

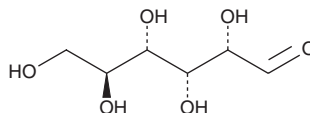
PRODUCT INFORMATION



L-(-)-Glucose

Item No. 20829

CAS Registry No.: 921-60-8
Formal Name: L-glucose
Synonyms: L-Glucopyranose, Levoglucose
MF: $C_6H_{12}O_6$
FW: 180.2
Purity: $\geq 95\%$
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

L-(-)-Glucose is supplied as a crystalline solid. A stock solution may be made by dissolving the L-(-)-glucose in the solvent of choice. L-(-)-Glucose is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of L-(-)-glucose in these solvents is approximately 0.30, 30, and 20 mg/ml, respectively.

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 L-(-)-glucose can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-(-)-glucose in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-(-)-Glucose is an enantiomer of the more common D-glucose. L-Glucose is not bioavailable to cells as an energy source because it cannot be phosphorylated by hexokinase. However, certain L-glucose-utilizing bacteria that contain NAD^+ -dependent L-glucose dehydrogenases capable of oxidizing L-glucose have been identified.¹

Reference

1. Shimizu, T., Takaya, N., and Nakamura, A. An L-glucose catabolic pathway in *Paracoccus* species 43P. *J. Biol. Chem.* **287**(48), 40448-40456 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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