Tryptone Glucose Extract HiVeg™ Agar / Broth MV014/MV952

(Tryptone Glucose Yeast Extract HiVeg™ Agar / Broth)

Tryptone Glucose Yeast Extract HiVeg Agar / Broth is recommended for enumeration of bacteria in water, air, milk and dairy products.

Composition ** :

Ingredients	MV014 Grams/Litre	MV952 Grams/Litre
HiVeg hydrolysate	5.00	10.00
Yeast extract	3.00	1.00
Glucose	1.00	5.00
Dipotassium phosphate	—	1.25
Agar	15.00	—
Final pH (at 25°C)	7.0 ± 0.2	6.8 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 24 grams of MV014 or 17.25 grams of MV952 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.

Principle and Interpretation :

These media are prepared by using HiVeg hydrolysate which is free from BSE/TSE risks associated with animal based peptones. These media are the modification of Tryptone Glucose Yeast Extract Agar/Broth which was originally developed by Bowers and Hucker (1). These media serves the same purpose as the conventional media which are recommended for the cultivation and enumeration of bacteria in air, water (2), milk and dairy products (3). Also these media can be used for various studies of thermophilic bacteria in milk (4), influence of incubation temperature (5) etc. Tryptone Glucose Extract HiVeg Agar/Broth like the conventional medium are used for the bacteriological plate count of milk and dairy products (6) and for the enumeration of microorganisms during microbiological examination of food materials by MPN technique (7).

HiVeg hydrolysate, yeast extract provide nitrogenous compounds, vitamin B complex and other essential growth nutrients. Glucose is the energy source.

This medium can be used for pour plate technique. Usually 1 ml of appropriate dilution of the test sample are pipetted in to sterile pertiplates and molten, Tryptone Glucose Yeast Extract HiVeg Agar is added followed by gentle mixing to mix the sample well and incubate the plates for 48 –72 hours at 32 – 35°C.

Quality Control :

Appearance of powder

Light yellow coloured, homogeneous, free flowing powder.

Gelling

Firm, comparable with 1.5% Agar gel of MV014.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV014/MV952 HiVeg hydrolysate	**M014/M952** Casein enzymic hydrolydsate

Recommended for	:	Enumeration of bacteria in water, air, milk and dairy products.
Reconstitution	:	(MV014) : 24.0 g/l
	:	(MV952) : 17.25 g/l
Quantity on preparation (500g)	:	(MV014) : 20.83
	:	(MV952) : 28.98 L
(100g)	:	(MV014) : 4.16 L
pH (25°C)	:	(MV014) : 7.0 ± 0.2
	:	(MV952) : 6.8 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes

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

Colour and Clarity

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

Reaction

Reaction of 2.4% w/v aqueous solution of MV014 is pH 7.0 ± 0.2 at 25°C. Reaction of 1.725% w/v aqueous solution of MV952 is pH 6.8 ± 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
Bacillus subtilis (6633)	30-300	luxuriant
Enterobacter aerogenes (13048)	30-300	luxuriant
Escherichia coli (25922)	30-300	luxuriant
Lactobacillus casei (9595)	30-300	luxuriant
Pseudomonas aeruginosa (27853)	30-300	luxuriant
Staphylococcus aureus (25923)	30-300	luxuriant
Enterococcus faecalis (29212)	30-300	luxuriant

References :

1. Bowers and Hucker, 1935, Tech. Bull., 228, N.Y.State Agr. Expt. Station.
2. Eaton A.D., Clesceri L.S. and Greenberg A.E., (Eds.), 2005, Standard Methods for the Examination of Water and Wastewater, 21st ed, APHA, Washington D.C.
3. Standard Methods for the Examination of Dairy Products. 17th Edition, 2004 Edited by H. Michael Wehr and Joseph H.Frank.
4. Pickett, 1928, Tech. Bull. 147, N.Y. State Agr. Expt. Station.
5. Dennis and Weiser, 1937, J.Dairy Science, 20 : 445.
6. Am. J. Pub. Health, 1939, 29 : 821.
7. Downes FP and Ito K (Eds.), 2001, Compendium of Methods For The Microbiological Examination of Foods, 4th ed., APHA, Washington, D.C.

◉ Prepared from GMO free Vegetable proteins replacing Animal based peptones. Freedom from BSE/TSE worries.