

SPECIFICATION

Product Name: Dextrose Anhydrous IP Grade
Chemical Formula: $C_6H_{12}O_6$
CAS Number: 50-99-7
Molecular Weight: 180.16 g/mol
Appearance: White or colorless crystalline powder.
Odor: Odorless.

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min/Max)
Identification: (A) Infrared Absorption Spectrophotometry Test	-	Complies	The absorption spectrum obtained with the sample should be concordant with the absorption spectrum obtained with Dextrose anhydrous working standard. The principal peak in the chromatogram obtained with the test solution is similar in retention time and size to the principal peak in the chromatogram obtained with reference solution (a).
(B) Assay (By HPLC)	-	Complies	
(C) Water	%	0.482	Max. 1.0%
Appearance of Solution	-	Complies	Test solution is clear, not more intensely coloured than reference solution BYS7 and is odourless.
Specific Optical Rotation	°C	+53.03°	+52.50° to +53.30°
Soluble Starch and Sulphite	PPM	Complies	NMT 15 PPM
Dextrin	-	Complies	The substances dissolves completely.
Arsenic	PPM	Complies	NMT 1 PPM (Limit Test)
Heavy Metals	PPM	Complies	NMT 5 PPM
Conductivity	μS.cm	2.50	Max. 20 μS.cm

Water	%	0.482	NMT 1.00%
Assay	%	100.51%	97.5% to 102% (Anhydrous Substance)
Bacterial Endotoxins	-	Complies	NMT 0.5 EU/ml of 5% w/v solution in wfi
Related Substances			
Impurity A and B:	%	0.06%	NMT 0.4%
Impurity C:	%	Not Detected	NMT 0.2%
Impurity D:	%	Not Detected	NMT 0.15%
Unspecified Impurity:	%	Not Detected	NMT 0.1%
Total Impurity:	%	0.06%	NMT 0.5%

Physical Properties

- Solubility: Freely soluble in water. Slightly soluble in ethanol. Slightly soluble in methanol. Practically insoluble in ether. Practically insoluble in chloroform.

Shelf Life & Storage

- Shelf Life: 5 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a tightly closed container in a cool, dry, and well-ventilated place, protected from moisture, humidity, and direct sunlight. Keep the container tightly sealed when not in use to prevent moisture absorption and caking.

Applications

- Use: Widely used as a sweetening agent, energy source, bulking agent, and pharmaceutical excipient in pharmaceutical, nutraceutical, food, and beverage formulations. It provides rapidly available energy and improves product taste and stability.
- Dosage: Depends on the intended application, formulation, and nutritional requirements.

Packaging

- Standard Packing: 25 kg woven PP bags with inner liner and 100 grams, or as per customer requirement.

- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

* Specifications are based on the manufacturer's provided specifications.