Technical Information

D.C.L.S. MiVeg Agar, Hajna

Product Code : VM1178

Application:- D.C.L.S. MiVeg Agar, Hajna is used for the isolation of gram-negative enteric bacilli.

Composition

Ingredients	Gms / Litre
MiVeg peptone	6.00
MiVeg hydrolysate	5.00
Yeast extract	3.00
MiVeg extract	3.00
Sucrose	7.50
Lactose	7.50
Sodium citrate	10.00
Sodium thiosulphate	5.00
Sodium chloride	5.00
Synthetic detergent No.III	1.50
Bromo cresol purple	0.02
Agar	20.0
Final pH (at 25°C)	7.2±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Deoxycholate Citrate Lactose Sucrose (DCLS) MiVeg Agar is prepared by using vegetable peptones instead of animal based peptones thereby making the media BSE/TSE risks free. This medium is the modification of Deoxycholate Citrate Lactose Sucrose (DCLS) Agar which was originally formulated by Leifson (1) and further modified by Hajna and Damon (2). The medium is moderately selective for the isolation of gram-negative enteric bacilli from faecal specimens. It supports the growth of *Salmonella, Shigella* species and aerobic *Vibrios* like *Vibrio comma* while coliforms and *Proteus* are inhibited. *Salmonella* serotype Pullorum and *Salmonella* serotype Gallinarum grow well on this medium.

It contains MiVeg extract, MiVeg hydrolysate, MiVeg peptone and yeast extract which supplies essential nitrogenous and other essential nutrients for the growth of the organisms. Sucrose and lactose serve as the fermentable carbohydrates and permits the formation of yellow colonies by the organisms that rapidly ferment either sucrose or lactose or both, e.g. *Proteus vulgaris* and typical coliforms. It facilitates better selection of members of the genera *Shigella* and *Salmonella* which form nearly colourless colonies. Sodium citrate and synthetic detergent no. III suppresses the growth of coliforms and gram-positive organisms respectively. Bromo cresol purple act as a pH indicator.

Methodology

Suspend 73.52 grams of powder media in 1000 ml distilled water. Mix thoroughly. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 50°C and pour into sterile petri plates.

Quality Control

Physical Appearance

Tan coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium

Bluish coloured clear gel forms in petri plates. It may have a slight precipitate.

Reaction

Reaction of 7.35 % w/v aqueous solution pH: 7.2 ±0.2 at 25°C

pH range

7.0-7.4

Cultural Response/Characteristics

Cultural characteristics observed after an incubation at 35-37°C for 18-48hours

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli (25922)	10^2-10^3	luxuriant	>50%	yellow
S. serotype Typhimurium (14028)	10^2-10^3	luxuriant	>50%	colourless
Shigella flexneri (12022)	10^2-10^3	luxuriant	>50%	colourless
Proteus mirabilis (25933)	10^2-10^3	good	>30%	colourless
Proteus vulgaris (13315)	10^2-10^3	good	>30%	yellow
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	-

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Leifson, 1935, J. Pathol. Bacteriol., 40:581.
2. Hajna and Damon, 1956, Appl. Microbiol., 4:341.

Disclaimer :

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