Technical Information

Drigalski Lactose Agar, Modified

Product Code: DM 2378

Application: - Drigalski Lactose Agar, Modified is recommended as a non-selective, differential medium for the detection of enteric pathogens.

Composition**

Ingredients	Gms / Litre
Beef extract	4.000
Peptic digest of animal tissue	10.000
Lactose	10.000
Bromothymol blue	0.040
Agar	16.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Drigalski Lactose Agar, Modified is based on the original medium developed by Drigalski and Conrad (1) for the detection of enteric pathogens. Beef extract and peptic digest of animal tissue supply nitrogeneous nutrients to the organisms, while lactose is the fermentable carbohydrate. Bromothymol blue is the pH indicator in the medium. Non-lactose fermenting (enteric) pathogens form blue to green colonies whereas lactose fermenting coliform organisms form yellow colonies due to acid production and decrease in pH (2).

Methodology

Suspend 40.04 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. Shake well before pour into sterile Petri plates.

Quality Control

Appearance
Light yellow to greenish yellow homogeneous free flowing powder, may have slight dye particles

Gelling
Firm, comparable with 1.6% Agar gel.

Colour and Clarity
Green coloured, clear to slightly opalescent gel forms in Petri plates

Reaction
Reaction of 4% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH Range
7.20-7.60

Cultural Response
DM2378: Cultural characteristics observed after an incubation at 35- 37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth	Recovery	Colour of colony
Cultural Response				
Klebsiella pneumoniae ATCC 13883	50-100	good-luxuriant	>=70%	yellow

Escherichia coli ATCC 25922	50-100	luxuriant	>=70%	yellow
Salmonella Typhi ATCC 6539	50-100	luxuriant	>=70%	blue to green
Shigella flexneri ATCC 12022	50-100	luxuriant	>=70%	blue to green
Pseudomonas aeruginosa ATCC 27853	50-100	good	>=70%	blue-green

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

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