Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Salmonella Differential MiVeg Agar, Modified (Twin Pack)

Product Code : VM2082

Application:- Salmonella Differential MiVeg Agar, Modified is recommended for the identification and differentiation of the *Salmonella* species from members of *Enterobacteriaceae*, especially *Proteus* species

Composition

Ingredients	Gms / Litre
Part A	
MiVeg special peptone	8.0
Yeast extract	3.0
Synthetic detergent	1.0
B.C. indicator	2.0
Sodium chloride	5.0
Agar	12.0
Part B	
Propylene glycol	10.0
Final pH (at 25°C)	7.3 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Salmonella Differential MiVeg Agar, Modified is prepared by using MiVeg peptones in place of animal based peptones thus making it free from BSE/TSE risk. This medium is the modification of Salmonella Differential Agar, which in turn itself is a slight modification of original formulation of Rambach (1) used for differentiation of *Salmonella* species from *Proteus* species and other enteric bacteria. Acid production from propylene glycol is a novel characteristic of *Salmonella* species which is utilized in this medium. Many of the media such as SS Agar, XLD Agar recommended for the identification and differentiation of *Salmonella* species (2) are based on lactose fermentation and hydrogen sulphide production.

MiVeg special peptone and yeast extract provides necessary nutrients for the growth of organisms while Synthetic detergent inhibits gram-positive organisms rendering the medium selective for enteric microorganisms. The BC indicator turns pink in presence of acid produced from propylene glycol. Lactose fermenters (ß-galactosidase producing) give rise to blue violet coloured colony (3). Salmonellae produce acid from propylene glycol and on combining with the pH indicator gives typical pink red colonies whereas other enteric gram-negative bacteria form colourless colonies. *Salmonella* Typhimurium and *Salmonella* Enteritidis produce pink to red colonies. Specimen should be enriched in an appropriate selective enrichment broth. This enriched culture is then inoculated on Salmonella Differential Agar, Modified and incubated at 35-37°C for 24-48 hours.

Methodology

Suspend 10 grams of fluid Part B in 1000 ml distilled water. Add 31 grams of Part A. Mix well and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C. Mix well before pouring into sterile Petri plates.

Quality Control

Physical Appearance

Part A: Light yellow to light pink coloured free flowing powder .

Part B: Colourless clear liquid.

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Light orange coloured clear to slightly opalescent gel forms in petri plates

Reaction

Reaction of 3.1% w/v aqueous solution of Part A is pH 7.3 ± 0.2 at 25°C.

pH Range

7.1-7.5

Cultural Response/Characteristics

VM2082: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of colony
Escherichia coli (25922)	50-100	luxuriant	>=50%	blue-green
Klebsiella pneumonia (ATCC 13883)	50-100	luxuriant	>=50%	blue-violet
Proteus mirabilis (ATCC25933)	50-100	luxuriant	>=50%	colourless
Salmonella serotype Typhimurium (14028)	50-100	luxuriant	>=50%	pink-red
Salmonella serotype Enteritidis (13076)	50-100	luxuriant	>=50%	pink-red
Salmonella Typhi (ATCC6539)	50-100	luxuriant	>=50%	colourless
Shigella flexneri (ATCC12022)	50-100	luxuriant	>=50%	colourless
Staphylococcus aureus (*ATCC 25923)*	>=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 day.

Further Reading

1.Rambach A., 1990, Appl Environ. Microbiol., 56:301.
2.Eaton A.D., Clesceri L.S., Rice E. W. and Greenberg A W., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st Ed., APHA, Washington, D.C
3.Greenwald R., Henderson R W. and Yappaw S., 1991, J. Clin. Microbiol. 29:2354.

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