

<b>PROGRAM Standard Operating Procedure – Laboratory Services</b>	
Title: MIC32200 – Nasal Culture	Policy Number: 15-136-V1
Program Name: Laboratory Services	
Applicable Domain: Lab, DI and Pharmacy Services	
Additional Domain(s): N/A	
Effective Date: 17/03/2021	Next Review Date: 17/03/2023
Issuing Authority: Director of Health Services	Date Approved: 17/03/2021
Accreditation Canada Applicable Standard: N/A	

**GUIDING PRINCIPLE:**

Nasal swabs are performed to identify nasal carriers of *Staphylococcus aureus*.

**PURPOSE/RATIONALE:**

To determine the presence or absence of *Staphylococcus aureus* in nasal specimens.

**SCOPE/APPLICABILITY:**

This procedure applies to Medical Laboratory Technologists processing specimens for nasal culture.

**SAMPLE INFORMATION:**

<b>Type</b>	Swab <ul style="list-style-type: none"> <li>• Amie’s with or without charcoal</li> </ul>
<b>Source</b>	Nose
<b>Stability</b>	If the sample is received in the laboratory and processed greater than 48 hours from collection: <ul style="list-style-type: none"> <li>• Add specimen quality comment: “Delayed transport may adversely affect pathogen recovery”</li> </ul>
<b>Storage Requirements</b>	Room temperature
<b>Criteria for rejection</b>	1. Unlabeled/mislabeled swabs 2. Specimen container label does not match patient identification on requisition 3. Duplicate specimens obtained with same collection method within 24 hours

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### REAGENTS and/or MEDIA:

- Blood agar (BA) and Mueller Hinton agar (MHP)
- Identification reagents: catalase, Staph latex test and Cefoxitin antibiotic disks

### SUPPLIES:

- Disposable inoculation needles
- Wooden sticks

### EQUIPMENT

- Biosafety cabinet
- 35° CO<sub>2</sub> incubator

### SPECIAL SAFETY PRECAUTIONS:

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potential 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 nasal culture</b>	
1	In the biosafety cabinet: <ul style="list-style-type: none"><li>• Inoculate BA with the swab</li><li>• Ensure all surfaces of swab make contact with the agar</li><li>• Streak for isolated growth using a disposable inoculation needle</li></ul>
2	Incubate the media: <ul style="list-style-type: none"><li>• Place BA in the CO<sub>2</sub> incubator</li></ul>

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**INTERPRETATION OF RESULTS:**

Step	Action	
1	<ul style="list-style-type: none"> <li>Observe BA plate at 24 hours and 48 hours</li> <li>Examine for colonies resembling <i>Staphylococcus aureus</i></li> </ul>	
2	<b>IF</b>	<b>THEN</b>
	No <i>S.aureus</i> colonies seen at 24 hours	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Re-incubate plate in CO<sub>2</sub> incubator on the "Old wound culture" shelf</li> </ul>
	No <i>S.aureus</i> colonies seen at 48 hours	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Workup complete</li> <li><i>S.aureus</i> not isolated</li> </ul>
3	<b>IF</b>	<b>THEN</b>
	<i>S.aureus</i> colonies are not isolated on original BA	<ul style="list-style-type: none"> <li>Subculture colonies to BA</li> <li>Perform Staph latex test</li> </ul>
	<i>S.aureus</i> colonies are isolated on original BA	<ul style="list-style-type: none"> <li>Perform Staph latex test</li> </ul>
4	<b>IF</b>	<b>THEN</b>
	Staph latex test NEGATIVE	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Workup complete</li> <li><i>S.aureus</i> not isolated</li> </ul>
	Staph latex test POSITIVE	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li><i>S.aureus</i> isolated</li> <li>Perform cefoxitin disk diffusion test</li> </ul>
	<b>IF</b>	<b>THEN</b>
	Cefoxitin screen SENSITIVE	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Methicillin sensitive <i>S.aureus</i> isolated</li> </ul>
	Cefoxitin screen RESISTANT	<ul style="list-style-type: none"> <li>Record observations in the LIS</li> <li>Methicillin resistant <i>S.aureus</i> isolated</li> </ul>

**REPORTING RESULTS:**

<b>IF</b>	<b>REPORT</b>
<i>Staphylococcus aureus</i> not isolated	<ul style="list-style-type: none"> <li>Report: <b>"No Staphylococcus aureus isolated"</b></li> </ul>
Methicillin sensitive <i>Staphylococcus aureus</i> isolated	<ul style="list-style-type: none"> <li>Add organism: <b>"Staphylococcus aureus"</b></li> <li>List quantification as <b>"Isolated"</b></li> <li>Report organism with isolate comment <b>&amp;MSSA</b></li> </ul>
Methicillin resistant <i>Staphylococcus aureus</i> isolated	<ul style="list-style-type: none"> <li>Add organism: <b>"Staphylococcus aureus"</b></li> <li>List quantification as <b>"Isolated"</b></li> <li>Report organism with isolate comment <b>&amp;MRSA</b></li> <li>In order entry, copy report to OCPHO (HPU1) and Stanton Infection Prevention and Control (SIPAC) if ER or In-patient</li> <li>In order entry add ESO code "MRSA"</li> </ul>

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**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:**

March 17, 2021

Date

  
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Director, Health Services

**REVISION HISTORY:**

REVISION	DATE	Description of Change	REQUESTED BY
1.0	03 Mar 19	Initial Release	L. Steven
2.0	22 Feb 21	Procedure reviewed and added to NTHSSA policy template	L. Steven

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