

A-1 HiVeg™ Broth**MV874**

A-1 HiVeg Broth is used for detecting faecal coliforms in water samples, wastewater, seawater and foods by a MPN Method.

Composition ** :

Ingredients	Grams/Litre
HiVeg hydrolysate	20.0
Lactose	5.0
Sodium chloride	5.0
Salicin	0.5
Polyethylene glycol p-isooctylphenyl ether (Triton X-100)	1.0

Final pH (at 25°C) 6.9 ± 0.1

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 31.5 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Distribute 10 ml amounts into tubes containing inverted Durham's tubes. Sterilize by autoclaving at 15 lbs pressure (121°C) for 10 minutes.

Principle and Interpretation :

A-1 HiVeg Broth is prepared by using HiVeg hydrolysate in place of Casein enzymic hydrolysate, which is free of BSE/TSE risks. A-1 HiVeg Broth is the modification of A-1 Broth devised by Andrews and Presnell (1) for the recovery of *Escherichia coli* from estuarine water. A-1 HiVeg Broth like the conventional medium facilitates easy recovery of *Escherichia coli* within 24 hours instead of 72 hours which includes additional pre-enrichment step. This medium provides possible accurate results with a substantial reduction in false positive results. Gas formation in the Durham's tube indicates the presence of faecal coliforms. The number of faecal coliforms is determined using the MPN table.

HiVeg hydrolysate provides carbonaceous and nitrogenous substances required for bacterial metabolism. Lactose and salicin act as energy sources and sodium chloride maintains osmotic equilibrium. Polyethylene glycol p-isooctylphenyl ether acts as a surfactant.

Quality Control :**Appearance of powder**

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

Colour and Clarity

Light amber coloured clear solution after cooling to room temperature.

Reaction

Reaction of 3.15% w/v aqueous solution is pH 6.9 ± 0.1 at 25°C.

Product Profile :

Vegetable based (Code MV)©		Animal based (Code M)
MV874	HiVeg hydrolysate	M874 Casein enzymic hydrolysate
Recommended for	:	Detection of faecal coliforms in water samples, wastewater, seawater and foods.
Reconstitution	:	31.5 g/l
Quantity on preparation (500g)	:	15.87 L
pH (25°C)	:	6.9 ± 0.1
Supplement	:	None
Sterilization	:	121°C / 10 minutes
Storage : Dry Medium - Below 30°C, Prepared Medium 2 - 8°C.		

Cultural Response

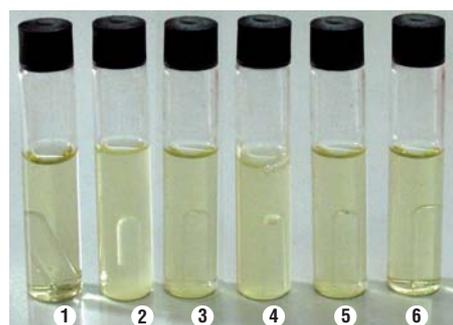
Cultural characteristics observed after an incubation for 18-24 hours at...

Organisms (ATCC)	Inoculum (CFU)	Recovery at 35-37°C	Recovery at 44-45°C
<i>Bacillus subtilis</i> (6633)	10 ² -10 ³	none	none
<i>Enterobacter aerogenes</i> (13048)	10 ² -10 ³	luxuriant*	poor-good
<i>Escherichia coli</i> (25922)	10 ² -10 ³	luxuriant w/gas	luxuriant w/gas
<i>Salmonella</i> serotype Typhimurium (14028)	10 ² -10 ³	luxuriant	good
<i>Enterococcus faecalis</i> (19433)	10 ² -10 ³	without gas	without gas
		poor	none - poor

Key : * = may or may not produce gas.

References :

- Andrews and Presnell, 1972, Appl. Microbiol., 23:521.

**MV874 A-1 HiVeg Broth (Incubated at 37°C)**

- Control
- Escherichia coli*
- Salmonella* serotype Typhimurium
- Enterobacter aerogenes*
- Enterococcus faecalis*
- Bacillus subtilis*