

SPECIFICATION

Product Name: Dextrose Monohydrate
Chemical Formula: $C_6H_{12}O_6 \cdot H_2O$
CAS Number: 14431-43-7
Molecular Weight: 198.17 g/mol
Appearance: A white crystalline powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Moisture (% water/ % LOD)	%	8.06	Max. 9.5
Optical rotation	°	53.6	+52.5° to +53.3°
D- glucose content (on dry basis)	%	99.80	Min. 99.5
% Ash as is	%	0.03	Max. 0.1
Acidity	ml	Complies	NMT 0.2 ml of 0.1 M NaOH is required to change the colour of the solution to pink.
Sulfur dioxide	-	8.00	Max. 20.0
Arsenic	PPM	Complies	Max. 1.0
Heavy metals	PPM	Complies	Max. 5.0
Retention on #30 mesh	%	1.60	Max. 2.0

Physical Properties

- Solubility: Soluble in water. Soluble in ethanol. Insoluble in ether. Insoluble in chloroform.

Shelf Life & Storage

- Shelf Life: 5 years from date of manufacture under recommended storage.

- **Storage Conditions:** Store in a cool, dry, and well-ventilated place at 15–30°C. Protect from moisture, excessive humidity, and direct sunlight. Keep the container tightly closed in the original, properly labeled container to prevent moisture absorption, caking, and contamination. Store away from strong oxidizing agents and incompatible materials to maintain product quality and stability.

Applications

- **Use:** Widely used as a readily available source of carbohydrate and energy in food, beverage, pharmaceutical, and nutraceutical formulations. It functions as a sweetener, bulking agent, diluent, stabilizer, and fermentation substrate. It is commonly incorporated into oral rehydration salts (ORS), energy drinks, syrups, tablets, powders, confectionery, bakery products, infant nutrition products, dietary supplements, and intravenous glucose solutions (when an appropriate pharmacopeial grade is used). It also helps improve taste, energy replenishment, and product stability.
- **Dosage:** Depends on the intended use, patient age, clinical condition, and product formulation.

Packaging

- **Standard Packing:** 50 Kgs woven pp bag with inner liner 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.