

**Brewer Thioglycollate HiVeg™ Medium / Modified****MV019 / MV195**

Brewer Thioglycollate HiVeg Medium / Modified is used for testing the sterility of biological products and for cultivation of enteric, anaerobic and microaerophilic organisms.

**Composition\*\* :**

Ingredients	MV019	MV195
	Grams/Litre	Grams/Litre
HiVeg peptone No.3	10.00	—
HiVeg infusion	17.50	—
HiVeg hydrolysate	—	17.50
Papaic digest of soyabean meal	—	2.50
Dextrose	5.00	10.00
Sodium chloride	5.00	5.00
Dipotassium phosphate	2.00	2.00
Sodium thioglycollate	0.50	1.00
Methylene blue	0.002	0.002
Agar	0.50	0.50

Final pH (at 25°C) 7.2 ± 0.2

\*\* Formula adjusted, standardized to suit performance parameters

**Directions :**

Suspend 40.5 grams of MV019 or 38.5 grams of MV195 in 1000 ml distilled water. Boil to dissolve the medium completely. Dispense in tubes or in suitable containers as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

**Principle and Interpretation :**

These media are prepared by completely replacing animal based peptones with vegetable peptones. Brewer Thioglycollate HiVeg medium is the modification of Brewer Thioglycollate Medium prepared as per the original formula of Brewer (1, 2). Brewer Thioglycollate HiVeg Medium Modified is a modification of Linden Thioglycollate Medium (3).

It contains highly nutritious HiVeg peptone No.3, HiVeg infusion and HiVeg hydrolysate which support luxuriant growth of even fastidious bacteria. Sodium thioglycollate helps to create anaerobic condition as well as neutralizes toxicity of mercurial compounds if present in the inoculum of the test material. Very small amount of agar present maintains anaerobic conditions at the bottom of the broth. Methylene blue is a oxidation-reduction indicator, indicating oxygen content of the medium by exhibiting bluish-green colour to the medium in presence of oxygen. The uninoculated medium shows bluish green colour at the top indicating presence of oxygen in that part. Modified medium contains more thioglycollate and was recommended for sterility testing procedures. Organisms which ferment dextrose and lower the pH to critical levels may not survive in this medium after growth has taken place.

**Note :** If more than the upper one third layer acquires bluish-green colour (absorbs oxygen), the dissolved oxygen can be removed by heating the medium in free flowing steam for 5-10 minutes or in a water bath until the green colour disappears, and the prepared medium should be stored in the dark till use.

**Product Profile :**

Vegetable based (Code MV)©	Animal based (Code M)
<b>MV019/MV195</b> HiVeg hydrolysate HiVeg infusion HiVeg peptone No. 3	<b>M019/M195</b> Casein enzymic hydrolysate Heart infusion Proteose peptone

**Recommended for** : Sterility testing of biological products and cultivation of various organisms.

**Reconstitution** : (MV019) : 40.5 g/l  
: (MV195) : 38.5 g/l

**Quantity on preparation (500g):** (MV019) : 12.34 L  
**(100g):** (MV019) : 2.46 L  
**(500g):** (MV195) : 12.98 L  
**(100g):** (MV195) : 2.59 L

**pH (25°C)** : 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**

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

**Colour and Clarity**

Yellow coloured, clear to very slightly opalescent fluid with upper 10% or less medium bluish green on standing.

**Reaction**

Reaction of 4.05% w/v of MV019 or 3.85% w/v of MV195 aqueous solution is pH 7.2 ± 0.2 at 25°C.

**Cultural Response**

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery
* <i>Bacteroides melaninogenicus</i> (25848)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	> 70%
* <i>Clostridium sporogenes</i> (11437)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	> 70%
<i>Streptococcus mitis</i> (9895)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	> 70%
<i>Streptococcus pyogenes</i> (19615)	10 <sup>2</sup> -10 <sup>3</sup>	luxuriant	> 70%

Key : \* = when incubated anaerobically

**References :**

1. Brewer, 1940, J. Bact., 39:10
2. Brewer, 1940, J.A.M.A., 115:598.
3. Bulletin, National Institute of Health, 1941.