Technical Information

Salmonella MiVeg Agar, ONOZ

Product Code : VM1573

Application:- Salmonella MiVeg Agar, ONOZ is used for the cultivation of *Salmonella* species.

Composition

Ingredients	Gms / Litre
MiVeg peptone	8.625
Yeast extract	3.0
MiVeg extract No. 1	6.0
Lactose	11.5
Sucrose	13.0
Synthetic detergent No. I	2.0
Trisodium citrate,5H_2O	9.3
Sodium thiosulphate,5H_2O	4.25
L-Phenylalanine	5.0
Ferric citrate	0.5
Magnesium sulphate	0.4
Brilliant green	0.00166
Neutral red	0.022
Aniline blue	0.25
Metachrome yellow	0.47
Disodium phosphate.2H_2O	1.0
Agar	15.0
Final pH (at 25°C)	7.1 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Salmonella MiVeg Agar, ONOZ is prepared by adding MiVeg peptone, MiVeg extract No.1 in place of Peptic digest of animal tissue and Meat extract thus making the medium free from BSE/TSE risks. Salmonella MiVeg Agar, ONOZ is the modification of Salmonella Agar ONOZ which was developed by ONOZ (1) for rapid detection of *Salmonella* and *Shigella* species from clinical specimens.

MiVeg peptone, yeast extract and Miveg extract No.1 provide nitrogenous compounds, vitamin B complex and also supplies certain other essential growth nutrients. Lactose and sucrose are the fermentable carbohydrates. Synthetic detergent No. I, brilliant green and sodium citrate inhibit gram-positive organisms. Sodium thiosulphate and ferric citrate allows the detection of hydrogen sulphide (H_2S) production indicated by black centered colonies. Lactose and sucrose fermenting members of *Enterobacteriaceae* are partially inhibited, and their colonies can be differentiated by means of the colour produced in the presence of the indicators - neutral red and aniline blue. *Proteus* species deaminate phenylalanine to give phenyl pyruvate which forms a dark brown complex with iron ions. Phenylalanine also neutralizes Chloramphenicol, so the detection of *Salmonellae* from patients under treatment is possible.

Methodology

Suspend 80.3 grams of powder media in 1000 ml distilled water. Mix throughly and heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Mix well before pouring into sterile petri plates.

Quality Control

Physical Appearance

Brown coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

Greenish brown coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 8.03% w/v aqueous solution is pH 7.1 ± 0.2 at 25°C.

pH Range

6.9-7.3

Cultural Response/Characteristics

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

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour#	Colour$
Enterobacter aerogenes (13048)	10^2-10^3	luxuriant	>50%	bluish or yellowish blue	yellow
Escherichia coli (25922)	10^2-10^3	good	>30%	blue	blue
Klebsiella pneumoniae (13883)	10^2-10^3	good	>30%	*bluish-purple	bluish green
Proteus mirabilis (25933)	10^2-10^3	luxuriant	>50%	dark brown to black	dark yellow
Pseudomonas aeruginosa (27853)	10^2-10^3	luxuriant	>50%	yellow to brown	yellow
Salmonella serotype Typhi (6539)	10^2-10^3	luxuriant	>50%	yellow**	yellow
Salmonella serotype Typhimurium (14028)	10^2-10^3	luxuriant	>50%	yellow@	yellow
Shigella flexneri (12022)	10^2-10^3	luxuriant	>50%	yellow to brown	dark brown
Staphylococcus aureus (25923)	10^2-10^3	inhibited	>0%	-	-

Key : * = may have slight precipitation ring around colony
** = with or without black centres
# = colour of colony
$ = colour change of medium
@ = with black centre

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. ONOZ E., Hoffmann K., 1978, Zbl. Bakt. Hyg., I. Abt. Orig., A240:1

Disclaimer :

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