

# Inhibitory Mold Agar

## Inhibitory Mold Agar with Gentamicin

### Intended Use

Inhibitory Mold Agar, which contains chloramphenicol, is a moderately selective medium used for the isolation of pathogenic fungi. BBL™ prepared plates of Inhibitory Mold Agar and Inhibitory Mold Agar with Gentamicin are deep filled to reduce the effects of drying during prolonged incubation.

### Summary and Explanation

Inhibitory Mold Agar was formulated by Ulrich as a general medium for the selective isolation and cultivation of the majority of pathogenic fungi.<sup>1</sup>

### Principles of the Procedure

The nutritive properties of Inhibitory Mold Agar are provided by the two peptones, derived from casein and animal tissue, and yeast extract, which is a rich source of vitamins. Dextrose, starch and dextrin are energy sources for the metabolism of fungi. Sodium chloride and the metallic salts provide essential ions and minerals. Chloramphenicol is a broad-spectrum antibiotic that inhibits a wide range of gram-positive and gram-negative bacteria. Gentamicin, if present, inhibits gram-negative microorganisms.

### Formula

#### BBL™ Inhibitory Mold Agar

Approximate Formula* Per Liter		
Pancreatic Digest of Casein .....	3.0	g
Peptic Digest of Animal Tissue .....	2.0	g
Yeast Extract .....	5.0	g
Dextrose .....	5.0	g
Starch .....	2.0	g
Dextrin .....	1.0	g
Chloramphenicol .....	125.0	mg
Sodium Phosphate .....	2.0	g
Magnesium Sulfate .....	0.8	g
Ferrous Sulfate .....	0.04	g
Sodium Chloride .....	0.04	g
Manganese Sulfate .....	0.16	g
Agar .....	15.0	g

\*Adjusted and/or supplemented as required to meet performance criteria.

### Directions for Preparation from Dehydrated Product

1. Suspend 36 g of the powder in 1 L of purified water. Mix thoroughly.
2. Heat with frequent agitation and boil for 1 minute to completely dissolve the powder.
3. Dispense in screw-capped test tubes or other suitable container. Autoclave at 121°C for 15 minutes.
4. Test samples of the finished product for performance using stable, typical control cultures.

### User Quality Control

*Candida albicans*  
ATCC™ 10231

#### Identity Specifications

##### BBL™ Inhibitory Mold Agar

Dehydrated Appearance:	Fine, homogeneous, free of extraneous material.
Solution:	3.6% solution, soluble in purified water upon boiling. Solution is light to medium, yellow to tan, slightly hazy to hazy.
Prepared Appearance:	Light to medium, yellow to tan, slightly hazy to hazy.
Reaction of 3.6% Solution at 25°C:	pH 6.7 ± 0.2

#### Cultural Response

##### BBL™ Inhibitory Mold Agar

Prepare the medium per label directions. Inoculate with fresh cultures (undiluted or diluted as described below) and incubate at 25 ± 2°C for 7 days under appropriate atmospheric conditions.

ORGANISM	ATCC™	INOCULUM CFU	RECOVERY
<i>Candida albicans</i>	10231	Undiluted	Good
<i>Escherichia coli</i>	25922	10 <sup>4</sup> -10 <sup>5</sup>	Partial to complete inhibition
<i>Trichophyton mentagrophytes</i>	9533	Undiluted	Good



## Procedure

Consult appropriate references for information about the processing and inoculation of specimens.<sup>2</sup>

For isolation of fungi from potentially contaminated specimens, a nonselective medium should be inoculated along with the selective medium. Incubate the plates at 25-30°C in an inverted position (agar side up) with increased humidity. The tubed slants also should be incubated at 25-30°C. For isolation of fungi causing systemic mycoses, two sets of media should be inoculated, with one set incubated at 25-30°C and a duplicate set at 35 ± 2°C.

All cultures should be examined at least weekly for fungal growth and should be held for 4-6 weeks before being reported as negative.

## Expected Results

Examine plates for fungal colonies exhibiting typical color and morphology. Biochemical tests and serological procedures should be performed to confirm findings.

## Limitation of the Procedure

Some fungi may be inhibited by the antibiotics in Inhibitory Mold Agar and Inhibitory Mold Agar with Gentamicin.<sup>3</sup>

## References

- Ulrich. 1956. Abstr. M75, p. 87. Bacteriol. Proc. Soc. Am. Bacteriologists. 1956.
- Miller and Holmes. 1999. In Murray, Baron, Pfaller, Tenover and Tenover (ed.), Manual of clinical microbiology, 7th ed. American Society for Microbiology, Washington, D.C.
- Ajello, Georg, Kaplan and Kaufmann. 1963. CDC laboratory manual for medical mycology. PHS Publication No. 994, U.S. Government Printing Office, Washington, D.C.

## Availability

### BBL™ Inhibitory Mold Agar

BS10 CMPH MCM7

Cat. No.	292846	Dehydrated – 500 g
	212254	Dehydrated – 5 lb (2.3 kg)
	297799	Prepared Plates (Deep Fill) – Pkg. of 10*
	298191	Prepared Plates (Deep Fill) – Ctn. of 100*
	297276	Prepared Slants – Pkg. of 10*
	297826	Transgrow-style Bottle – Pkg. of 10*
	297757	Transgrow-style Bottle – Ctn. of 100*

### BBL™ Inhibitory Mold Agar with Gentamicin

BS10 CMPH MCM7

Cat. No.	297800	Prepared Plates (Deep Fill) – Pkg. of 10*
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\*Store at 2-8°C.

# Inositol Assay Medium

## Intended Use

Inositol Assay Medium is used for determining inositol concentration by the microbiological assay technique.

## Summary and Explanation

Vitamin assay media are prepared for use in the microbiological assay of vitamins. Three types of media are used for this purpose:

1. Maintenance Media: For carrying the stock culture to preserve the viability and sensitivity of the test organism for its intended purpose;
2. Inoculum Media: To condition the test culture for immediate use;
3. Assay Media: To permit quantitation of the vitamin under test. They contain all the factors necessary for optimal growth of the test organism except the single essential vitamin to be determined.

Inositol Assay Medium, a modification of the formula described by Atkin et al.,<sup>1</sup> is used in the microbiological assay of inositol using *Saccharomyces cerevisiae* ATCC™ 9080 (*Saccharomyces uvarum*) as the test organism.

## Principles of the Procedure

Inositol Assay Medium is an inositol-free dehydrated medium containing all other nutrients and vitamins essential for the cultivation of *S. cerevisiae* ATCC 9080. The addition of inositol in specified increasing concentrations gives a growth response that can be measured turbidimetrically.

## User Quality Control

### Identity Specifications

#### Difco™ Inositol Assay Medium

Dehydrated Appearance:	White to off-white, free-flowing, homogeneous.
Solution:	6.1% (single strength) solution, soluble in purified water upon boiling. Solution is light amber, clear, may have a slight precipitate.
Prepared Appearance:	Light amber, clear, may have a slight precipitate.
Reaction of 6.1% Solution at 25°C:	pH 5.2 ± 0.2

### Cultural Response

#### Difco™ Inositol Assay Medium

Prepare the medium per label directions. The medium supports the growth of *Saccharomyces cerevisiae* ATCC™ 9080 when prepared in single strength and supplemented with inositol. The medium should produce a standard curve using an inositol reference standard at 0.0 to 10.0 µg per 10 mL. Incubate tubes with caps loosened at 25-30°C for 20-24 hours. Read the percent transmittance using a spectrophotometer at 660 nm.