

Technical Information

Litmus Lactose Bile Salt Agar (LLBSA)

Product Code: DM 1507

Application: - Litmus Lactose Bile Salt Agar is recommended for selective isolation of enteric bacteria on the basis of lactose fermentation and non-clinical samples.

Composition**

Ingredients	Gms / Litre
Peptone	20.000
Sodium taurocholate	5.000
Meat extract B #	5.000
Sodium chloride	5.000
Lactose	20.000
Litmus	0.500
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Principle & Interpretation

Litmus Lactose Bile Salt Agar is a modification of Litmus Lactose Agar formulated by Wurtz (1) and is used for the isolation of enteric bacteria. It can be successfully used in place of MacConkey Agar.

Numerous plating media are in use today for the differentiation of lactose-fermenters and lactose non-fermenters. Some of these are selective, whereas others are differential. Some lactose fermenting, gram-negative enteric bacteria can tolerate the inhibitory substances present in the media. These bacteria can be recognized readily by their appearance on selective plates.

LLBSA Medium contains sodium taurocholate, which prevents the growth of gram-positive microorganisms. Lactose is the fermentable sugar utilized by coliform enteric bacteria leading to production of acid. Peptone and meat extract B provide the essential nutrients like nitrogen compounds for the growth of enteric bacteria. Sodium chloride helps to maintain the osmotic balance in the medium.

Methodology

Suspend 70.5 grams of dehydrated media in 1000 ml distilled water. Mix thoroughly & heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Shake well before pour into sterile Petri plates.

Quality Control

Appearance

Light purple to greyish yellow homogeneous free flowing may contain minute to small particles.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity

Light purple coloured slightly opalescent gel forms in Petri plates, may have black particles

Reaction

Reaction of 7.05 w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range

7.20-7.60



Dehydrated Culture Media
Bases / Media Supplements

Cultural Response

DM1507: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant	>=50%	red
<i>Salmonella Typhi</i> ATCC 6539	50-100	good-luxuriant	>=50%	deep blue to violet
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant	>=50%	-
<i>Staphylococcus aureus</i> ATCC 25923	50-100	none-poor	<=10%	-
<i>Proteus mirabilis</i> ATCC 25933	50-100	good-luxuriant (no swarming)	>=50%	blue to violet
<i>Enterococcus faecalis</i> ATCC 29212	50-100	none-poor	<=10%	-

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. .

Prepared Media: 2-8° in sealable plastic bags for 2-5 days.

Further Reading

1. Wurtz, 1897, Technique Bacteriologique Paris, Masson.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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