

<b>PROGRAM Standard Operating Procedure – Laboratory Services</b>	
Title: MIC32100 – Yeast Culture	Policy Number:
Program Name: Laboratory Services	
Applicable Domain: Lab, DI and Pharmacy Services	
Additional Domain(s): NA	
Effective Date:	Next Review Date:
Issuing Authority: Director, Laboratory and Diagnostic Imaging Services	Date Approved:
Accreditation Canada Applicable Standard: NA	

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**GUIDING PRINCIPLE:**

Yeast cultures are performed to identify yeast in select specimens. Yeast isolates are identified and reported based on clinical significance in the location of isolation.

**PURPOSE/RATIONALE:**

This standard operating procedure describes the screening for *Candida albicans* in anal, penis, cervical and vaginal specimens.

**SCOPE/APPLICABILITY:**

This procedure applies to Medical Laboratory Technologists (MLTs) processing specimens for yeast culture.

**SAMPLE INFORMATION:**

<b>Type</b>	Swab • Amie’s with or without charcoal
<b>Source</b>	<ul style="list-style-type: none"> <li>• Anus</li> <li>• Penis</li> <li>• Cervix</li> <li>• Vagina</li> </ul>
<b>Stability</b>	If the sample is received in the laboratory and processed greater than 48 hours from collection: • Add specimen quality comment: “Delayed transport may adversely affect pathogen recovery”
<b>Storage Requirements</b>	Room temperature
<b>Criteria for rejection</b>	<ol style="list-style-type: none"> <li>1. Unlabeled/mislabeled swabs</li> <li>2. Specimen container label does not match patient identification on requisition</li> </ol>

**Disclaimer Message:** This is a **CONTROLLED** document for internal use only. Any documents appearing in paper form are not controlled and should be checked against the electronic file version prior to use.

**REAGENTS and/or MEDIA:**

- Sabouraud Dextrose agar (SAB)

**SUPPLIES:**

- Disposable inoculation needles
- Microscope slides
- Sterile saline
- Wooden sticks
- Coverslips

**EQUIPMENT:**

- Biosafety cabinet
- Microscope
- VITEK 2 and supplies

**SPECIAL SAFETY PRECAUTIONS:**

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials or cultures:

- Ensure that appropriate hand hygiene practices be used
- Lab gown must be worn when performing activities with potential pathogens
- Gloves must be worn when direct skin contact with infected materials is unavoidable
- Eye protection must be used when there is a known or potential risk of exposure of splashes
- All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC)
- The use of needles, syringes and other sharp objects should be strictly limited

All patient specimens are assumed to be potentially infectious. Routine Practices must be followed. Since viable micro-organisms are used, all cultures must be handled with appropriate precautions. All equipment in contact with cultures should be decontaminated by appropriate methods.

**QUALITY CONTROL:**

- Refer to Test Manual for reagent quality control procedures

**PROCEDURE INSTRUCTIONS:**

Step	Action
<b>Processing specimens for yeast culture</b>	
1	In the biosafety cabinet: <ul style="list-style-type: none"><li>• Inoculate SAB with the swab</li><li>• Ensure all surfaces of the swab make contact with the agar</li><li>• Streak for isolated growth using a disposable inoculation needle</li><li>• Write on the plate the date of the 48 hour read</li></ul>
2	Incubate the media: <ul style="list-style-type: none"><li>• Place SAB on the appropriate workbench</li></ul>

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**INTERPRETATION OF RESULTS:**

Step	Action	
1	<ul style="list-style-type: none"> <li>Observe SAB plate at 48 hours</li> <li>Examine for white, creamy colonies resembling yeast</li> </ul>	
2	If no colonies resembling yeast are seen at 48 hours: <ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Workup complete</li> <li>No yeast isolated</li> </ul>	
3	If colonies resembling yeast are seen: <ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Perform a wet prep of the colonies</li> </ul>	
4	<b>IF</b>	<b>THEN</b>
	Wet prep NEGATIVE	<ul style="list-style-type: none"> <li>Workup complete</li> <li>Yeast not isolated</li> </ul>
	Wet prep POSITIVE	<ul style="list-style-type: none"> <li>Perform VITEK 2 YST card</li> </ul>

**REPORTING INSTRUCTIONS:**

IF	REPORT
Yeast not isolated	<ul style="list-style-type: none"> <li>Report: <b>"No Yeast Isolated"</b></li> </ul>
Yeast Isolated, <i>Candida albicans</i>	<ul style="list-style-type: none"> <li>Report organism identification</li> <li>List quantitation as <b>"Isolated"</b></li> </ul>
Yeast Isolated, not <i>Candida albicans</i>	<ul style="list-style-type: none"> <li>Add isolate: <b>"Yeast (NOT Candida species)"</b></li> <li>Use LIS OrgID: <b>ystnot</b></li> <li>List quantitation as <b>"Isolated"</b></li> </ul>
Yeast culture ordered on vaginal swab and applicable clinical information not provided	<ul style="list-style-type: none"> <li>Choose key 2 on CXYST keypad to add test comment }YST which states:  <b>"Routine yeast cultures on vaginal swabs will only be performed if there is a clinical history of recurrent vaginal candidiasis, treatment failure or immunosuppression, particularly HIV infection."</b></li> </ul>

**LIMITATIONS:**

- The VITEK 2 YST card provides an acceptable identification for *Candida* spp. and results can be reported as tested.
- If yeast other than *Candida* spp. are isolated, the identification should not be reported.

**CROSS-REFERENCES:**

NA

**REFERENCES:**

1. Leber, A. (2016). *Clinical microbiology procedures handbook*. (4<sup>th</sup>ed.) Washington, D.C.: ASM Press
2. Jorgensen J.H., Pfaller M.A., Carroll K.C., Funke G., Landry M.L., Richter S.S., Warnock D.W. (2015). *Manual of Clinical Microbiology, 11<sup>th</sup> edition*. Washington, D.C: ASM Press

**APPROVAL:**

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Date  
  
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**REVISION HISTORY:**

REVISION	DATE	Description of Change	REQUESTED BY
1.0	31 Dec 21	Initial Release	L. Steven
2.0	21 Dec 23	Procedure reviewed	L. Steven
3.0	02 Dec 24	Procedure updated to add the reporting of samples not meeting testing criteria	L. Steven