

Dextrose (Glucose)

Cat. 1900

Ingredients (Carbohydrates and Glycosides)

Practical information

| Applications | Categories |
|---------------|-------------|
| Carbon source | General use |

Industry: Fermentation / Ingredients for culture media / Manufacturing process

Principles and uses

Dextrose (D-glucose) is a monosaccharide used as a energy source for the cultivation of microorganisms and for fermentation studies. Its empirical formula is C₆H₁₂O₆.

Dextrose is incorporated into numerous formulations of culture media, such as those used in the selective isolation of Enterobacteriaceae. In liquid media, dextrose is normally used in a concentration of 0,5%, while in solid media it is higher.

This sugar is easily assimilated and allows an increase in the growth and recovery of microorganisms.

The assays have been carried out according to the criteria of the European Pharmacopoeia and USP.

Physical-chemical characteristics

| Description | Specification |
|------------------------------|---|
| Loss on drying | <1,0% |
| Conductivity | <20 microS/cm |
| Soluble starch/sulfites | <15 ppm |
| Particle size (>500 microns) | <0,1 % |
| Particle size (>315 microns) | <2 % |
| Dextrin | EP/USP |
| Appearance | White or almost white, crystalline powder |
| Heavy metals | <5 ppm |
| Identification test | USP |
| Identification test A | EP |
| Solubility | Freely soluble in water, very slightly soluble in ethanol (96%) |
| Appearance of solution | No more color than the control |
| Glucose | 97,5-102,0 % |
| Maltose + isomaltose | <0,4 % |
| Maltotriose | <0,2 % |
| Fructose | <0,15 % |
| Unspecified impurities | <0,10 % |
| Total impurities | <0,5 % |

Microbiological test

| Description | Specification |
|-----------------------------|---------------|
| Total aerobic count | <1000 CFU/g |
| Total yeast and molds count | <100 CFU/g |
| Salmonella | Negative/10g |
| Escherichia coli | Negative/1g |

Storage

Temp. Min.:2 °C

Temp. Max.:25 °C