



# Clinical Laboratory Department POLICY AND PROCEDURE

POLICY NUMBER: 1099  
VERSION: 3

## **SUBJECT: CHROMagar Candida Plates**

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### PURPOSE:

Chromagar Candida is a differential culture medium that facilitates the isolation and presumptive identification of clinically important yeast species, especially from mixed yeast specimens. It supports the growth of yeasts and most fungi, while inhibiting the majority of bacterial species. Chromagar Candida is a chromogenic, selective and differential media that facilitates the recognition of mixed yeast cultures and the presumptive identification of *C.albicans*, *C. tropicalis* and *C. krusei*.

The isolation of *Candida krusei* is of utmost importance in clinical specimens because of its resistance to a commonly used antifungal, Fluconazole. These colonies appear rough, spreading, and pink in color. *Candida glabrata* produces smooth, creamy, white to pink or pinkish-purple colonies on Chromagar, while *Candida tropicalis* appear smooth, creamy, and blue to bluish-gray. *Candida albicans* present as smooth, creamy, green colonies.

### STORAGE:

Upon receipt, store at 2-8°C away from direct light. Media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), contamination, or if the expiration date has passed. Product is light and temperature sensitive; protect from light, excessive heat, moisture, and freezing. The expiration date applies to the product in its intact packaging when stored as directed.

### PROCEDURE:

Allow the Chromagar Candida plates to warm to room temperature, and the agar surface to dry before inoculating. Inoculate, and streak for isolation with a sterile loop, and incubate plates in an inverted position, protected from light, aerobically at 30°C for 48 hours. Some strains may show enough growth and color development to be read at 24 hours, however all plates should be incubated for 48 hours to allow for adequate color development. Examine plates for colonies showing typical morphology and color.

### INTERPRETATION OF RESULTS:

A medium size, green, smooth, matte colony with a very slight green halo in the surrounding media is identified as *Candida albicans*. Report as *C. albicans*.

A medium size, smooth, matte, colony which is blue to blue-gray with a paler pink edge can be presumptively identified as *Candida tropicalis*. The colony may have a dark brown to purple halo, which diffuses into the agar. Send to reference lab for identification.

A large, spreading, rough, pink colony with a pale pink to white edge can be presumptively identified as *Candida krusei*. Send to reference lab for identification.

Other yeasts are generally small in colony size and range from white to cream, pink, purple or blue-green. Most species have a smooth appearance but are variable in the diffusion of pigment (halo effect) into the agar. Send these to a reference lab for identification.

#### LIMITATIONS:

It is recommended that biochemical and/or serological tests be performed on colonies from pure culture for complete identification. This is done by a reference lab.

Color-blind individuals may encounter difficulty in distinguishing the color differences on Chromagar Candida.

*Trichosporon beigelii* exhibits blue-green colonies that become rough and crenated with prolonged incubation, which distinguishes them from *C.albicans* and *C.tropicalis*. Additional testing is required for the identification of *T.beigelii*.

#### QUALITY CONTROL:

Check for signs of contamination and deterioration. QC should be done upon receipt of each new batch or lot of Chromagar Candida media. The following organisms should be tested with the listed results:

- (#53) *Candida albicans* ATCC 10231 -growth; smooth, green colonies with a slight green halo in the agar -24-48 hours.
- (#66) *Candida tropicalis* ATCC 750 -growth; smooth, blue to blue-gray colonies with a dark brown to purple halo in the agar -24-48 hours.
- (#78) *Candida krusei* ATCC 14243 -growth; large pink, rough, crenated colonies with pale pink to white edges 24-48 hours.
- (#1) *E.coli* ATCC 25922 -partial to complete inhibition -24 hours.

#### REFERENCES:

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Hardy Diagnostics, HUGO information sheet, 2002.

<b>Approved By:</b> Brian Yee (PHYS SPEC PATHOLOGY)	
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<b>Written By:</b> Jill Hartenstein (CLINICAL LABORATORY SCIENTIST II)	
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