

TECHNICAL DATA SHEET

Lactose Agar w/ Bromothymol Blue

Principle

Lactose Agar with bromothymol blue is designed by Chapman et al (1937), is used in the detection and isolation of pathogenic Staphylococci generally coagulase positive. On this media Staphylococci are differentiated by their ability to grow at a high pH and in the presence of bromothymol blue. Media is composed of proteose peptone and meat extract serves as a source of carbon, nitrogen, long chain amino acids, vitamins and other essential nutrients. Lactose is the fermentable carbohydrate and bromothymol blue as a pH indicator. Typical colonies appear deep yellow or blue grey. Coliforms may grow but are differentiated by their appearance.

Use: A selective medium used for the isolation of Gram-negative bacteria from urine & faeces.

Contents*

Ingredients	Gram/Litre
Proteose peptone	5.000
Meat extract#	3.000
Lactose	10.000
Bromothymol blue	0.170
Agar	15.000
pH at 25°C	8.6 ±0.2

* Formula adjusted for optimum performance and parameters # Equivalent to Meat extract

Directions: Dissolve 33.1 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C), cool to 45-50°C. Mix well and distribute aseptically in petri plates and allow to solidify. Ensure complete solidification and inoculate test sample aseptically.

Specimens types analyzed
Clinical samples.

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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.

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 with green ting colored, free-flowing, homogeneous
Reaction of 3.31% solution	8.6 ±0.2 at 25 °C
pH	8.40- 8.80
Gelling	Firm comparable with 1.5% agar gel
Color and clarity of ready medium	Green blue colored, clear opalescent gel
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: Cultural characteristics observed after incubation at 35±2°C for 18-48 hours. Inoculum 50-100 CFU.

Organism	ATCC	Growth	Recovery	Colony color
<i>Escherichia coli</i>	8739	Luxuriant	≥ 70%	Yellow
<i>Escherichia coli</i>	25922	Luxuriant	≥ 70%	Yellow
<i>Staphylococcus aureus</i>	25923	Luxuriant	≥ 70%	Golden yellow
<i>Salmonella typhimurium</i>	14028	Luxuriant	≥ 70%	Blue or colorless
<i>Staphylococcus epidermidis</i>	12228	Luxuriant	≥ 70%	Blue or colorless

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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. Chapman, Lieb, Bereus and Curcio, 1937, J. Bacteriol., 33: 533. Revision: 04 / 2019
- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
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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