



Drigalski Litmus Lactose Agar

M659

Drigalski Litmus Lactose Agar is used as a non-selective differential medium for the detection of enteric pathogens.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	7.000
Sodium chloride	5.000
Lactose	15.000
Litmus	1.200
Agar	13.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41.2 grams in 1000 ml distilled water. Heat to boiling 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.

Principle And Interpretation

Drigalski Litmus Lactose Agar is formulated as per Drigalski and Conrad (1) as a differential medium for the detection of enteric pathogens from water, meat, milk and other food materials.

The medium contains lactose as the source of carbon and fermentable carbohydrate. Peptic digest of animal tissue supplies essential nitrogenous nutrients to the microorganisms. Litmus is the pH indicator in the medium. Lactose fermenters produce acid and thus change the colour of litmus to red forming red, colonies. Lactose non-fermenters form blue colonies on the medium. Inoculate culture from primary fermentation tubes showing gas either by four-quadrant streaking on the medium or by serial dilution and pour plate technique (2).

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder, may have slight dye particles

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium

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

Reaction

Reaction of 4.12% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

M659: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours .

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
<i>Enterococcus faecalis</i> ATCC 29212	50-100	fair-good	40-50%	orange-red
<i>Escherichia coli</i> ATCC 25922	50-100	luxuriant	≥70%	orange- red
<i>Salmonella Typhimurium</i> ATCC 14028	50-100	luxuriant	≥70%	blue
<i>Shigella flexneri</i> ATCC 12022	50-100	luxuriant	≥70%	blue

Staphylococcus aureus 50-100 good 50-70% orange- red
ATCC 25923

Storage and Shelf Life

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

Reference

1. Drigalski V. and Conrad H., 1902, Z. Hyg. Infektionskr., 39:283.
2. MacFaddin J.F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Volume I, Williams and Wilkins, Baltimore.

Revision : 1 / 2011



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