D-Glucose Solution (45%)

Contains 450.0 g/L D-glucose
in cell/tissue culture grade water
Sterile-filtered
Endotoxin tested
Cell culture tested

Catalog Number **LS 001-02**
Storage Temperature 2~8°C

Product Description
Glucose is a main source of energy for living organisms. Glucose occurs naturally in the free state in fruits and other parts of plants. Glucose is combined into glucosides, disaccharides, oligosaccharides, the polysaccharides (cellulose and starch), and glycogen. Normal human blood contains 0.08-0.1% glucose. Small amounts of glucose (also hydrogen peroxide or glucose oxidase) can be measured using luminol as a substrate with horseradish peroxidase.
LS 001-02 contains 450 g/L D-glucose in cell/tissue culture grade water (**LS 016-01**). Appropriate volume of D-Glucose solution should be aseptically added to the medium. The selection of a nutrient medium is strongly influenced by (1) type of cell, (2) type of culture (monolayer, suspension, or clonal) and (3) degree of chemical definition necessary. It is important to review the literature for recommendations concerning medium, supplementation and physiological parameters required for a specific cell line.

Storage/Stability
D-glucose solution should be stored at 2~8°C in the dark. Deterioration of the liquid may be recognized by (1) precipitate or particulate matter throughout the solution, (2) cloudy appearance, (3) color change, and/or (4) pH change. The nature of supplements added may affect storage conditions and shelf life of the medium. Product label bears expiration date.

Biological Performance Characteristics
The growth-promoting capacity of D-glucose solution is tested in a medium containing 10% FBS using an appropriate cell line(s). Growth rates are examined through three subculture generations and compared with parallel cultures grown in standardized control medium. Cells are counted and growth is plotted as a logarithmic function of time in culture, and seeding efficiencies, doubling time, and final cell densities are determined. During the testing period cultures are examined microscopically for a typical morphology and evidence of cytotoxicity.

Molecular Weight
180.2 g/mol

Molecular Formula
$C_6H_{12}O_6$

Precautions
For *In Vitro* Use Only

Product Profile	
Appearance	Clear colorless solution
Endotoxin	≤ 10 EU/ml
Sterility	Sterilized by 0.2 μm filtration system. Sterility tests are performed in accordance with protocols described in USP.

References
Biochemistry, 2nd ed., Lehninger, A. L., ed., Worth Publishers, Inc. (New York, NY: 1975), p. 253.
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Puget, K., and Michelson, A.M., Microestimation of glucose and glucose oxidase. Biochimie, **58**, 757-758 (1976).
Martindale The Extra Pharmacopoeia, 29th ed., Reynolds, J. E. F., ed., The Pharmaceutical Press (London, England: 1989), p. 1265.

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