

# TM 1176 – EMERSON YSS AGAR

### **INTENDED USE**

For isolation of Actinomycetes and other fungi.

### PRODUCT SUMMARY AND EXPLANATION

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. 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.

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

### **COMPOSITION**

Ingredients	Gms / Ltr	
Soluble starch	15.000	
Yeast extract	4.000	
Dipotassium hydrogen phosphate	1.000	
Magnesium sulphate	0.500	
Agar	20.000	

### **PRINCIPLE**

The medium consists of Yeast extract which 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.

### **INSTRUCTION FOR USE**

- Dissolve 40.50 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 psi pressure (121°C) for 15 minutes. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates.

## **QUALITY CONTROL SPECIFICATIONS**

**Appearance of Powder** : Cream to pink homogeneous free flowing powder.

Appearance of prepared medium : Light to medium amber coloured, opalescent gel with a slight flocculant

precipitate forms in Petri plates.

pH (at 25°C) : 7.0 ± 0.2

# INTERPRETATION

Cultural characteristics observed after incubation.













Microorganism	АТСС	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Aspergillus brasiliensis	16404	10-100	Luxuriant	>=70%	30°C	40-72 Hours
Saccharomyces cerevisiae	9763	10-100	Luxuriant	>=70%	30°C	40-72 Hours
Saccharomyces uvarum	28098	10-100	Luxuriant	>=70%	30°C	40-72 Hours

### **PACKAGING:**

In pack size of 500 gm bottles.

### **STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

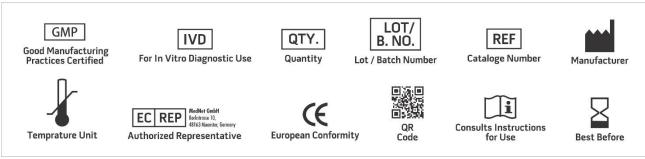
**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

### **DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

## **REFERENCES**

- 1. Emerson, 1941, Lloydia, 4:77.
- 2. Emerson and Wilson, 1954, Mycologia, 46:393.
- 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.
- 5. 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.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

\*For Lab Use Only













# **PRODUCT DATA SHEET**

Revision: 08 Nov., 2019

