

Department of Microbiology

Yeast Screen Culture Procedure

I. Purpose and Test Principle

Yeasts are normal microbiota of the upper respiratory tract, gastrointestinal tract, and genitourinary tract. However, when disruptions occur to the normal flora or host immunity, yeast may opportunistically proliferate and cause symptomatic disease. Overgrowth of yeast may be associated with conditions such as pregnancy, birth control, diabetes, use of broad-spectrum antibiotics, steroid therapy and immunosuppression. The most common yeasts associated with infection are *Candida albicans* and other *Candida* species. Clinicians may request a culture screen to confirm oral candidiasis (thrush), genital candidiasis, or yeast overgrowth in the gastrointestinal tract. Specimens that may be submitted for a yeast screen include vaginal discharge, feces, and oral cavity specimens (mouth, gums, throat, esophagus, tongue, etc.). Specimens are plated onto CHROMagar Candida, a selective and differential medium for the isolation and identification of *Candida* species.

II. Specimen Information

A sterile swab from a bacterial transport device should be used to obtain the specimen. Place the swab into transport medium and transport at room temperature. Stool may be collected on a swab or submitted in a sterile container. Specimens transported refrigerated are also acceptable.

III. Reagents & Equipment

- BBL™ CHROMagar™ Candida Agar
Store in the dark at 2 – 8°C in original sleeve wrapping and original cardboard box until time of inoculation. Plates may be inoculated up to the expiration date.
- Sterilized inoculation loop
- Aerobic (non-CO₂) incubator set at 35 ± 2°C
- Glass slide

IV. Procedure

A. Specimen Processing

1. Requests for yeast culture should be ordered as CYEST.
2. Inoculate specimen onto BBL CHROMagar Candida plate. If specimen is received on a swab, roll the swab gently over a small area of the surface at the edge.
3. Streak for isolation using a sterilized inoculation loop.
4. Prepare a direct smear for Gram stain.

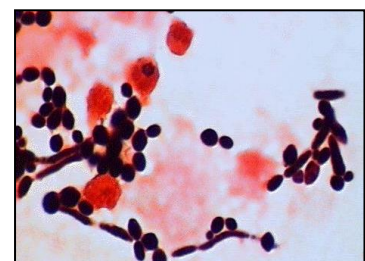
B. Incubation

Incubate the plates aerobically in the dark at 35 ± 2°C for 36 to 48 h in an inverted position.

C. Smear & Culture Interpretation and Reporting

1. Direct Smear

Examine smear microscopically on oil immersion for the presence of budding yeast cells or pseudohyphae.



- a. If yeast cells are present, report **Yeast seen. [YSTS]**
- b. If yeast are not observed, report **No yeast seen. [NYS]**
- 2. Culture
 - After sufficient incubation, examine plate for growth. For interpretation of growth, refer to the [CHROMagar Candida Procedure](#).
 - a. If yeast colonies are observed from stool, report **Yeast [YST]** with the comment: **Yeast are part of the normal flora of the gastrointestinal tract [YSTGI]**.
 - b. If yeast colonies are observed from an oral cavity specimen (mouth, gums, throat, esophagus, tongue, etc.) or genital specimen, report either ***Candida albicans* [CALB]** or ***Candida species not albicans* [CAND]** based on the colony morphology.
 - c. If no yeast colonies are observed, report **No yeast isolated. [NY]**
- D. Antimicrobial Susceptibility Testing (AST)
 - If the specimen is from the oral cavity (mouth, gums, throat, esophagus, tongue, etc.), perform susceptibility testing as outlined in the [Candida Disk Diffusion Procedure](#). For isolates from other specimen types, do not perform AST unless requested.

V. References

- A. Clinical Microbiology Procedures Handbook, 3rd ed. and 2007 update, Vol. 2. Garcia, L.S., editor in chief. ASM Press, Washington, D.C.
- B. www.medtraining.org

Document Control

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