



## Emerson YSS Agar

M773

Emerson YSS Agar is recommended for the isolation of *Actinomycetes* and other fungi.

### Composition\*\*

Ingredients	Gms / Litre
Soluble starch	15.000
Yeast extract	4.000
Dipotassium 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 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. Mix well and pour into 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.

### 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

M773: Cultural characteristics observed after an incubation at 30°C for 40-72 hours.

#### Organism

*Aspergillus brasiliensis*  
ATCC 16404

#### Growth

luxuriant

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*Saccharomyces cerevisiae* luxuriant  
ATCC 9763  
*Saccharomyces uvarum* luxuriant  
ATCC 28098

## Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

## Reference

1. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Tenover F. C., (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.

Revision : 1 / 2011



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