Technical Information

Edward's Medium MiVeg Base, Modified

Product Code : VM1748

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

Composition

Ingredients	Gms / Litre
MiVeg peptone	10.00
MiVeg extract	10.00
Esculin	1.0
Sodium chloride	5.0
Crystal violet	0.0013
Thallous sulphate	0.33
Agar	15.0
Final pH (at 25°C)	7.4 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

This medium is prepared by adding MiVeg peptone and MiVeg extract in place of Peptic digest of animal tissue and Beef extract, that makes the medium free from 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 MiVeg medium is the modification of this medium by replacing animal based peptones with 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 thallous sulphate. Mastitis *Streptococci* show alpha, beta or gamma type haemolysis. Esculin differentiates esculin positive group *D Streptococci* from esculin negative *Streptococcus agalactiae*.

Methodology

Suspend 41.33 grams of powder media in 1000 ml distilled water. Mix thoroughly. 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.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.5% Agar gel.

Colour and Clarity of prepared medium

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 7.1 ± 0.2 at 25°C

pH Range

7.2-7.6

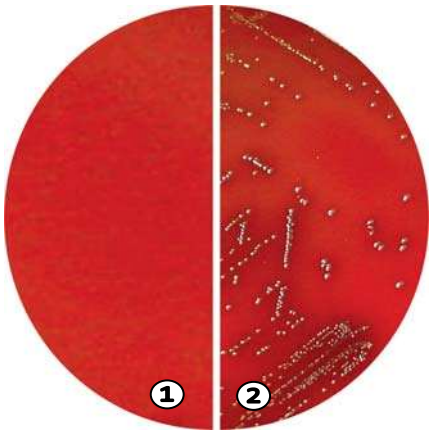
Cultural Response/Characteristics

Cultural characteristics observed after an incubation at for 24-48 hours.

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

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.



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1. Control
2. *Enterococcus faecalis*

Further Reading

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.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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