



Dextrose (Glucose)

RDM-S-01

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 % |
| Residue on ignition | NMT 1 % |

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

Test for pathogens:

| | |
|------------------------------|-------------------------|
| 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 35-37°C, of various bacteria with Dextrose.

| Organism | Growth | Acid production | Gas production |
|---|------------------|--------------------------------|----------------|
| <i>Escherichia coli</i> (ATCC 25922) | Luxurious growth | Yellow color positive reaction | Positive |
| <i>Salmonella typhimurium</i> (ATCC 14028) | Luxurious growth | Yellow color positive reaction | Positive |
| <i>Proteus vulgaris</i> (ATCC 13315) | Luxurious growth | Yellow color positive reaction | Positive |

Storage and Shelf Life

Store below 30°C in tightly sealed jar or container. Use before expiry date on the label.

Expected performance when stored at optimum conditions and within expiry date.

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.

Disclaimer

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