QUALITY CONTROL PROCEDURES (Optional)

I INTRODUCTION
These Inhibitory Mold Agars provide enhanced selectivity for the isolation of pathogenic and nonpathogenic fungi from a variety of clinical and nonclinical specimens.

II PERFORMANCE TEST PROCEDURE
1. Inoculate representative samples with the cultures listed below.
   a. Streak the plates for isolation using fresh fungal cultures (up to one month in age) of the fungi and 10⁻¹ dilutions of 5-h BD Trypticase™ Soy Broth cultures of the Escherichia, Pseudomonas and Staphylococcus strains.
   b. Incubate plates at 25 ± 2 °C in an aerobic atmosphere.
   c. Include Sabouraud Dextrose Agar plates as nonselective controls for all strains.
2. Examine plates for up to 7 days for amount of growth, pigmentation and selectivity.
3. Expected Results

<table>
<thead>
<tr>
<th>Organisms</th>
<th>ATCC®</th>
<th>Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Aspergillus niger</td>
<td>16404</td>
<td>Growth</td>
</tr>
<tr>
<td>*Candida albicans</td>
<td>10231</td>
<td>Growth</td>
</tr>
<tr>
<td>*Trichophyton</td>
<td>9533</td>
<td>Growth</td>
</tr>
<tr>
<td>mentagrophytes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Escherichia coli</td>
<td>25922</td>
<td>Inhibition (partial to complete)</td>
</tr>
<tr>
<td>Additional Organisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microsporum audouinii</td>
<td>9079</td>
<td>Fair to heavy growth. Colonies cottony, white to tan surface with white to reddish-brown undersurface.</td>
</tr>
<tr>
<td>Penicillium roquefortii</td>
<td>9295</td>
<td>Fair to heavy growth. Colonies powdery, initially white but become green to blue.</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>27853</td>
<td>Growth inhibited. Trace growth acceptable.</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>25923</td>
<td>Complete inhibition</td>
</tr>
</tbody>
</table>

*Recommended organism strain for User Quality Control.

III ADDITIONAL QUALITY CONTROL
1. Examine plates as described under “Product Deterioration.”
2. Visually examine representative plates to assure that any existing physical defects will not interfere with use.
3. Determine the pH potentiometrically at room temperature for adherence to the specification of 6.7 ± 0.2.
4. Note the firmness of plates during the inoculation procedure.
5. Incubate uninoculated representative plates at 25 ± 2 °C for 72 h and examine for microbial contamination.

IV INTENDED USE
Inhibitory Mold Agar with Gentamicin, which also contains chloramphenicol, is a moderately selective medium used for the isolation of pathogenic fungi. Selectivity is further enhanced by providing the medium, Inhibitory Mold Agar with Chloramphenicol and Gentamicin, with double the concentration of chloramphenicol contained in Inhibitory Mold Agar base. The plates are deep-filled to reduce the effects of drying during prolonged incubation.

V SUMMARY AND EXPLANATION
Inhibitory Mold Agar was formulated by Ulrich as a general medium for the selective isolation of pathogenic fungi.¹ These enhanced selective Inhibitory Mold Agars are recommended for the isolation of pathogenic fungi from materials having an extensive flora of other fungi and bacteria.²

VI 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 electrolytes and minerals. Chloramphenicol is a broad spectrum antibiotic which inhibits a wide range of gram-positive and gram-negative bacteria. Gentamicin is an aminoglycoside antibiotic that inhibits the growth of gram-negative bacteria.
Inhibitory Mold Agar with Gentamicin consists of Inhibitory Mold Agar base with 0.05 g/L of gentamicin.

Inhibitory Mold Agar with Chloramphenicol and Gentamicin consists of Inhibitory Mold Agar base with 0.05 g/L gentamicin and 0.250 g/L chloramphenicol (final concentration).

Warnings and Precautions: For in vitro Diagnostic Use.

If excessive moisture is observed, invert the bottom over an off-set lid and allow to air dry in order to prevent formation of a seal between the top and bottom of the plate during incubation.

Pathogenic microorganisms, including hepatitis viruses and Human Immunodeficiency Virus, may be present in clinical specimens. “Standard Precautions” and institutional guidelines should be followed in handling all items contaminated with blood and other body fluids. After use, prepared plates, specimen containers and other contaminated materials must be sterilized by autoclaving before discarding.

Storage Instructions: On receipt, store plates in the dark at 2–8 °C. Avoid freezing and overheating. Do not open until ready to use.

Minimize exposure to light. Prepared plates stored in their original sleeve wrapping at 2–8 °C until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times including up to 6 weeks for mycology media. Allow the medium to warm to room temperature before incubation.

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

VIII SPECIMEN COLLECTION AND HANDLING

Specimens suitable for culture may be handled using various techniques. For detailed information, consult appropriate texts. Specimens should be obtained before antimicrobial therapy has been administered. Provision must be made for prompt delivery to the laboratory.

IX PROCEDURE

Material Provided: Inhibitory Mold Agar with Gentamicin (Deep Fill) or Inhibitory Mold Agar with Chloramphenicol and Gentamicin (Deep Fill)

Materials Required But Not Provided: Ancillary culture media, reagents, quality control organisms and laboratory equipment as required.

Test Procedure: Observe aseptic techniques.

The agar surface should be smooth and moist, but without excessive moisture.

Streak the specimen as soon as possible after it is received in the laboratory using a sterile inoculating loop to obtain isolated colonies. Consult appropriate references for information about the processing and inoculation of specimens.

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. For isolation of fungi causing systemic mycoses, two sets of media should be inoculated, with one set incubated at 25–30 °C until just prior to use may be inoculated up to the expiration date and incubated for recommended incubation times including up to 6 weeks for mycology media. Allow the medium to warm to room temperature before incubation.

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

User Quality Control: See “Quality Control Procedures.”

Each lot of media has been tested using appropriate quality control organisms and this testing meets product specifications and CLSI standards, where relevant. As always, QC testing should be performed in accordance with applicable local, state, federal or country regulations, accreditation requirements, and/or your laboratory's standard quality control procedures.

X RESULTS

After sufficient incubation, the plates should show isolated colonies in streaked areas and confluent growth in areas of heavy inoculation. Examine plates for fungal colonies exhibiting typical color and morphology. Biochemical tests and serological procedures should be performed to confirm findings.

XI LIMITATIONS OF THE PROCEDURE

Some fungi may be inhibited by the antibiotics in these media.

For identification, organisms must be in pure culture. Morphological, biochemical, and/or serological tests should be performed for final identification. Consult appropriate texts for detailed information and recommended procedures.

A single medium is rarely adequate for detecting all organisms of potential significance in a specimen. It should be recognized that organisms generally susceptible to the antimicrobial agent in a selective medium may be completely or only partially inhibited depending upon the concentration of the agent, the characteristics of the microbial strain and the number of organisms in the inoculum. Organisms that are generally resistant to the antimicrobial agent should not be inhibited. Cultures of specimens grown on selective media should, therefore, be compared with specimens cultured on nonselective media to obtain additional information and help ensure recovery of potential pathogens.

XII AVAILABILITY

Cat. No. Description
297800 BD BBL™ Inhibitory Mold Agar with Gentamicin (Deep Fill), Pkg. of 10 plates
299715 BD BBL™ Inhibitory Mold Agar with Chloramphenicol and Gentamicin (Deep Fill), Pkg. of 10 plates
XIII REFERENCES


Technical Information: In the United States, contact BD Technical Service and Support at 800-638-8663 or www.bd.com/ds.