

m-GREEN YEAST and FUNGI BROTH (7190)

Intended Use

m-Green Yeast and Fungi Broth is used for the detection of fungi in beverages.

Product Summary and Explanation

m-Green Yeast and Fungi Broth is a relatively more complex formula compared to other media used for isolation of fungi and yeast. This formulation is rich in nutrients which allows for excellent fungal growth. Bacterial growth is inhibited by an acid pH.

Fungi have been found in potable water and on the inner surface of distribution system pipes.¹ They can survive water treatment or they enter the system after treatment and remain viable.¹

Principles of the Procedure

Enzymatic Digest of Casein and Enzymatic Digest of Animal Tissue provide nitrogen, carbon, and amino acids in m-Green Yeast and Fungi Broth. Yeast Extract is the vitamin source. Dextrose is an energy source for metabolism of fungi. Potassium Phosphate is a buffering agent. Magnesium Sulfate, Thiamine, and Diastase (a mixture containing amylolytic (starch) enzymes) provide essential ions, minerals, and nutrients. Bromcresol Green is the pH indicator, facilitating visualization and counting of fungal colonies. The colonies are green due to diffusion of Bromcresol Green into the colonies. Acidic end products from colonies diffuse into the medium, further reducing the pH and causing the indicator to turn yellow (acid reaction) around the colonies.

Formula / Liter

Enzymatic Digest of Casein	5 g
Enzymatic Digest of Animal Tissue.....	5 g
Yeast Extract.....	9 g
Dextrose.....	50 g
Magnesium Sulfate	2.1 g
Potassium Phosphate	2 g
Diastase	0.05 g
Thiamine	0.05 g
Bromcresol Green.....	0.026 g

Final pH: 4.6 ± 0.2 at 25°C

Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precautions

1. For Laboratory Use.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Dissolve 73 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 10 minutes.

Quality Control Specifications

Dehydrated Appearance: Powder is homogeneous, free flowing, and light green-beige.

Prepared Appearance: Prepared medium is clear, dark green, with none to moderate precipitate.

Expected Cultural Response: Cultural response in m-Green Yeast and Fungi Broth incubated aerobically at 25 - 30°C and examined for growth after 2 - 7 days.

Microorganism	Approx. Inoculum (CFU)	Expected Results
<i>Aspergillus niger</i> ATCC® 16404	Point Inoculation	Growth
<i>Candida albicans</i> ATCC® 10231	10 - 300	Growth
<i>Penicillium roquefortii</i> ATCC® 10110	Point Inoculation	Growth
<i>Saccharomyces cerevisiae</i> ATCC® 9763	Point Inoculation	Growth
<i>Trichophyton mentagrophytes</i> ATCC® 9533	Point Inoculation	Growth

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

1. Saturate a sterile membrane filter pad in a sterile petri dish with 2.0 to 2.5 mL of m-Green Yeast and Fungi Broth.
2. Roll the membrane filter from the test sample onto the surface of the moistened pad. Avoid trapping air bubbles between the filter and the pad.
3. Incubate plates for up to 7 days at 25 - 30°C in an aerobic atmosphere.

Results

Count colonies appearing on the filter surface after incubation. Mold colonies generally appear green and filamentous, yeast colonies are green and opaque. Refer to appropriate references for complete information on isolation and identification of yeasts and molds.⁴

Storage

Store sealed bottle containing the dehydrated medium at 2 - 8°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light by keeping container tightly closed.

Expiration

Refer to expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitation of the Procedure

Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.

Packaging

m-Green Yeast and Fungi Broth	Code No.	7190A	500 g
		7190B	2 kg
		7190C	10 kg

References

1. **Eaton, A. D., L. S. Clesceri, and A. E. Greenberg (eds.).** 1998. Standard methods for the examination of water and wastewater, 20th ed. American Public Health Association, Washington, D.C.

Technical Information

Contact Acumedia Manufacturers, Inc. for Technical Service or questions involving dehydrated culture media preparation or performance at (517)372-9200 or fax us at (517)372-2006.