

TECHNICAL DATA SHEET

Glucose Peptone Agar (Dextrose Peptone Agar)

Principle

Glucose peptone agar is simple media used for the enumeration of fastidious microorganisms. It is composed of peptone, glucose, sodium chloride, and agar. Peptone provides nitrogen, carbon, vitamins, and other essential growth factors. Glucose is a carbon source. Sodium chloride maintains osmotic balance, and agar is a solidifying agent.

Use: For general cultivation of microorganisms.

Contents*

Ingredients	Gram/Litre
Peptone	20.000
Glucose	10.000
Sodium chloride	5.000
Agar	15.000
pH at 25°C	7.2±0.2

* Formula adjusted for optimum performance and parameters

Directions: Dissolve 50.0 grams in 1000 ml distilled water. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C and distribute aseptically in petri plates. Ensure complete solidification and inoculate test sample aseptically.

Specimens' types analyzed

Potable, waste water samples, air samples, food and dairy 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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ISO 9001-2008 Certified Company

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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 5.0% solution	7.2±0.2 at 25 °C
pH	7.00-7.40
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Light amber colored opalescent gel
Growth Promotion properties	Best at ≤ 100 CFU at 32-37 °C for 18-48 h
Indicative properties	Optimum at ≤ 100 CFU at 32-37 °C for 18-24 h
Negative control	Performed using sterile distilled water

Different Microbial Response: Prepare media as per the label directions. Inoculate and incubate at 35±2°C for 18-48 hours. Inoculum 50-100 CFU.

Organism	ATCC	Aerobic incubation	Anaerobic incubation (overlayed with paraffin oil or mineral oil)
<i>Escherichia coli</i>	25922	Acidic reaction (yellow color of the medium), gas formation	Acidic reaction (yellow color of the medium), gas formation
<i>Klebsiella aerogenes</i>	13048	Acidic reaction (yellow color of the medium), gas formation	Acidic reaction (yellow color of the medium), gas formation
<i>Pseudomonas aeruginosa</i>	9027	Acidic reaction (yellow color of the medium), no gas formation	Alkaline reaction (green color of the medium) no gas formation
<i>Salmonella enteritidis</i>	13076	Acidic reaction (yellow color of the medium), gas formation	Acidic reaction (yellow color of the medium), gas formation
<i>Shigella flexneri</i>	9199	Acidic reaction (yellow color of the medium), no gas formation	Acidic reaction (yellow color of the medium), no gas formation

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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.

Reference

1. Atlas, R. M. (2005). Handbook of media for environmental microbiology. CRC press.
2. Difco Manual (1998). 11th Edition. Difco Laboratories., Division of Becton Dickinson and Company, Sparks, Maryland, USA.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1

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