



Corn Meal Agar w/ Dextrose

M150

Corn Meal Agar w/ dextrose is recommended for the cultivation of phytopathological and other fungi.

Composition**

| Ingredients | Gms / Litre |
|--------------------------|-------------|
| Corn meal, infusion from | 50.000 |
| Dextrose | 2.000 |
| Agar | 15.000 |
| Final pH (at 25°C) | 6.0±0.2 |

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 19 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Corn Meal Agar is a general purpose medium used for the cultivation of fungi and for the study of *Candida* species for the chlamydospore production. Corn Meal Agar with Dextrose is used for the cultivation of commonly occurring as well as phytopathological fungi. The addition of dextrose enhances the chromogenesis of some species of *Trichophyton* (2). Pollack and Benham (1) have described the usefulness of this medium for studying the morphology of *Candida*.

This is a very simple formulation containing cornmeal infusion, dextrose and agar. However this infusion has enough nutrients to enhance the growth of fungi. Addition of dextrose to the medium supports more luxuriant growth of some fungi as compared to the medium without dextrose, but dextrose supplemented Corn Meal Agar should not be used for chlamydospores production. Some *Candida* species lose their ability of chlamydospore formation by repeated sub culturing.

Quality Control

Appearance

Cream to yellow homogeneous coarse powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured, opalescent gel forms in Petri plates

Reaction

Reaction of 1.9% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH

5.80-6.20

Cultural Response

M150: Cultural characteristics observed after an incubation at 23- 27°C for upto 4 days . (For observing Chlamydospore formation:Using a straight wire, make a deep cut in the Corn Meal Agar plate with inoculum. Place a flamed sterile coverslip over the line of inoculum. After incubation, the streaks are examined microscopically,through the coverslip,using low and high power objectives, for chlamydospore formation.)

| Organism | Inoculum (CFU) | Growth | Chlamydospores | Recovery |
|--|----------------|-----------|----------------|----------|
| * <i>Aspergillus brasiliensis</i> ATCC 16404 | 50-100 | luxuriant | negative | |
| <i>Candida albicans</i> ATCC 10231 | 50-100 | luxuriant | positive | >=70% |

| | | | | |
|--|--------|-----------|----------|-------|
| <i>Saccharomyces cerevisiae</i> ATCC 9763 | 50-100 | luxuriant | negative | >=70% |
| <i>Saccharomyces uvarum</i> ATCC 28098 | 50-100 | luxuriant | negative | >=70% |

Key : * - Formerly known as *Aspergillus niger*

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label.

Reference

1. Pollack and Benham, 1960, J. Lab. Clin. Med., 50:313.
2. Prospero, Magdalene T. and Reyes A. C., 1955, ActaMed, Phillipina 12(2), 69-74

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