Technical Information

Leifson MiVeg Agar

Product Code : VM2380

Application:- Leifson MiVeg Agar is recommended for isolation of *Salmonella* and *Shigella* species.

Composition

Ingredients	Gms / Litre
MiVeg extract No. 1	6.50
MiVeg peptone No. 1	5.00
Lactose	10.00
Sodium thiosulphate	5.40
Ferric ammonium citrate	1.00
Synthetic detergent No. III	1.50
Neutral red	0.02
Sodium citrate	6.00
Agar	12.00
Final pH (at 25°C)	7.5 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Leifson MiVeg Agar is prepared by using vegetable peptones in place of animal based peptones thereby making the medium BSE/TSE risks free. This media is the modification of Leifson Agar which is recommended for the isolation of *Salmonella* and *Shigella* species (1).

MiVeg extract No.1 and MiVeg peptone No.1 supplies essential growth nutrients. Synthetic detergent No. III inhibits all gram positive bacteria. Lactose is added to the medium to allow differentiation of lactose fermenters bacteria such as *Escherichia coli* from non-lactose-fermenters such as *Salmonella* and *Shigella* species. Lactose fermenting strains grow as red to pink colonies because of absorption of neutral red indicator whereas non fermenters grow as colourless colonies with black centers due to production of hydrogen sulphide (H_2S) against *Shigella* which does not produce hydrogen sulphide (H_2S) (2).

Methodology

Suspend 47.42 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE OR OVERHEAT. Excessive heating is detrimental.

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 4.74% w/v aqueous solution is pH 7.5 ± 0.2 at 25°C.

pH Range

7.3 - 7.7

Cultural Response/Characteristics

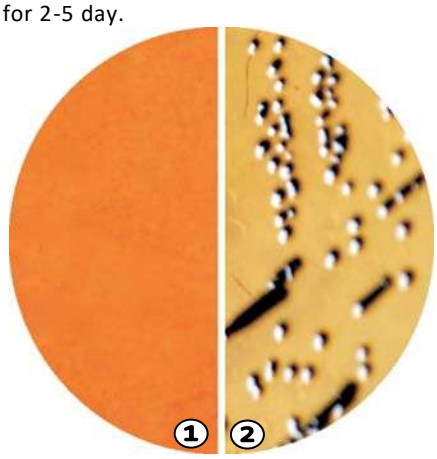
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour Of Colony	H_2S
Enterococcus faecalis (29212)	10^2-10^3	inhibited	>0%	-	-
Escherichia coli (25922)	10^2-10^3	poor	<10%	pink	-
Klebsiella pneumoniae (13883)	10^2-10^3	good	>30%	pink mucoid	-
Salmonella serotype Enteritidis (13076)	10^2-10^3	luxuriant	>50%	colourless	+
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	>50%	colourless	+
Shigella flexneri (12022)	10^2-10^3	good	>30%	colourless	-
Staphylococcus aureus (25923)	10^2-10^3	inhibited	0%	-	-

Key : + = positive, black centered colony

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 day.



VM2380 Leifson MiVeg Agar

1. Control
2. *Salmonella* serotype Typhimurium

Further Reading

1. Leifson, E., 1935. J. Pathol. Bacteriol., 40-581.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Mainte-nance of Medical Bacteria, 3rd edition, Williams and Wilkins, Baltimore.

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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