Emerson YSS Agar

M773

Intended Use:

Recommended for the isolation of *Actinomycetes* and other fungi from clinical and non-clinical samples.

Composition**

Ingredients	g/ L
Starch, soluble	15.000
Yeast extract	4.000
Dipotassium hydrogen phosphate	1.000
Magnesium sulphate	0.500
Agar	20.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 40.5 grams in 1000 ml purified / distilled water. If desired, half strength medium can be prepared using 20.25 grams in 1000 ml 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

Fungi were among the first microorganisms recognized because some of the fruiting structures, such as the mushrooms, are large enough to be seen without a microscope. Fungi are extremely successful organisms, as evidenced by their ubiquity in nature. They are an important component in the energy cycle where they function as decomposers (1). *Actinomycetes* are distributed worldwide, found as part of the indigenous microflora found in soil, mud etc. and also as parasites of humans and other animals (1).

Emerson YSS (Yeast Soluble Starch) Agar recommended for the isolation of *Actinomycetes* and other fungi was formulated by Emerson (2). This medium was used in half strength by Emerson and Wilson (3) to obtain single germlings from zygotes or zoospores.

Yeast extract serves as a source of B-complex vitamins, amino acids and essential nutrients. Soluble starch serves as a source of energy and carbon. It also neutralizes the toxic metabolites formed. Phosphates buffer the medium whereas magnesium sulphate acts as a source of ions and sulphates. Standard reference for the isolation, cultivation and colony characteristics of various fungi should be followed.

Type of specimen

Clinical samples- oral swab, intestinal swab, etc. Soil samples

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (4,5).
After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

In Vitro diagnostic Use only. For professional use only. 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 clinical 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
Cream to pink homogeneous free flowing powder
Gelling
Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Light to medium amber coloured, opalescent gel with a slight flocculant precipitate forms in Petri plates

Reaction

Reaction of 4.05% 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 30°C for 40-72 hours.

Organism	Growth
# *Aspergillus brasiliensis* ATCC 16404 (00053*)	luxuriant
Saccharomyces cerevisiae ATCC 9763 (00058*)	luxuriant
Saccharomyces uvarum ATCC 28098	luxuriant

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 clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (4,5).

Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.
2. Emerson, 1941, Lloydia, 4:77.
3. Emerson and Wilson, 1954, Mycologia, 46:393.
4. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
5. 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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IVD *In vitro* diagnostic medical device

30°C / 10°C Storage temperature

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