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TECHNO PHARMCHEM

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Registered Off. : 101-A, Deep Enclave, Pocket "D", Ashok Vihar, Phase-III, Delhi-110 052 (India)
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VIOLET RED BILE AGAR

Product Code: CM0369

Violet Red Bile Agar is selective medium used for the isolation, detection and enumeration of coli-aerogenes bacteria.

Composition**

Ingredients	Gms / Litre
Peptone	7.000
Yeast extract	3.000
Sodium chloride	5.000
Bile salts mixture	1.500
Lactose	10.000
Neutral red	0.030
Crystal violet	0.002
Agar	15.000

Final pH (at 25°C) 7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 41.53 grams in 1000 ml distilled water. Heat with stirring to boiling to dissolve the medium completely. Do not autoclave. Cool to 45°C and pour into sterile Petri plates containing the inoculum. If desired, the medium can be sterilized by autoclaving at 15 lbs pressure at 15lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Violet Red Bile Agar, a modification of MacConkey's original formulation is used for the enumeration of coli-aerogenes bacterial group. It relies on the use of the selective inhibitory components crystal violet and bile salts and the indicator system lactose, and neutral red. Thus, the growth of many unwanted organisms is suppressed, while tentative identification of sought bacteria can be made. Organisms, which rapidly attack lactose, produce purple colonies surrounded by purple holes. Non fermenters or late lactose-fermenters produce pale colonies with greenish zones. VRBA is recommended by APHA. Selectivity of VRBA can be increased by incubation under anaerobic conditions and/ or at elevated temperature, i.e. equal to or above 42°C.

Peptone and yeast extract serve as sources of carbon, nitrogen, vitamins and other essential growth nutrients. Lactose is the fermentable carbohydrate, utilization of which leads to the production of acids. Neutral red indicator detects the acidity so formed. Crystal violet and bile salts mixture help to inhibit the accompanying gram-positive and unrelated flora. Sodium chloride maintains the osmotic equilibrium. Violet Red Bile Agar is not completely specific for enteric; other accompanying bacteria may give the same reaction. Further biochemical tests are necessary for positive identification.

Quality Control

Appearance	:	Light yellow to pink homogeneous free flowing powder
Gelling	:	Firm, comparable with 1.5% Agar gel.
Colour and Clarity of prepared medium	:	Reddish purple coloured clear to slightly opalescent gel forms in petri plates
Reaction	:	Reaction of 4.15% w/v aqueous solution at 25°C. pH: 7.4±0.2
pH	:	7.20 - 7.60



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Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery	Color of colony
Enterobacter aerogenes ATCC 13048	50 - 100	luxuriant	>=50%	pink to pinkish red
Escherichia coli ATCC 25922	50 - 100	luxuriant	>=50%	pinkish red with bile precipitate
Salmonella Enteritidis ATCC13076	50 - 100	luxuriant	>=50%	Colourless to orangish yellow
Staphylococcus aureus ATCC 25923	>=10 ³	inhibited	0%	

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.