISATION

Another enzyme is then used to convert some of the glucose into sweeter-tasting fructose.

7



PURIFYING

The syrup is purified by additional steps such as filtration and then evaporated. A thick, clear syrup of glucose and fructose remains.

8



GLUCOSE-FRUCTOSE SYRUP

The syrup is now ready for use in foods and drinks to sweeten them and/or to improve texture, colour and flavour.

For more information

[What is glucose-fructose syrup? \(Q&A\)](#)