

## Mycobiotic Agar, Fungal Selective Agar (i23121)

Used for the selective isolation of fungi, especially in highly contaminated specimens.

Industry: Clinical

### Principles & Uses

Dermatophytes, fungi that proliferate on the skin, are implicated in dermatomycosis, a fungal parasitism of the skin. Mycobiotic Agar serves as a differential selective medium for isolating pathogenic fungi from mixed microbial flora. Georg et al recommended the inclusion of antibiotics -cycloheximide and chloramphenicol- in this medium. Cycloheximide selectively inhibits saprophytic fungi, certain yeasts, and molds, while chloramphenicol suppresses accompanying bacteria. Dermatophytes are insensitive to these antibiotics, but some fungi causing systemic diseases might be affected by either antibiotic. It is crucial to use media without antibiotics alongside Mycobiotic Agar. Soy peptone and dextrose in the medium provide essential nutrients for fungal growth.

Incubation at 25 - 30°C is recommended, as the sensitivity of certain systemic pathogenic fungi to cycloheximide and chloramphenicol is influenced by temperature. Additionally, to curb chloramphenicol-resistant bacteria, TAPLIN suggests the addition of gentamicin sulfate (40 mg / L) to the medium. Mycobiotic Agar, with its carefully balanced components and inhibitors, facilitates the primary isolation of dermatophytes and fungi causing systemic diseases.

### Composition (gr/L)

Soy Peptone 10 g, Dextrose 10 g, Cycloheximide 0.4 g, Chloramphenicol 0.05 g, Agar 15 g.

Final pH at 25°C 6.9 ± 0.2

### Preparation from dehydrated Powder

Suspend 35.5 g of the powder in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Autoclave at 121°C for 10 minutes. DO NOT REMELT OR OVERHEAT.

### Quality Control

Dehydrated Appearance: Light beige, free-flowing, homogeneous.

Prepared Appearance: Amber, slightly hazy.

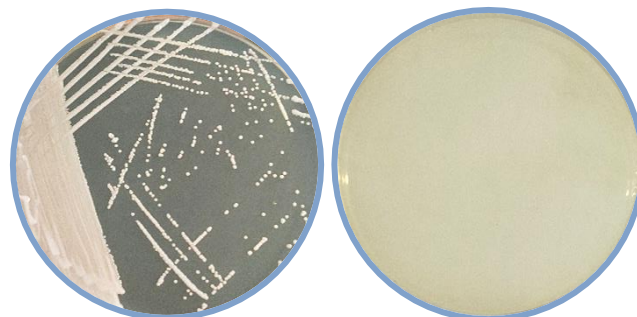
Reaction of 3.55% Solution at 25°C: pH 6.9 ± 0.2

### Cultural Response

The medium was inoculated with the organisms listed below. Cultural characteristics were observed after incubation at 25 - 30°C for 4 - 7 days.

| Organism (ATCC*)                                | Recovery                        |
|-------------------------------------------------|---------------------------------|
| <i>Escherichia coli</i> (25922)                 | Inhibited                       |
| <i>Staphylococcus aureus</i> (25923)            | Inhibited                       |
| <i>Candida albicans</i> (2091)                  | Good                            |
| <i>Aspergillus brasiliensis</i> (niger) (16404) | Inhibited (partial to complete) |

\*ATCC is a registered trade mark of the American Type Culture Collection.



*Candida albicans* (left). Prepared Culture Media (right).

The background of cultured plate has been darkened for better visibility of colonies.

### Storage

Keep the container at 15-30 °C. Store prepared medium at 2-8 °C.