PROGRAM Standard Operating Procedure – Laboratory Services	
Title: MIC40200 – Identification of Yeasts	Policy Number:
Program Name: Laboratory Services	
Applicable Domain: Lab, DI and Pharmacy Services	
Additional Domain(s):	
Effective Date:	Next Review Date:
Issuing Authority:	Date Approved:
Accreditation Canada Applicable Standard: N/A	

PURPOSE/RATIONALE:
This standard operating procedure describes the workflow and identification scheme for yeast isolates from clinical microbiology specimens.

SCOPE/APPLICABILITY:
This procedure applies to Medical Laboratory Technologists (MLTs) performing yeast identification on clinical microbiology specimens.

REAGENTS and/or MEDIA:
- VITEK 2 Yeast ID card

SUPPLIES:
- 0.45% Saline
- Plastic VITEK tubes and caps
- Sterile swabs

EQUIPMENT:
- VITEK 2

ENVIRONMENTAL CONTROLS:
- Store VITEK 2 cards at 2°C to 10°C in unopened package liner
- Allow the card to come to room temperature before

QUALITY CONTROL:
- Refer to MIC60030-VITEK 2 Quality Control for VITEK 2 QC procedures
- Record all results on MIC60032-QC Results Record-VITEK 2

IDENTIFICATION OF YEAST:

Test	Result	Next step
Growth	Creamy, white colonies resembling yeast	Wet prep
Wet prep	Yeast	VITEK 2 YST ID card
VITEK 2 YST ID card results	≥90% Candida species	• Report genus and species name **IF** indicated in procedure
VITEK 2 YST ID card results	<90% Candida species	• Do not report genus and species name • Ensure culture is pure and repeat YST ID card • If repeat is the same, report as Yeast spp. and refer to *Dyna*LIFE **IF** indicated in procedure
VITEK 2 YST ID card results	Not Candida species	• Do not report genus and species name • Ensure culture is pure and repeat YST ID card • If repeat is the same, report as Yeast spp. and refer to *Dyna*LIFE **IF** indicated in procedure

***Candida albicans*:**
- Budding yeast cells in smear and feet in <48 hours

***Candida dublinensis*:**
- Is difficult to distinguish from *Candida albicans* and it is currently not recommended that laboratories routinely perform additional tests to differentiate these organisms. However, a history of clinical failure or persistence of *Candida albicans* despite therapy with fluconazole may alert the clinician that this may be *C. dublinensis*, as this organism can develop resistance to fluconazole during therapy

***Candida glabrata*:**
- Small yeasts in smear with no hyphae
- Better growth on Chocolate agar than Blood agar

***Cryptococcus* spp.:**
- Spherical pleomorphic budding yeast with no hyphae, typically mucoid due to presence of capsular material, becoming dryer and duller with age
- *Cryptococcus* spp. are urea positive
- *Cryptococcus gattii is* difficult to distinguish from *C. neoformans*. *C. neoformans* affects mostly immunocompromised hosts (malignancy, HIV, etc.) but *Cryptococcus gattii* may cause disease in immunocompetent hosts

LIMITATIONS:

1. If identification is problematic and the isolate is clinically significant, refer isolate to *Dyna*LIFE for further identification and susceptibility testing (if required)
2. Refer the following to *Dyna*LIFE or Alberta Precision Labs as applicable for further testing:
   - Unusual or uncommon isolates for confirmation

CROSS-REFERENCES:

- MIC60030-VITEK 2 Quality Control
- MIC60032-QC Results Record-VITEK 2

REFERENCES:

1. Clinical Microbiology Procedures Handbook, 4th edition, ASM Press, 2016
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, 11th edition, ASM Press, Washington, D.C.
3. bioMérieux. (2019-03*). VITEK 2 YST* package insert
4. CLSI. *Abbreviated Identification of Bacteria and Yeast; Approved Guideline—Second Edition.* CLSI document M35-A2. Wayne, PA: Clinical and Laboratory Standards Institute; 2008

APPROVAL:

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Date

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REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	20 Mar 19	Initial Release	L. Steven
2.0	08 Mar 21	Procedure reviewed	L. Steven
3.0	27 Feb 23	Procedure reviewed and added to NTHSSA policy template	L. Steven