

Technical Information

B.T.B. Lactose Agar

Product Code: DM 1861

Application: - B. T. B. Lactose Agar (Bromothymol Blue Lactose Agar) is used for the detection and isolation of pathogenic Staphylococci.

Composition**

Ingredients	Gms / Litre
Proteose peptone	5.000
Beef extract	3.000
Lactose	10.000
Bromo thymol blue	0.170
Agar	15.000
Final pH (at 25°C)	8.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Staphylococci are known to be pathogenic to mammals including man. Although this organism is mainly a part of the normal human microflora, it can cause significant opportunistic infections under appropriate conditions ⁽¹⁾. Traditionally Staphylococci are divided into two groups on the basis of their ability to clot blood plasma (the coagulase reaction). The coagulase-positive Staphylococci comprises of the most pathogenic species of *Staphylococcus aureus*. BTB Lactose Agar ⁽²⁾ designed by Chapman et al ⁽³⁾ is used in the detection and isolation of pathogenic Staphylococci. On this media Staphylococci are differentiated by their ability to grow at a high pH and in the presence of bromothymol blue. Plates should be inoculated preferably by spread plate technique and incubated for about 36 hours at 35°C. Typical colonies appear deep yellow (90% approx.) or blue grey (10% approx.). Coliforms may grow but are differentiated by their colonial appearance.

Methodology

Suspend 33.17 grams of powder media in 1000 ml distilled water. Shake well and heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to greenish yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Greenish blue coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.32% w/v aqueous solution at 25°C. pH : 8.6±0.2

pH Range

8.40-8.80

Cultural Response/Characteristics**DM1861:** Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	>=70%	yellow
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	>=70%	golden yellow
<i>Salmonella typhi</i> ATCC 6539	50-100	Good-luxuriant	>=70%	Blue/ colourless
<i>Staphylococcus aureus</i> ATCC 6538	50-100	good-luxuriant	>=70%	Golden yellow
<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	good-luxuriant	>=70%	Blue/ colourless

Storage and Shelf Life**Dried Media:** Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.**Prepared Media:** 2-8⁰ in sealable plastic bags for 2-5 days.**Further Reading**

1. Carney D. N., Fossieck B. E., Parker R. H. et al, 1982, Rev. Infect. Dis. H., 1-12.
2. Atlas R. M., 2004, Handbook of Microbiological Media, 3rd Edition, CRC Press.
3. Chapman, Lieb, Bereus and Curcio, 1937, J. Bacteriol., 33:533.

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