AATCC Mineral Salts Agar

M232

Intended Use:

Recommended for evaluation of fungicides for use on textiles and the resistance of textiles to mildew and rot.

Composition**

Ingredients	Gms / Litre
Ammonium nitrate	3.000
Potassium dihydrogen phosphate	2.500
Dipotassium hydrogen phosphate	2.000
Magnesium sulphate	0.200
Ferrous sulphate	0.100
Agar	20.000
Final pH (at 25°C)	5.6±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 27.8 grams in 1000 ml purified / distilled water. Add 7.5 grams of dextrose if the medium is to be used for testing with # *Aspergillus brasiliensis*. Heat to boiling to dissolve the medium completely. Dispense in 7 ml amounts in test tubes or 40 ml amounts in bottles or flasks. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C.

Principle And Interpretation

AATCC Mineral Salts Agar is used as per the procedure described by American Association of Textile Chemists and Colourists (4). These procedures are employed for testing a) Initial mildew resistance of textiles, b) Perseverance of mildew resistance, c) Fungicidal potency of textile fungicides testable, Standard Minimum protective concentration, peccnanence indices, including resistance to leaching, volatalization and weathering. Cultures used are Chaetomium globosum ATCC 16790, # *Aspergillus brasiliensis* ATCC 16404 (1).

Ammonium nitrate acts as a nitrogen source. Potassium dihydrogen phosphate and Dipotassium hydrogen phosphate provides buffering to the medium. Magnesium sulphate and ferrous sulphate are sources of ions that simulate metabolism.

Type of specimen

Textile samples - Fabrics

Specimen Collection and Handling:

Follow appropriate techniques for handling specimens as per established guidelines and local standards.
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 testing is required 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
Cream to beige homogeneous free flowing powder

Gelling
Firm, comparable with 2.0% Agar gel.

Colour and Clarity of prepared medium
Light amber coloured clear to slightly opalescent gel.

Reaction
Reaction of 2.78% w/v aqueous solution at 25°C. pH : 5.6±0.2

pH
5.40-5.80

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	**Inoculum (CFU)**
#*Aspergillus brasiliensis ATCC 16404* (00053*)	50-100
Chaetomium globosum ATCC 16790	50-100

Key : (*) - Corresponding WDCM numbers. (#) - Formerly known as *Aspergillus niger*

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 (2,3).

Reference

1. Catalogue of Bacteria and Bacteriophages, 1992, 18th Ed., American Type Culture Collection, Rockville, MD
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. 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.
4. Technical Manual of the American Association of Textile Chemists and Colourists, 1959, Part III, AATCC Test Methods, 82, Lowell, Mass

Revision : 02 / 2020