Kanamycin Esculin Azide Broth Base

M776A

Intended Use:

Recommended for selective isolation and identification of group D Streptococci in foodstuffs.

Composition**

Ingredients	Gms / Litre
Tryptone	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
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 16.32 grams in 500 ml purified / distilled water. Heat if necessary 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 (FD146). Mix well and dispense into sterile tubes or flasks or as desired.

Principle And Interpretation

Kanamycin Esculin Azide Broth Base is recommended for isolation and identification of group D Streptococci in food stuffs (3). Tryptone and yeast extract provide essential growth nutrients for enterococci. Sodium azide inhibits gram negative organisms. Kanamycin has inhibitory effect on other gram-positive bacteria. Streptococci hydrolyse esculin to esculetin and dextrose. Esculetin and ferric ammonium citrate forms dark brown to black complex importing black colour to the broth.

Type of specimen

Food samples

Specimen Collection and Handling

For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (4). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Further biochemical and serological tests must be carried out for complete identification.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Light yellow coloured homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured clear solution without any precipitate.

Reaction

Reaction of 3.26% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH
6.80-7.20

Cultural Response
Cultural characteristics observed after an incubation at 35-38°C for 18-24 hours.

Organism	Growth	Esculin hydrolysis
Enterococcus bovis (27960)	luxuriant	+
Enterococcus faecium ATCC 19434 (00010*)	luxuriant	+
Escherichia coli ATCC 25922 (00013*)	inhibited	-

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

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.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
3. Mossel, D.A.A., Harrewijin, G.A and Elzebroek, Berdien, J.M (1973) UNICEF, Geneva.
4. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

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