Blood Agar Base No. 2, HiVeg™ / with 1.2% Agar, HiVeg™ MV834 / MV834A

Blood Agar Base No. 2, HiVeg / with 1.2% Agar, HiVeg is specially devised to permit the maximum recovery of fastidious pathogenic microorganisms without interfering with their haemolytic reactions.

Composition** :

Ingredients	MV834 Grams/Litre	MV834A Grams/Litre
HiVeg peptone No.3	15.00	15.00
HiVeg extract No.2	2.50	2.50
Yeast extract	5.00	5.00
Sodium chloride	5.00	5.00
Agar	15.00	12.00

Final pH (at 25°C) 7.4± 0.2
** Formula adjusted, standardized to suit performance parameters

Directions :

Suspend 21.25 grams of MV834 or 19.75 grams of MV834A in 500 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 40 - 50°C and aseptically add 7% v/v sterile defibrinated blood.

For *Brucella* species: Add rehydrated contents of 1 vial of Brucella Selective Supplement (FD005) to 500 ml sterile molten base.

For *Campylobacter* species : Add rehydrated contents of 1 vial of Campylobacter Supplement - I (FD006) or Campylobacter Supplement - II (FD007) or Campylobacter Supplement - III (FD008) or Campylobacter Growth Supplement (FD009) to 500 ml sterile molten base.

For *Streptococci* species : Add rehydrated contents of 1 vial of Strepto Supplement (FD031) to 500 ml sterile molten base. Mix well and pour into sterile petri plates.

Principle and Interpretation :

These medias are prepared by using vegetable peptones in place of animal peptones, which make the medium free of BSE/TSE risks. These media can be used to prepare a selective medium for *Brucella* species or *Campylobacter* species by adding antibiotic supplement selective for respective bacteria (1, 2) like conventional Blood Agar Base. In comparison to other Blood Agar Base, Blood Agar Base No. 2, HiVeg offers enhanced growth especially for fastidious organisms. *Brucella* cultures are highly infective and must be handled with care. Incubate preferably in 5-10% carbon dioxide atmosphere. Comparative studies of horse, rabbit and sheep blood were performed by Snavely and Brahier and it was found that sheep blood gave the clearest and most reliable colony and haemolysis characteristics at both 24 and 48 hours (3). These medium can also be used for primary isolation of *Haemophilus* species, where horse blood is used to enrich the medium. Better results are obtained by spreading half of the horse blood agar plate with 2 drops of 10% saponin (4). Supplementation with blood (5-10%) provides additional growth factors for fastidious microorganisms and is the basis for determining haemolytic reactions. With added HiVeg extract No.2 and yeast extract the medium shows enhanced growth and haemolytic reactions of fastidious organisms like *Streptococci* and *Pneumococci*. HiVeg peptone No. 3 is the nitrogen source and sodium chloride maintains osmotic equilibrium.

Product Profile :

Vegetable based (Code MV)◉	Animal based (Code M)
MV834/MV834A HiVeg peptone No. 3 HiVeg extract No. 2	**M834/M834A** Proteose peptone Liver extract

Recommended for	:	Maximum recovery of fastidious pathogenic microorganisms without interfering with their haemolytic reactions.
Reconstitution	:	(MV834) : 42.5 g/l
	:	(MV834A) : 39.5 g/l
Quantity on preparation (500g)	:	(MV834) : 11.76 L
(100g)	:	(MV834) : 2.35 L
(500g)	:	(MV834A) : 12.65 L
pH (25°C)	:	7.4 ± 0.2
Supplement	:	Defibrinated blood and FD's as desired.
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.

Gelling

Firm, comparable with 1.5% Agar gel of MV834 or 1.2% Agar gel of MV834A.

Colour and Clarity

Basal medium yields yellow coloured clear to slightly opalescent gel, with addition of 7% v/v sterile defibrinated blood, cherry red coloured, opaque gel forms in petri plates.

Reaction

Reaction of 4.25% w/v of MV834 or 3.95% w/v of MV834A aqueous solution is pH 7.4 ± 0.2 at 25°C.

Cultural Response

Cultural characteristics observed after an incubation at 35 - 37°C for 48 hours for MV834 and for 18-48 hours for MV834A.

Organisms(ATCC)	Inoculum (CFU)	Growth w/blood	Recovery	Haemolysis
Neisseria meningitidis (13090)	10^2-10^3	good to luxuriant	>70%	none
Streptococcus pneumoniae (6303)	10^2-10^3	good to luxuriant	>70%	alpha
Streptococcus pyogenes (19615)	10^2-10^3	good to luxuriant	>70%	beta
Staphylococcus aureus (25923)	10^2-10^3	good to luxuriant	>70%	beta

References :

1. Hunter D. and Kearns M., 1977 Brit. Vet. J., 133:486.
2. Skirrow M.B., 1977, B.M.J., ii:9.
3. Snavely and Brahier1960, Am. J. Clin. Pathol. 33:511.
4. Waterworth and Pamela M.,1955, Brit. J. Exp. Pathol. 36:186.

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