

PRODUCT INFORMATION AND QUALITY CONTROL SHEET

CORN MEAL AGAR with 0.01% CHLORAMPHENICOL

I. INTENDED USE

Cornmeal agar is used for stimulating the production of chlamydo spores by most strains of *Candida albicans* and for cultivating phytopathological fungi. The media is modified from traditional formulation by the addition of Chloramphenicol.

II. SUMMARY AND EXPLANATION

Corn Meal Agar has been used for years to cultivate fungi. Although this is a very basic medium comprised of an infusion of corn meal and agar, numerous culture media formulations have been described for the detection, isolation, and identification of *Candida albicans*, the etiological agent in candidiasis. The various media were designed to bring out morphological or physiological characteristics in this organism which would differentiate it from other members of the genus as well as from other genera.

One of the most important differential characteristics of *C. albicans* is its ability to form chlamydo spores on certain media. This property is perhaps the best criterion for identification. Corn Meal Agar is valuable for morphological differentiation of many yeast-like organisms. It suppresses vegetative growth of many fungi while stimulating sporulation.¹

Corn Meal Agar has been used with varying degrees of success for showing chlamydo spore formation in *C. albicans*. Chlamydo spore production is the best diagnostic criterion for identification of the pathogenic yeast *C. albicans*.²

III. PRINCIPLES OF THE PROCEDURE

Infusion from corn meal is a source of carbon, protein and nutrients. Agar is a solidifying agent. Chloramphenicol inhibits the growth of competing bacteria.

IV. TYPICAL FORMULA AND APPEARANCE

Appearance = light amber, slightly opalescent
(Approximate formula* per liter of processed water)

Corn Meal, Infusion from (solids)	2.0 g
Agar	15.0 g
Chloramphenicol	0.1g

*adjusted and/or supplemented to meet performance criteria.
Final pH: 6.0 ± 0.2 @ 25°C

V. PRECAUTIONS

This product is for IN VITRO diagnostic use only. Culture specimens may contain microorganisms, which can be potentially infectious to the user. Strict adherence to aseptic techniques and established precautions against microbiological hazards should be followed throughout the procedure. Carefully dispose of all items which contact specimens.

VI. STORAGE/SHELF LIFE

Plated media should be stored at 2-8°C (36-46°F), media side up, in the unopened or resealed package protected from light. DO NOT FREEZE OR EXPOSE TO HIGH TEMPERATURES. Allow unopened plates to warm to room temperature prior to inoculation. Prior to and during inoculation procedures, plates should be handled in a manner that minimizes product exposure to the environment. Product that has exceeded the assigned expiration date noted on the label should not be used. Do not use plates that exhibit evidence of drying, cracking, discoloration, microbial contamination or any other signs of deterioration. The presence of excessive condensate may indicate plates that have been damaged by exposure to temperature extremes.

VII. SPECIMEN COLLECTION

The quality of culture results depends primarily on the adequacy and condition of the specimen submitted for

examination. Proper specimen collection techniques must be followed to ensure the most accurate culture results. Consult appropriate references for information about the processing and inoculation of specimens for fungal culture. Sterile swabs and collection containers should be used. Plates should be inoculated promptly after specimen collection.

VIII. MATERIALS PROVIDED

Corn Meal Agar w/0.01% Chloramphenicol Plates (10/pkg)

IX. MATERIALS REQUIRED BUT NOT PROVIDED

Ancillary culture media, reagents and laboratory equipment as required.

X. PROCEDURE

Specimens should be collected in sterile containers or with sterile swabs and transported immediately to the laboratory according to recommended guidelines. Inoculate the specimen as soon as possible after it is received in the laboratory. Organisms to be cultivated for identification must first be isolated in pure culture on an appropriate agar medium. Reference texts should be consulted for detailed information on processing and inoculating specimens for fungal culture.

1. Using a sterile inoculating needle, lightly touch the yeast colony, then make two streaks approximately 1.5 cm long each and 1.0 cm apart.
2. Flame the needle, and allow it to cool. Lightly make an S-shaped streak back to and forth across the two streak lines.
3. Flame sterilize a cover glass. Allow it to cool, then place it over the streak marks.
4. Incubate the inoculated plates at 23-27°C, agar side up for up to one week. Examine cultures at least every other day for fungal growth.

XI. EXPECTED RESULTS

NCCLS CONTROL ORGANISMS (ATCC STRAINS)

<i>Candida albicans</i>	Growth, chlamydo spores present
ATCC 60193	
<i>Aspergillus niger</i>	Growth, black colonies
ATCC 16404	chlamydo spores absent

XII. LABORATORY RESULTS

Identification of yeasts, molds and fungi may be made on the basis of typical gross colony morphology, microscopic characteristics, and physiologic and pathologic characteristics. Additional test procedures should be used to confirm findings.

XIII. LIMITATIONS

The ability to detect yeasts, molds and fungi by culture techniques can be affected by the following factors: improper specimen collection, storage and inoculation, improper culture incubation temperatures and atmospheres, improper length of culture incubation, and improper storage and handling of culture media.

XIV. REFERENCES

1. **Baron, E.J., and S.M. Finegold.** 1990. Formulas and preparation of culture media and reagents, p.A-10. Bailey & Scott's Diagnostic Microbiology, 8th ed. The C.V. Mosby Company, St. Louis, MO.
2. **Duncan, J., and J.Floeder.** 1963. A comparison of media for the production of chlamydo spores by *Candida albicans*. Am. J. Med. Tech. 29:199-206.

USER QUALITY ASSURANCE/ QUALITY CONTROL PROCEDURES AND INFORMATION

HealthLink recommends that the following quality assurance and quality control procedures be performed on each batch of product.

I. QUALITY ASSURANCE

The following quality assurance procedures must be performed to assure the product will perform according to its intended use within the assigned expiry date:

Daily, document that product storage refrigerator maintains temperature within 2-8°C.

II. QUALITY CONTROL

The following incoming inspection procedures must be performed for each batch (batch = same lot, same shipment) of culture media received in the laboratory:

Inspect plates according to instructions contained in the
Section
VI "STORAGE/SHELF LIFE"

Note: Notify Technical Service immediately if media does not meet the inspection criteria.

TECHNICAL SERVICE

HealthLink provides a toll free technical service line (1-800-638-2625) to assist with product usage. To have technical questions answered; please call between the hours of 9:00 am to 5:00 pm EST.

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