

YM BROTH (7363)

Intended Use

YM Broth is used for the cultivation of fungi.

Product Summary and Explanation

YM Broth is prepared according to the formulation published by Wickerham.¹⁻³ Wickerham suggested that YM Broth, acidified to pH 3.0 – 4.0, be used as an enrichment medium for yeasts from populations also containing bacteria and molds. To favor isolation of fermentative species, add a layer of sterile paraffin oil 1 cm deep on the surface of the inoculated broth. Cultures should be incubated until growth appears, and then streaked onto YM Agar to obtain isolated yeast colonies. To isolate fermentative and oxidative strains, place acidified inoculated YM Broth on a rotary shaker for 1 to 2 days. This favors yeast recovery while preventing sporulation of molds.

Media selectivity may be enhanced through acidification or addition of selective agents. YM Broth may be acidified prior to sterilization.

Principles of the Procedure

Enzymatic Digest of Gelatin is a nitrogen and amino acid source in YM Broth. Yeast Extract provides trace elements and vitamins. Malt Extract is a source of carbon, protein, and nutrients. Dextrose is an energy source.

Formula / Liter

Enzymatic Digest of Gelatin.....	5 g
Malt Extract.....	3 g
Dextrose.....	10 g
Yeast Extract.....	3 g

Final pH: 6.2 ± 0.2 at 25°C

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

Precaution

1. For Laboratory Use.

Directions

1. Dissolve 21 g of the medium in one liter of purified water.
2. Mix thoroughly.
3. Autoclave at 121°C for 15 minutes.

Optional

If desired, acidify YM Broth to pH 3.0 - 4.0 by adding sterile 10% HCl, Tartaric Acid, or 10% Citric Acid. Selective agents, e.g., penicillin (20 units per mL final concentration) or streptomycin (40 micrograms per mL- final concentration) may be added to the medium after sterilization using aseptic technique.

Quality Control Specifications

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

Prepared Appearance: Prepared medium is brilliant to clear and yellow to gold.

Expected Cultural Response: Cultural response, after inoculation in YM Broth incubated aerobically at 25 - 30°C and examined for growth after 2 - 7 days.

Microorganism	Approx. Inoculum (CFU)	Response
<i>Aspergillus niger</i> ATCC® 16404	Point Inoculation	growth
<i>Candida albicans</i> ATCC® 10231	10 - 300	growth
<i>Microsporium canis</i> ATCC® 36299	Point Inoculation	growth
<i>Penicillium roquefortii</i> ATCC® 10110	Point Inoculation	growth
<i>Saccharomyces cerevisiae</i> ATCC® 9763	10 - 300	growth
<i>Trichophyton mentagrophtes</i> ATCC® 9533	Point Inoculation	growth

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

Test Procedure

1. Inoculate YM Broth with appropriate samples to evaluate the presence of yeasts, molds, or aciduric microorganisms.
2. Incubate at 30 ± 2°C for 18 - 72 hours.

Results

Examine tubes for growth. Record YM Broth results as growth or no growth.

Storage

Store sealed bottle containing the dehydrated medium at 2 - 30°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 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

YM Broth	Code No.	7363A	500 g
		7363B	2 kg
		7363C	10 kg

References

1. 1951. U. S. Dept. Agricult. Tech. Bull. No. 1029.
2. 1939. J. Tropical Med. Hyg. 42:176.
3. Jong, S. C., and M. J. Edwards. 1991. American Type Culture Collection Catalog of filamentous fungi. 18th ed. American Type Collection, Rockville, MD.

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.