Technical Information

D.C.L.S. MiVeg Agar

Product Code : VM1160

Application:- D.C.L.S. MiVeg Agar is a selective medium used for the isolation of *Shigella* and *Salmonella*. Also useful for isolation of *Vibrio cholerae*.

Composition

Ingredients	Gms / Litre
MiVeg peptone No. 3	8.0
MiVeg extract	3.0
Lactose	5.0
Sucrose	5.0
Sodium citrate	10.0
Sodium thiosulphate	5.0
Synthetic detergent No. III	1.5
Neutral red	0.03
Agar	12.0
Final pH (at 25°C)	7.2±0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

D.C.L.S. MiVeg Agar is prepared by using vegetable peptone in place of animal based peptones which makes the medium BSE/TSE risks free. This medium is a modification of Deoxycholate Citrate Agar of Leifson (1). The addition of sucrose to this medium increases its usefulness because non-pathogenic sucrose fermenting organisms like *Proteus, Enterobacter, Klebsiella* form red colonies. This medium is a moderately selective culture medium which also supports the growth of *Vibrio* species. It contains MiVeg peptone No. 3, MiVeg extract, which supplies essential growth nutrients. Sodium citrate and synthetic detergent No.III inhibit coliforms and gram-positive bacteria respectively. Sucrose and lactose serve as the fermentable sugars. The nonfermenters show colourless or nearly colourless colonies. *Shigella sonnei* may form a translucent, pink colony.

Inoculation can be done directly from the specimen or inoculated after enrichment in Selenite MiVeg Broth (VM1025A) or Tetrahionate MiVeg Broth (VM1032). The suspected *Salmonellae, Shigellae* colonies are further subcultured on Triple Sugar Iron MiVeg Agar (VM1021) for identification.

Methodology

Suspend 49.5 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 about 20 ml of medium into standard petri plates and allow to dry for about two hours with covers partially removed.

Quality Control

Physical Appearance

Light pink coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Reddish orange coloured, clear to very slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.95 % 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
Enterococcus faecalis (29212)	$10^2\text{-}10^3$	inhibited	0%	
Escherichia coli (25922)	$10^2\text{-}10^3$	none-poor	<10%	red
Proteus vulgaris (13315)	$10^2\text{-}10^3$	luxuriant	>50%	red
Salmonella serotype Typhimurium (14028)	$10^2\text{-}10^3$	luxuriant	>50%	colourless- slightly pink
Shigella flexneri (12022)	$10^2\text{-}10^3$	poor-good	<30%	slightly pink

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: $2\text{-}8^0$ in sealable plastic bags for 2-5 days.
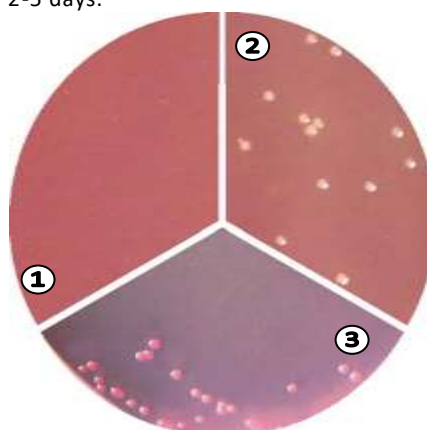
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1. Control
2. *Salmonella* serotype Typhimurium
3. *Escherichia coli*

Further Reading

1. Leifson E., 1935, J. Pathol. Bacteriol., 40:581

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
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