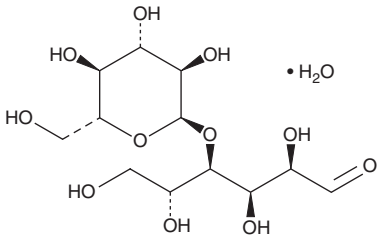
PRODUCT INFORMATION

Maltose (hydrate)

Item No. 34239

CAS Registry No.:	6363-53-7
Formal Name:	4-O-α-D-glucopyranosyl-D-glucose, monohydrate
Synonym:	D-(+)-Maltose
MF:	$C_{12}H_{22}O_{11} \bullet H_2O$
FW:	360.3
Purity:	≥90%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Maltose (hydrate) is supplied as a solid. A stock solution may be made by dissolving the maltose (hydrate) in the solvent of choice, which should be purged with an inert gas. Maltose (hydrate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of maltose (hydrate) in these solvents is approximately 15 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of maltose (hydrate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of maltose (hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Maltose is a disaccharide found in plants and bacteria.[1,2] It is a degradation product of starch in plants that accumulates in a circadian rhythm-, day length-, and temperature-dependent manner.[1] Maltose is formed from starch by the action of β-amylase and is a source of glucose in bacteria and mammals.[2,3]

References

1. Lu, Y. and Sharkey, T.D. The importance of maltose in transitory starch breakdown. *Plant Cell Environ.* **29(3)**, 353-366 (2006).
2. Boos, W. and Böhm, A. Learning new tricks from an old dog: MalT of the *Escherichia coli* maltose system is part of a complex regulatory network. *Trends Genet.* **16(9)**, 404-409 (2000).
3. Tester, R.F., Karkalas, J., and Qi, X. Starch structure and digestibility enzyme-substrate relationship. *World Poultry Sci. J.* **60(2)**, 186-195 (2004).

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