
CORNMEAL AGAR w/ 1% DEXTROSE

INTENDED USE

Remel Cornmeal Agar w/ 1% Dextrose is a solid medium recommended for use in qualitative procedures for the cultivation of fungi and the chromogenesis of dermatophytes.

SUMMARY AND EXPLANATION

In 1970, Hazen and Reed used Cornmeal Agar to isolate pathogenic fungi.¹ Cornmeal Agar w/ 1% Dextrose is recommended to demonstrate chromogenesis of some species of *Trichophyton*.^{2,3} Identification of *Trichophyton* to the species level is necessary to allow correct treatment of diseases, such as tinea capitis, where drug dosage levels or treatment times may require species-specific adjustment.⁴

PRINCIPLE

Cornmeal Agar w/ 1% Dextrose consists of cornmeal extract and agar. The cornmeal extract provides the essential nutrients needed to support the growth of fungi. Agar is the solidifying agent. Dextrose is added to differentiate *Trichophyton rubrum*, which produces a red pigment on Cornmeal Agar w/ 1% Dextrose, from *Trichophyton mentagrophytes* which produces no pigment.

REAGENTS (CLASSICAL FORMULAE)*

Cornmeal Extract	2.0 g	Agar	15.0 g
Dextrose	10.0 g	Demineralized Water	1000.0 ml

pH 6.0 +/- 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE⁵

1. Inoculate Cornmeal Agar w/ 1% Dextrose from a pure culture of the test isolate growing on primary isolation agar other than Cornmeal Agar.
2. Using a sterile inoculating needle or sterile teasing needle, inoculate a small fragment of the fungus colony onto the agar plate.
3. Incubate in ambient at 25-30°C for up to 14 days.
4. Examine at regular intervals for growth and pigmentation.

Agar Deep: Melt the agar deep in a boiling water bath and cool to 45-50°C. Mix and dispense into a sterile petri dish and proceed with the instructions above.

QUALITY CONTROL

All lot numbers of Cornmeal Agar w/ 1% Dextrose have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL

Trichophyton rubrum ATCC® 38484
Trichophyton mentagrophytes ATCC® 9533

INCUBATION

Ambient, up to 14 days @ 25-30°C
Ambient, up to 14 days @ 25-30°C

RESULTS

Growth with red pigment
Growth with no pigment

LIMITATIONS

1. Cornmeal agar with dextrose is not recommended for the production of chlamydospores by *Candida albicans*.²

BIBLIOGRAPHY

1. Hazen, E.L., M.A. Gordon, and F.C. Reed. 1970. Laboratory Identification of Pathogenic Fungi Simplified. 3rd ed. Charles C. Thomas, Springfield, IL.
2. MacFaddin, J.F. 1985. Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria. Williams and Wilkins, Baltimore, MD.
3. Larone, D.H. 2011. Medically Important Fungi, A Guide to Identification. 5th ed. ASM Press, Washington, D.C.
4. Versalovic, J., K.C. Carroll, G. Funke, J.H. Jorgensen, M.L. Landry, and D.W. Warnock. 2011. Manual of Clinical Microbiology. 10th ed. ASM Press, Washington, D.C.
5. Conant, N.F., D.T. Smith, R.D. Baker, and J.L. Callaway. 1971. Manual of Clinical Mycology. W.B. Saunders Co., Philadelphia, PA.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

ATCC® is a registered trademark of American Type Culture Collection.
IFU 1327, Revised July 17, 2012

Printed in U.S.A.

remel

12076 Santa Fe Drive, Lenexa, KS 66215, USA
General Information: (800) 255-6730 Website: www.remel.com Email: remel@remel.com
Local/International Phone: (913) 888-0939 International Fax: (913) 895-4128