Mineral Salts Agar (ATCC Medium 329)

M2106

Intended Use:

Recommended for the isolation of *Stemphylium* species as recommended by ATCC.

Composition**

Ingredients	Gms / Litre
Yeast extract	0.020
Sodium nitrate	2.000
Potassium dihydrogen phosphate	0.140
Dipotassium hydrogen phosphate	1.200
Magnesium sulphate	0.500
Potassium chloride	0.500
Ferric sulphate, monohydrate	0.010
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 19.37 grams (the equivalent weight of dehydrated media in 1000 ml) purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

This is a carbon-free mineral salts medium for enrichment / isolation / growth of specific nutritional types of microbes. A carbon source (e.g. glucose) must be added to MSM before use. Usually best to add carbon sources from filter-sterile stock solutions after autoclaving to avoid possible problems. The ratio of phosphate salts has been chosen so that the medium should be already close to pH 7 without need to adjust. This medium is recommended by ATCC for the isolation of *Stemphylium*. It is a minimal medium and does not support growth of all organisms. MSM recipe is from Coleman (1), originally adapted from Hartmans et al (2). Many bacteria will grow fine in plain MSM, but some may also require the vitamin solution.

Type of specimen

Pure ATCC Culture or soil samples

Specimen Collection and Handling:

For soil samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (3,4). 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.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
2.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

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

Off white to cream homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow coloured opalescent to hazy gel forms in Petri plates

Reaction

Reaction of 1.94% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH

7.00-7.40

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°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 (3,4).

Reference

1.Coleman et al 2002 (AEM, JS666)

2.Hartmans et al (Appl.Micr.Biotech.1992).

3.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.

4.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.

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