



Dextrose Monohydrate

Sugar in bloodstream, primary energy source of brain

Dextrose Monohydrate, often known as D-glucose monohydrate, is the sugar found in the bloodstream. It is the brain's primary energy source and has been shown to enhance brain function.

It is necessary for glycosylation, energy production, and the synthesis of glycans, which give cells their structural integrity. Glucose contributes to the post-translational modifications of proteins through glycation or non-enzymatic glycosylation of proteins at the lysine residues. Glycation causes cataracts, aging, diabetes mellitus, and issues related to Alzheimer's disease.

Moreover, glucose is used to maintain the water balance of tissues and cells and to cure or prevent hypoglycemia. This molecule can be found in many foods, such as honey, corn syrup, molasses, fruits, and fruit juices.

Cat. Number	ASF-3002
CAS Number	77938-63-7
MDL Number	MFCDD00149450
PubChem	57647555
Molecular Weight	198.17 g/mol
Molecular Formula	$C_6H_{12}O_6 \cdot H_2O$
Storage Temperature	+20°C
Form and Color	White or almost white, Crystalline powder
Appearance of Solution	Clear solution, color \leq BY7
Conductivity	$\leq 20\mu S/cm$ (20% in water)
Sulphites	$\leq 15ppm$
Dextrin	To pass USP test
Soluble Starch, Sulfitess	To pass USP test
Sulphated Ash	$\leq 0.1\%$



Related Substances	≤ 0.40% (maltose + isomaltose)
Fructose	≤ 0.15%
Maltotriose	≤ 0.20%
Total Related Substances	≤ 0.50% (Ph. Eur.)
Any Unspecified Impurity	≤ 0.10% (Ph. Eur.)
Water (KF)	7.5 - 9.5 %
Assay	97.5 - 102.0 % (dried basis)
Synonym	Glucose monohydrate