

Salmonella HiVeg™ Agar, ONOZ**MV573**

Salmonella HiVeg Agar, ONOZ is used for the cultivation of *Salmonella* species.

Composition ** :

Ingredients	Grams/Litre
HiVeg peptone	8.625
Yeast extract	3.0
HiVeg extract No. 1	6.0
Lactose	11.5
Sucrose	13.0
Synthetic detergent No. 1	2.0
Trisodium citrate,5H ₂ O	9.3
Sodium thiosulphate,5H ₂ O	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 ₂ O	1.0
Agar	15.0

Final pH (at 25°C) 7.1 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 80.31 grams of dehydrated medium in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Mix well before pouring into sterile petri plates.

Principle and Interpretation :

This medium is prepared by using HiVeg peptone, HiVeg extract No.1 which are of vegetable origin and the medium is therefore BSE/TSE risks free. Salmonella HiVeg 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. HiVeg peptone, yeast extract and HiVeg extract No.1 provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Lactose and sucrose are the fermentable carbohydrates. Synthetic detergent No. 1, brilliant green and sodium citrate inhibit gram-positive organisms. Sodium thiosulphate and ferric citrate enable the detection of hydrogen sulphide 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 phenylpyruvate which forms a dark brown complex with iron ions. Phenylalanine also neutralizes Chloramphenicol, so the detection of *Salmonellae* from patients under treatment is possible.

Quality Control :**Appearance of powder**

Brown coloured, homogeneous, free flowing powder.

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV573 HiVeg peptone HiVeg extract No. 1 Synthetic detergent No. 1	M573 Peptic digest of animal tissue Meat extract Bile salts mixture

Recommended for : Cultivation of *Salmonella* species.

Reconstitution : 80.31 g/l

Quantity on preparation (500g): 6.22 L

pH (25°C) : 7.1 ± 0.2

Supplement : None

Sterilization : Boiling (DO NOT AUTOCLAVE)

Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity

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.

Cultural Response

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

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

References :

1. ONOZ E., Hoffmann K., 1978, Zbl. Bakt. Hyg., I. Abt. Orig., A240:16.