

PRODUCT SPECIFICATION SHEET

B.T.B. Lactose Agar (DM032)

Intended Use

B.T.B. Lactose Agar (DM032) is recommended for isolation of pathogenic *Staphylococci*.

Product Summary and Explanation

Staphylococcus are gram-positive, facultative anaerobes, known to be pathogenic to man and other mammals. Members of the genus *Staphylococcus* frequently colonize the skin and upper respiratory tracts of mammals and birds, 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* constitute the most pathogenic species, *Staphylococcus aureus*. Chapman et al⁽²⁾ formulated BTB Lactose Agar⁽³⁾ which 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.

Principles of the Procedure

B.T.B. Lactose Agar contains proteose peptone and beef extract which provides nitrogen, carbon, and amino acids essential growth nutrients. Lactose is the fermentable carbohydrate and an energy source. Bromothymol blue is a pH indicator.

Formula / Liter

Ingredients	Gms / Liter
Proteose peptone	5.00
Beef extract	3.00
Lactose	10.00
Bromo thymol blue	0.17
Agar	15.00
Final pH: 8.6 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 33.17 grams of the medium in one liter of distilled water.
2. Heat to boiling to dissolve the medium completely.
3. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
4. Mix well and pour into sterile petri plates.

Quality Control Specifications

Dehydrated Appearance	Cream to greenish yellow homogeneous free flowing powder
Prepared Medium	Greenish blue coloured, clear to slightly opalescent gel forms in Petri plates
Reaction of 3.32% solution	pH 8.6 ± 0.2 at 25°C
Gel Strength	Firm, comparable with 1.5% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Sr. No.	Organisms	Results to be achieved			
		Inoculum (CFU)	Growth	Recovery	Colour of Colony
1.	<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	≥70%	yellow

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2.	<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant	≥70%	golden yellow
3.	<i>Salmonella typhi</i> ATCC 6539	50-100	good-luxuriant	≥70%	blue/colourless
4.	<i>Staphylococcus aureus</i> ATCC 6538	50-100	good-luxuriant	≥70%	golden yellow
5.	<i>Staphylococcus epidermidis</i> ATCC 12228	50-100	good-luxuriant	≥70%	blue/colourless

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Plates should be inoculated preferably by spread plate technique and incubated for about 36 hours at 35°C. Refer to appropriate references for standard test procedures.

Results

Typical colonies appear deep yellow (90% approx.) or blue grey (10% approx.). Coliforms may grow but are differentiated by their appearance. Refer to appropriate references and standard procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 2 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : B. T. B. Lactose Agar

Product Code : DM032

Available Pack sizes : 100gm / 500gm

References

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

Further Information

For further information please contact your local MICROMASTER Representative.



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