

Edward's Medium HiVeg™ Base, Modified

MV748

Edwards Medium HiVeg Base, Modified is used for selective and rapid isolation of *Streptococcus agalactiae* and other *streptococci* associated with bovine mastitis.

Composition ** :

Ingredients	Grams/Litre
HiVeg peptone	10.0
HiVeg extract	10.0
Esculin	1.0
Sodium chloride	5.0
Crystal violet	0.0013
Thalious sulphate	0.33
Agar	15.0

Final pH (at 25°C) 7.4 ± 0.2

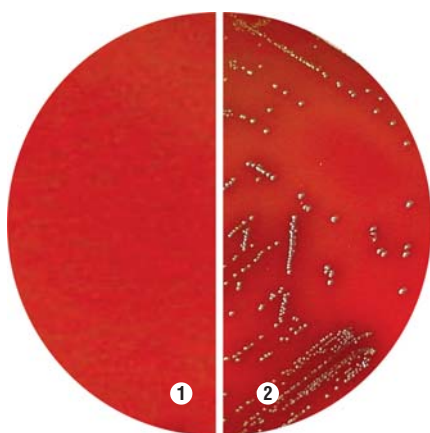
** Formula adjusted, standardized to suit performance parameters.

Directions :

Suspend 41.33 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 10 lbs pressure (115°C) for 20 minutes. Cool to 50°C and aseptically add 5 to 7% v/v sterile bovine or sheep blood, mix well and pour into sterile petri plates.

Principle and Interpretation :

This medium is prepared by using HiVeg peptone and HiVeg extract in place of Peptic digest of animal tissue and Beef extract, that makes the medium free of BSE/TSE risks. Edwards (1) employed a crystal violet esculin blood agar for the cultural diagnosis of bovine mastitis, while McKenzie (2) used a medium containing thallium acetate for the same purpose. Hauge et al (3) further modified Edwards medium. Edwards HiVeg medium is the modification of this medium by replacing animal based peptones by vegetable peptones. This is a selective medium for the rapid isolation of *Streptococcus agalactiae* and other *Streptococcus* involved in bovine mastitis. This medium is selective due to the presence of crystal violet and thalious sulphate. Mastitis *Streptococci* show alpha, beta or gamma type haemolysis. Esculin differentiates esculin positive group *D Streptococci* from esculine negative *Streptococcus agalactiae*.



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- 1. Control
- 2. *Enterococcus faecalis*

Product Profile :

Vegetable based (Code MV)Ⓞ	Animal based (Code M)
MV748 HiVeg peptone HiVeg extract	M748 Peptic digest of animal tissue Beef extract

Recommended for : Selective and rapid isolation of *Streptococci* associated with bovine mastitis

Reconstitution : 41.33 g/l

Quantity on preparation(100g) : 2.41 L

pH (25°C) : 7.4 ± 0.2

Supplement : Bovine or Sheep blood

Sterilization : 115°C / 20 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.

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity

Basal medium forms amber coloured, clear to slightly opalescent gel forms in petri plates. Addition of 5-7% v/v sterile defibrinated bovine or sheep blood yields a cherry red opaque gel in petri plates.

Reaction

Reaction of 4.13% w/v aqueous solution is pH 7.4 ± 0.2 at 25°C

Cultural Response

Cultural characteristics observed after an incubation of 24-48 hours at 35 - 37°C.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Colour of Colony
<i>Enterococcus faecalis</i> (29212)	10 ² -10 ³	luxuriant	>50%	black
<i>Escherichia coli</i> (25922)	10 ² -10 ³	inhibited	0%	-
<i>Staphylococcus aureus</i> (25923)	10 ² -10 ³	inhibited	0%	-
<i>Streptococcus agalactiae</i> (13813)	10 ² -10 ³	luxuriant	>70%	colourless,w/ haemolysis

References :

- 1. Edwards S.J., 1933, J. Comp. Path. Therap., 46:211.
- 2. McKenzie D.A., 1941, Vet. Rec., 53:473.
- 3. Hauge S.T. and Kohler - Ellingsen J., 1953, Nord. Vet. Med., 5:539.