Corn Meal Agar

Intended Use
Corn Meal Agar is a general-purpose medium used for cultivation of fungi.

Summary
To facilitate a more rapid differentiation of strains of *Candida albicans* from other yeasts and from other species of *Candida*, there arose a need for culture conditions, which would result in the rapid formation of mycelia, chlamydospores or both. Pollack and Benham reported the usefulness of Corn Meal Agar for studying the morphology of *Candida*. In 1960, Walker and Huppert modified the basic formulation of Corn Meal Agar by adding Polysorbate 80, which stimulated rapid and abundant chlamydospore formation. This modified formulation is recommended for the production and visualization of chlamydospores. Besides, the addition of dextrose enhances fungal growth and pigment production.

Principle
Corn Meal Agar is a relatively simple medium, consisting of an infusion from corn meal and agar. This infusion product contains sufficient nutrients to support the growth of fungal species. The polysorbate 80 is a mixture of oleic esters which when added to the basal medium, stimulates the production of chlamydospores. Dextrose when added to Corn Meal Agar provides an energy source that enhances fungal growth and chromogenesis.

Formula*

Ingredients	**g/L**
Corn Meal Infusion from(solids)	2.0
Agar	15.0
Final pH (at 25°C)	6.0 ± 0.2

*Adjusted to suit performance parameters.

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2ºC-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Food and dairy samples

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions
1. Suspend 17.00 g of the powder in 1000 mL purified / distilled water. If desired, add 1% Polysorbate 80 or 1% Dextrose and mix thoroughly.
2. Heat with frequent agitation to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.

Quality Control
Dehydrated Appearance: Cream to yellow coloured, homogeneous, coarse free flowing powder.
Prepared Appearance: Transparent off white gel forms in petridishes.
Cultural Response: Cultural characteristics observed after an incubation of 2-5 days at 20°C-25° C.

Organism (ATCC)	Growth	Chlamydospores
Aspergillus brasiliensis WLRI 034(120) (16404)	Good	-
Candida albicans 3147 (10231)	Good	+
Saccharomyces cerevisiae NRRL Y-567 (9763)	Good	-

Interpretation of Results

1. Observe cultures for growth and morphology
2. If polysorbate 80 is added to the medium, most strains of *C. albicans* and *Stellatoidea* form chlamydospores within 24-48 hours
3. If dextrose is added to the medium, observe for chromogenesis macroscopically.

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Precautions/Limitations

1. Some *Candida* species lose their ability of chlamydospore formation by repeated subculturing.
2. When streaking, with a sterile inoculating needle, lightly touch the yeast colony and make two separate streaks. Do not dig into the agar. Flame a cover slip and after it cools, place it over the central area of the stab marks to provide slightly reduced oxygen tension.
3. Glucose supplemented Corn Meal Agar should not be used for chlamydospores production by *Candida* species.

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

Reference

1. Pollack and Benham, 1960, J. Lab. Clin. Med., 50:313.
2. Walker and Huppert, 1960, Tech. Bull. Reg. Med. Technol., 30:10.
3. Cooper & Silvo-Hunter, 1985, Manual of Clinical Microbiology, Lennette, et al., 4th ed., ASM, Washington, D.C.
4. Conant N.F., Smith D.T., Baker R.D., Callaway J.L. & Martin D.S., 1971, Manual of Clinical Mycology, 3rd Ed.,USA
5. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201030200100	Dehydrated Culture Media	100 g
201030200500	Dehydrated Culture Media	500 g