Yeast and Mold Agar (NCM0176)

Revision: 1 Effective Date: 10/27/2022

Intended Use

Yeast and Mold Agar is recommended for the isolation and maintenance of yeasts and molds. This medium can also be used for the detection of wild yeasts in beer. Yeast and Mold Agar is not intended for use in the diagnosis of disease or other conditions in humans.

Description

Yeast and Mold Agar is prepared according to the formulation published by Wickerham and was formulated for the selective isolation of yeasts from mixed cultures containing bacteria and molds. The selectivity of this medium may be enhanced through acidification or through addition of selective agents. Yeast and Mold Agar should be sterilized without pH adjustment and sterile acid added to the medium cooled to 45 - 50°C. Acidified Yeast and Mold Agar should not be heated. Antibiotics may be aseptically added to sterile media. Other fungistatic materials may also be added to Yeast and Mold Agar to eliminate molds and permit enumeration of yeasts to mixed populations.

Typical Formulation

Enzymatic Digest of Gelatin	5.0 g/L
Yeast Extract	3.0 g/L
Malt Extract	3.0 g/L
Dextrose	10.0 g/L
Agar	20.0 g/L

Final pH: 6.2 ± 0.2 at 25°C
Formula may be adjusted and/or supplemented as required to meet performance specifications.

Precaution

Refer to SDS

Preparation

1. Suspend 41 grams of the medium in one liter of purified water.
2. Heat with frequent agitation and boil for one minute to completely dissolve the medium.
3. Autoclave at 121°C for 15 minutes.
4. Cool to 45-50°C.

Quality Control Specifications

Dehydrated Appearance: homogeneous, free-flowing, beige

Prepared Appearance: Clear and yellow

Expected Cultural Response: Cultural response on YM Agar incubated aerobically at 30°C and examined for growth after 2 - 5 days.

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Microorganism	Approx. Inoculum (CFU)	Expected Results	
		Recovery	Response
Aspergillus brasiliensis ATCC® 16404	Point Inoculation	Growth	White mycelium black spores
Candida albicans ATCC® 10231	50-200	>70%	Cream colonies
Escherichia coli ATCC® 25922	4 Quad Streak	Growth	----
Lactobacillus fermentum ATCC® 9338	4 Quad Streak	Growth	----
Penicillium roquefortii ATCC® 10110	Point Inoculation	Growth	Grey - green mycelium
Pichia fermentans ATCC® 10651	4 Quad Streak	Growth	Off-white to beige
Saccharomyces cerevisiae ATCC® 9763	4 Quad Streak	Growth	Off-white to beige
Saccharomyces pastorianus NCYC 185	4 Quad Streak	Growth	Off-white to beige

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

Test Procedure

1. Inoculate YM Agar with the appropriate sample for the presence of yeasts, molds, or aciduric microorganisms.
2. Incubate at 30 ± 2°C for 2 to 7 days.

Results

Examine plates for growth. Record YM Agar results as colony forming units (CFU) per volume of sample.

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.

Limitations of the Procedure

1. Due to nutritional variation, some strains may be encountered that grow poorly or fail to grow on this medium.
2. Acidified YM Agar should not be reheated.

Storage

Store dehydrated culture media at 2-30°C away from direct sunlight. 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.

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.

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