

Schaedler HiVeg™ Agar / Broth**MV291/MV292**

Schaedler HiVeg Agar / Broth is used for the cultivation of various aerobic and anaerobic bacterial species present in the gastrointestinal tract.

Composition ** :

Ingredients	MV291	MV292
	Grams/Litre	Grams/Litre
HiVeg hydrolysate	5.67	5.67
HiVeg peptone No. 3	5.00	5.00
Papaic digest of soyabean meal	1.00	1.00
Yeast extract	5.00	5.00
Dextrose	5.83	5.83
Sodium chloride	1.67	1.67
Dipotassium hydrogen phosphate	0.83	0.83
Tris hydroxymethyl aminomethane	3.00	3.00
L-Cysteine	0.40	0.40
Ferric pyrophosphate	0.01	0.01
Agar	15.00	--

Final pH (at 25°C) 7.6 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 43.41 grams of MV291 or 28.41 grams of MV292 in 1000 ml distilled water. Boil with frequent agitation to dissolve the medium completely. Add 0.02 - 0.2% agar in broth if desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and add 5% sterile defibrinated blood if desired. Mix well before dispensing. Avoid overheating and photo-oxidation of the medium, as it will retard the growth of bacteria.

Principle and Interpretation :

This medium is prepared by using HiVeg hydrolysate and HiVeg peptone No.3 which is free from BSE/TSE risks.

Schaedler HiVeg Agar / Broth is the modification of Schaedler Agar / Broth which was originally formulated by Schaedler et al (1) and further modified by Mata et al (2) with formulation changes (3) for cultivation and enumeration of aerobic and anaerobic microorganisms.

Schaedler HiVeg Agar supplemented with Vitamin K1 and 5% sheep blood is used for the recovery of fastidious anaerobic bacteria such as *Bacteroides*. Inclusion of Colistin and Nalidixic acid in the formulation (Schaedler CNA HiVeg Agar) along with 5% sheep blood is used for the selective isolation of anaerobic gram-positive cocci (4), *Peptococcus* and *Peptostreptococcus* species. Inclusion of Kanamycin and Vancomycin in the formulation (Schaedler KV HiVeg Agar) along with 5% sheep blood is used for selective isolation of gram-negative anaerobes.

Schaedler HiVeg Agar / Broth serve as an excellent basal media to which blood or other enrichments can be added to enhance the recovery of fastidious anaerobic organisms. Stalons et al found the broth medium to be most effective for the growth of obligatory anaerobic bacteria in an atmosphere of 5% carbon dioxide, 10% hydrogen and 85% nitrogen.

It can also be used to determine the MIC levels of antibiotics for anaerobic organisms. Fass et al used tube method for antibiotic MIC determination.

The combination of HiVeg hydrolysate, HiVeg peptone No.3 and Papaic digest of soyabean meal, yeast extract and L-Cysteine provide nitrogenous growth factors, vitamins and other essential growth nutrients. Dextrose serves as energy source. Ferric pyrophosphate and sheep blood stimulates the growth of fastidious microorganisms. Vitamin K1 enables the cultivation of *Bacteroides*

Product Profile :

Vegetable based (Code MV)©	Animal based (Code M)
MV291/MV292	M291/M292
HiVeg hydrolysate	Casein enzymic hydrolysate
HiVeg peptone No. 3	Proteose peptone
Ferric pyrophosphate	Hemin

Recommended for : Enumeration of various aerobic and anaerobic bacterial species present in the gastrointestinal tract.

Reconstitution : (MV291) : 43.41 g/l
: (MV292) : 28.41 g/l

Quantity on preparation (500g) : (MV291) : 11.51 L
: (MV292) : 17.59 L

pH (25°C) : 7.6 ± 0.2

Supplement : Sterile defibrinated Blood, if desired

Sterilization : 121°C / 15 minutes

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

melaninogenicus (5) and stimulates growth of other *Bacteroides* species and gram-positive spore formers (6). Addition of Sodium Polyanethol Sulphonate (SPS) is recommended when using this medium for blood culture (7). It inhibits phagocytosis and neutralizes the antibacterial activity of fresh blood components (8).

Quality Control :**Appearance of powder**

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

Gelling

Firm, comparable with 1.5% Agar gel of MV291.

Colour and Clarity

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

Reaction

Reaction of 4.34% w/v of M291 or 2.84% w/v of M292 aqueous solution is pH 7.6 ± 0.2 at 25°C.

Cultural Response

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

Organisms (ATCC)	Growth
<i>Bacteroides fragilis</i> (25285)	luxuriant
<i>Clostridium butyricum</i> (9690)	luxuriant
<i>Clostridium perfringens</i> (12924)	luxuriant
<i>Clostridium sporogenes</i> (11437)	luxuriant
<i>Streptococcus pyogenes</i> (19615)	luxuriant

References :

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