Technical Information

Kanamycin Esculin Azide MiVeg Agar

Product Code : VM1510

Application:- Kanamycin Esculin Azide MiVeg Agar is used for isolation of *Enterococci* in foodstuffs.

Composition

Ingredients	Gms / Litre
MiVeg hydrolysate	20.00
Yeast extract	5.00
Sodium chloride	5.00
Sodium citrate	1.00
Esculin	1.00
Ferric ammonium citrate	0.50
Sodium azide	0.15
Kanamycin sulphate	0.02
Agar	12.00
Final pH (at 25°C)	7.0 ± 0.2

** Formula adjusted, standardized to suit performance parameters.

Principle & Interpretation

Kanamycin Esculin Azide MiVeg Agar is prepared by using MiVeg hydrolysate in place of Casein enzymic hydrolysate thus making the medium free from BSE/TSE risks. This medium is the modifications of the medium which was formulated by Mossel et al (1,2) for *Enterococci* detection in food stuffs. It can be used for bacteriological monitoring of food stuff using dip slide method (3).

MiVeg hydrolysate and yeast extract supplies necessary nutrients for the growth of *Enterococci.* Kanamycin sulphate and sodium azide are the selective inhibitory components. Esculin and ferric ammonium citrate together form the indicator system to detect esculin-hydrolysing *Enterococci* forming black zones around the colonies.

Mossel et al (4) described the following procedure as - 1gm/1ml food sample is added to prechilled diluent (Tryptone water, MiVeg VM1463) and decimal dilutions are prepared, which are then inoculated onto Kanamycin Esculin Azide MiVeg Broth Base (VM1776) and incubated at 35°C for up to 24 hours. If there is blackening in the medium observed after incubation, streak it onto Kanamycin Esculin Azide MiVeg Agar (VM1510). After incubation confirmatory tests must be carried out.

Methodology

Suspend 44.67 grams of powder media in 1000 ml distilled water. Mix thoroughly and heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials thus it is advisable to use enough water to flush off the disposables.

Quality Control

Physical Appearance

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

Gelling

Firm, comparable with 1.2% Agar gel.

Colour and Clarity of prepared medium

Medium amber coloured, clear to slightly opalescent gel forms in petri plates.

Reaction

Reaction of 4.47% w/v aqueous solution is pH 7.0 ± 0.2 at 25°C.

pH Range

6.8-7.2

Cultural Response/Characteristics

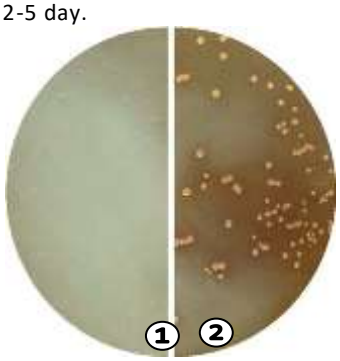
Cultural characteristics observed after an incubation at 35°C or 42°C for 18-24 hours.

Organisms (ATCC)	Inoculum (CFU)	Growth	Recovery	Esculin hydrolysis
Enterococcus faecium (19434)	10^3-10^5	luxuriant	>70%	+
Enterococcus bovis (27960)	10^3-10^5	luxuriant	>70%	+
Escherichia coli (25922)	10^3-10^5	inhibited	>0%	–
Staphylococcus aureus (25923)	10^3-10^5	inhibited	>0%	–
Enterococcus faecalis (29212)	10^3-10^5	luxuriant	>70%	+

Key : + = blackening of medium / black zone around the colony.

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 day.



VM1510 Kanamycin Esculin Azide MiVeg Agar
1. Control
2. *Enterococcus faecium*

Further Reading

1. Mossel D.A.A., Bijker P.G.H. and Eelderink I., 1978, Arch. Lebensmittel - hyg., 29:121.
2. Mossel D.A.A., el al, 1978, In : 'Streptococci.', Skinner F.A. and Quesnel L. B. (Eds.), SAB Symposium, series No.7, Academic Press, London.
3. Mossel D.A.A., et al, 1976, Lab. Practice, 25:393.
4. Mossel D.A.A., Harrenwijn G.A. and Elzebroek B.J.M., 1973, UNICEF, Geneva.

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