

Bases / Media Supplements

Technical Information

Kanamycin Esculin Azide Agar Base

Product Code: DM 1510A

Application: - Kanamycin Esculin Azide Agar Base is recommended for isolation of Group D Streptococci in foodstuffs.

Composition**				
Ingredients	Gms / Litre			
Casein enzymic hydrolysate	20.000			
Yeast extract	5.000			
Sodium chloride	5.000			
Sodium citrate	1.000			
Esculin	1.000			
Ferric ammonium citrate	0.500			
Sodium azide	0.150			
Agar	10.000			
Final pH (at 25°C)	7.0±0.2			
**Formula adjusted, standardized to suit perform	nance parameters			

Principle & Interpretation

Kanamycin Esculin Azide media are formulated as per Mossel et al (1, 2) to detect Enterococci in food stuffs. Mossel et al (3) recommended it for the dip slide technique for bacteriological monitoring of foods.

Casein enzyme hydrolysate, yeast extract provides nitrogeneous and carbonaceous compounds, long chain amino acids, vitamins and other supplies essential nutrients for Enterococci. Kanamycin sulphate and Sodium azide are the selective inhibitory components. Esculin and Ferric ammonium citrate together form indicator system to detect esculin - hydrolysing Streptococci forming black zones around the colonies.

Mossel et at (4) adopted the following procedure as - 1gm or 1ml mixed food is added to prechilled diluent (Tryptone water DM1463) and decimal dilutions are prepared. The decimal dilution are inoculated in Kanamycin Esculin Azide Broth (DM1776) and incubated at 35° for 16-24 hours.

Methodology

Suspend 21.32 grams of dehydrated powder media in 500ml distilled water. Mix thoroughly & heat to boil to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45 50°C and aseptically add rehydrated contents of one vial of Kanamycin Sulphate Selective Supplement (MS 1146). Shake well before pouring into sterile petri plates.

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

Quality Control

Appearance

Light yellow to light brown coloured homogeneous free flowing powder

Gelling

Firm, comparable with 1.0% Agar gel.





Dehydrated Culture Media Bases / Media Supplements

Colour and Clarity

Medium amber coloured clear to slightly opalescent gel with purplish tinge forms in petri plates.

Reaction

Reaction of 4.26% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH Range

. 6.80-7.20

Cultural Response

DM 1510A: Cultural characteristics observed after an incubation at 35-37°C or 42°C for 18-24 hours.

Organism	lnoculum (CFU)	Growth	Recovery	Esculin Hydrolysis
Enterococcus bovis ATCC 27960	50-100	luxuriant	>=50%	Positive reaction, blackening of medium around the colony
Enterococcus faecium ATCC 19434	50-100	luxuriant	>=50%	Positive reaction, blackening of medium around the colony
Escherichia coli ATCC 25922	>=104	inhibited	0%	-

Storage and Shelf Life

Dried Media: Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use. Product performance is best if used within stated expiry period.

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., et al., 1978, In : Streptococci., Skinner F.A. and Quesnel L. B. (ed.), 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.
- 5. Reuter E., 1985, Inter. J. Food Microbiol., 2:103.

Disclaimer:

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at CDH is true and accurate
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