Fluid Thioglycollate HiVeg™ Medium/with HiVeg Extract MV009/MV380

Fluid Thioglycollate HiVeg Media are used for sterility testing of biologicals and for cultivation of aerobic and anaerobic organisms.

Composition** :

Ingredients	MV009 Grams/Litre	MV380 Grams/Litre
HiVeg hydrolysate	15.00	15.00
Yeast extract	5.00	5.00
HiVeg extract	-	5.00
Dextrose	5.50	5.50
Sodium chloride	2.50	2.50
L-Cystine	0.50	0.50
Sodium thioglycollate	0.50	0.50
Resazurin sodium	0.001	0.001
Agar	0.75	0.75
Final pH (at 25°C)	7.1 ± 0.2	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 29.75 grams of MV009 or 34.75 grams of MV380 in 1000 ml distilled water. Heat to boiling the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 25°C and store in a cool dark place preferably below 25°C.

Note: If more than the upper one-third of the medium has acquired a pink colour, the medium may be restored once by heating in a water bath or in free flowing steam until the pink colour disappears.

Principle and Interpretation :

Fluid Thioglycollate HiVeg Media are specially developed from HiVeg hydrolysate and HiVeg extract to avoid BSE/TSE risks associated with animal origin peptone. These media are the modifications of medium formulated by Brewer (by adding a reducing agent and small amount of agar) (1) for rapid cultivation of aerobes as well as anaerobes and recommended by AOAC (2) for sterility testing of antibiotics, biologicals and foods and for determining the phenol coefficient and sporicidal effect of disinfectants. However, it is intended for the examination of clear liquid or water-soluble materials. This medium (MV380) is also used in the detection of viable bacteria in vaccines.

Dextrose, HiVeg hydrolysate, HiVeg extract, yeast extract, L-Cystine provide the growth factors necessary for bacterial multiplication. Sodium thioglycollate act as a reducing agent and neutralizes the antibacterial effect of mercurial preservatives and other heavy metal compounds which exert a bacteriostatic effect on the materials under examination. L-Cystine is a reducing agent, since it contain sulfhydryl group, which inactivate heavy metal compounds and maintain low redox potential, thereby supporting anarobics. By creating an environment with a low Eh, the reducing agents prevent the accumulation of peroxides which can be toxic to some organisms. Any increase in the oxygen content is indicated by a colour change of redox indicator, resazurin to red (3,4,5). The small amount of agar helps in maintaining low redox potential for stabilizing the medium (6).

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV009/MV380 HiVeg hydrolysate HiVeg extract	**M009/M380** Casein enzymic hydrolysate Beef extract

Recommended for	:	Sterility testing of biologicals and for cultivation of aerobic and anaerobic organisms.
Reconstitution	:	(MV009) : 29.75 g/l
	:	(MV380) : 34.75 g/l
Quantity on preparation (500g)	:	(MV009) : 16.80 L
	:	(MV380) : 14.38 L
(100g)	:	(MV009) : 3.36 L
pH (25°C)	:	(MV009) : 7.1 ± 0.2
	:	(MV380) : 7.2 ± 0.2
Supplement	:	None
Sterilization	:	121°C / 15 minutes.

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

Quality Control:

Appearance of Powder

Yellow coloured, may have slightly greenish tinge, homogeneous, free flowing powder.

Colour and Clarity

Light straw coloured, clear to very slightly opalescent solution with upper 10% or less medium pink on standing.

Reaction

Reaction of 2.97% w/v aqueous solution of MV009 is pH 7.1 ± 0.2 at 25°C.

Reaction of 3.47% w/v aqueous solution of MV380 is pH 7.2 ± 0.2 at 25°C.

Continued ...

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

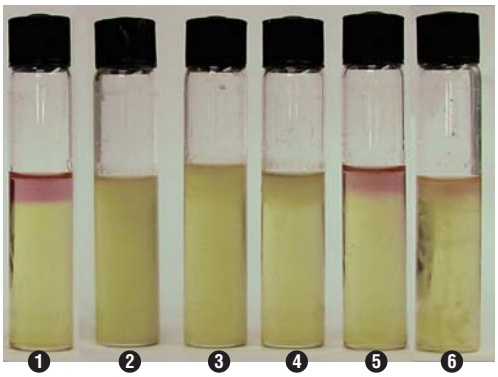
Fluid Thioglycollate HiVeg™ Medium/with HiVeg Extract MV009/MV380

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 48-72 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
**Bacillus subtilis* (6633)	10-100	luxuriant	>70%
**Candida albicans* (10231)	10-100	luxuriant	>70%
**Clostridium sporogenes* (11437)	10-100	luxuriant	>70%
**Micrococcus luteus* (9341)	10-100	luxuriant	>70%
Neisseria meningitidis (13090)	10-100	luxuriant	>70%
Streptococcus pyogenes (19615)	10-100	luxuriant	>70%
**Bacteroides vulgatus* (8482)	10-100	fair-good	>50%

Key : * = These cultures may be incubated at 25-30°C for 2-7 days.



MV009 Fluid Thioglycollate HiVeg Medium

1. Control
2. *Clostridium sporogenes*
3. *Neisseria meningitidis*
4. *Streptococcus pyogenes*
5. *Micrococcus luteus*
6. *Candida albicans*

References :

1. Brewer, 1940, J. Am. Med. Assoc., 115:598.
2. Williams (Ed.), 2005, Official methods of Analysis of AOAC, 18th ed. AOAC, Washington D.C.
3. Marshall, Gunnison and Luxen, 1940, Proc. Soc. Exp. Biol. Med., 43:672.
4. Nungester, Hood and Warren, 1943, Proc. Soc. Exp. Biol. Med., 52:287.
5. Portwood, 1944, J. Bact., 48:255.
6. MacFaddin J.F., 1985 (ed), Media for Isolation-Cultivation-Identification of Medical Bacteria. Vol 1. Williams and Wilkins, Baltimore