

TECHNICAL DATA SHEET

Glucose Broth (Dextrose Broth)

Principle

The glucose broth consists of casein enzymatic hydrolysate, glucose and sodium chloride. Casein enzymatic hydrolysate provide nitrogen and amino acids. Glucose is the fermentable carbohydrate providing carbon and energy; Sodium chloride maintains the osmotic balance. The media gives rapid growth and accelerates the early development of injured cells.

Use: For the cultivation of a wide variety of microorganisms.

Contents*

Ingredients	Gram/Litre
Casein enzymatic hydrolysate	10.000
Glucose	5.000
Sodium Chloride	5.000
pH at 25°C	7.0 ±0.2

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 20.00 grams in 1000 ml distilled water. Boil to dissolve the medium completely and distribute tubes containing inverted Durhams tubes. Sterilize by autoclaving at 15 lbs. pressure (121 °C) for 15 min, cool it to 42-45 °C and inoculate test sample aseptically.

Specimens' types analyzed

Food and dairy samples and water samples, pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

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Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	Light beige colored free flowing, homogeneous powder
Reaction of 2.0% solution	7.0 ±0.2 at 25 °C
pH	6.80- 7.20
Color and clarity of ready medium	Light amber colored clear opalescent solution
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-72 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-48 h
Negative control	Performed using sterile distilled water

Different Microbial Response

Organism	ATCC	Inoculum (CFU)	Growth	Gas production
<i>Escherichia coli</i>	8739	50-100	Luxuriant	Positive
<i>Salmonella typhimurium</i>	14028	50-100	Luxuriant	Negative
<i>Staphylococcus aureus</i>	25923	50-100	Luxuriant	Negative
<i>Shigella flexneri</i>	9199	50-100	Luxuriant	Negative

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 the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

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Reference

1. **American Public Health Association, (1978) *Standard Methods for the Examination of Dairy Products*, 14th Ed., Washington D.C.**
2. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
3. **Baird R.B., Eaton A.D., and Rice E.W., (Eds.), (2015), *Standard Methods for the Examination of Water and Wastewater*, 23rd Ed., APHA, Washington, D.C.**
4. ***Difco Manual* (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.**

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