

Tryptone Yeast Extract HiVeg™ Agar / Broth

MV1272/MV356

Tryptone Yeast Extract HiVeg Agar is recommended for estimation of microbial counts in water. The broth medium is used as a general purpose enrichment medium for cultivation of not particularly fastidious microorganisms.

Composition ** :

Ingredients	MV1272	MV356
	Grams/Litre	Grams/Litre
HiVeg hydrolysate	6.0	5.0
Yeast extract powder	3.0	3.0
Agar	12.0	-
Final pH (at 25°C)	7.2 ± 0.2	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 21 grams of MV1272 and 8 grams of MV356 in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Dispense as desired.

Principle and interpretation:

These media are prepared by using HiVeg hydrolysate which is free of BSE/TSE risks associated with animal based peptones. Tryptone Yeast Extract HiVeg Agar is the modification of Tryptone Yeast Extract HiVeg Agar which is formulated for the enumeration of viable microorganisms in water. Tryptone Yeast Extract HiVeg Broth is the modification of Tryptone Yeast Extract Broth formulated as per International Streptomyces Project (1).

HiVeg hydrolysate and yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients.

For colony count, water sample to be tested is either streak inoculated on agar or is added in sterile petri plates and sterile molten agar is added to it and mixed with rotation and allowed to set. Tryptone Yeast Extract HiVeg Broth with added carbohydrate and a pH indicator, can be used for fermentation studies.

Quality control :**Appearance**

Light yellow to yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.2% Agar gel, of MV1272.

Colour and clarity

Light amber coloured, clear to slightly opalescent gel forms in petri plates, clear solution in tubes.

Product Profile :

Vegetable based (Code MV)☉		Animal based (Code M)	
MV1272/MV356 HiVeg hydrolysate		M1272/M356 Casein enzymic hydrolysate	
Recommended for	:	Estimation of microbial counts in water and as a general purpose enrichment medium for cultivation of not particularly fastidious microorganisms.	
Reconstitution	:	(MV1272) : 21.0 g/l (MV356) : 8.0 g/l	
Quantity on preparation (500g)	:	(MV1272) : 23.80 L (MV356) : 62.50 L	
	:	(100g) : (MV356) : 12.50 L	
pH (25°C)	:	(MV1272) : 7.2 ± 0.2 (MV356) : 7.0 ± 0.2	
Supplement	:	None	
Sterilization	:	121°C / 15 minutes.	
Storage	:	Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.	

Reaction

Reaction of 2.1% w/v aqueous solution of MV1272 is pH 7.2 ± 0.2 at 25°C.

Reaction of 0.8% w/v aqueous solution of MV356 is pH 7.0 ± 0.2 at 25°C.

Cultural response

Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours on MV1272.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
<i>Escherichia coli</i> (25922)	10 ² -10 ³	luxuriant	> 70%
<i>Enterobacter aerogenes</i> (13078)	10 ² -10 ³	luxuriant	> 70%
<i>Salmonella</i> serotype Typhimurium (14028)	10 ² -10 ³	luxuriant	> 70%
<i>Salmonella</i> serotype Enteritidis (13076)	10 ² -10 ³	luxuriant	> 70%

Cultural characteristics observed after an incubation at 35-37°C for 18 - 24 hours in MV356.

Organisms (ATCC)	Growth
<i>Escherichia coli</i> (25922)	luxuriant
<i>Staphylococcus aureus</i> (25923)	luxuriant
<i>Streptomyces albus</i> (3004)	luxuriant
<i>Streptomyces lavendulae</i> (8664)	luxuriant

References :

- Shirling E.B. and Gotlieb D., 1966, International J. Systemic Bact, 16 : 3.