



Technical Data Sheet

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Dextrose (Glucose)

RDM-S-01

CAS No. 50-99-7

Principle: Dextrose is utilized as a nutrient in many bacteriological media. The microorganisms have capability to ferment dextrose to produce energy, acids and gas. In fermentations, simple organic end products are formed from the anaerobic dissimilation of glucose. Due to glucose breakdown by enzymatic dehydrogenation reaction to yield Energy in the form of ATP. Glucose is the most common hexose used to study fermentation reactions. The complete hydrolysis of glucose yield sufficient energy for microbial growth. Since dextrose is used as carbon and energy source in many dehydrated media.

Use: Recommended for media ingredient of basic, selective or differential media and used as carbohydrate source in biochemical characterization of microorganisms etc.

Quality Control

Appearance	White colored, crystals or powder or powder free flowing with dry lumps
Solubility (2%)	Soluble in distilled water
Clarity	No visual color solution
Loss on drying	NMT 1 %
Ash Content	NMT 1.00% as estimated by AOAC method.

Bacteriological testing Bacteriological tests are carried out as per USP 32, NF26 where respective medium is prepared by using dextrose under test.

Microbial Parameters

Total Plate Count	NMT 10000 cfu per gram.
Yeast & Molds	Absent per 10 grams
<i>Escherichia coli</i>	Absent per 10 grams
<i>Salmonella</i>	Absent per 10 grams
<i>Staphylococcus aureus</i>	Absent per 10 grams

Culture response: The carbohydrate fermentation reactions after an incubation of 18-48 hours at 33-37°C, of various bacteria with Dextrose. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Acid production	Gas production
<i>Escherichia coli</i>	25922	Luxuriant	Yellow color positive reaction	Positive
<i>Salmonella typhimurium</i>	14028	Luxuriant	Yellow color positive reaction	Positive
<i>Proteus vulgaris</i>	13315	Luxuriant	Yellow color positive reaction	Positive

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.

Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes used, unusable or modified preparation of this product must be disposed after autoclaving or incineration after completion of task.

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