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<b>Section: Respiratory Tract Culture Manual</b>	<b>Subject Title: Throat Swabs</b>	
<b>Issued by: LABORATORY MANAGER</b>	Original Date: September 25, 2000	
Approved by: Laboratory Director	Revision Date: April 6, 2005	

## THROAT SWABS

### **I. Introduction**

Throat (pharyngeal) swabs are submitted for the diagnosis of Group A streptococcal pharyngitis.

Occasionally, specific requests may be received to rule out the following:

- Gonococcal pharyngitis
- Diphtheria pharyngitis
- Vincent's angina
- Candida pharyngitis (thrush)
- Meningococcal carriers
- Viral pharyngitis
- Mycoplasma pharyngitis

If no specific organism or infection is suggested, it should be assumed that the specimen is for the diagnosis of streptococcal pharyngitis and should be processed as such.

Specimens for other infections (e.g. viral, mycoplasma) should be submitted in appropriate transport media. Refer specimens for virology to the virology section. Requests for Diphtheria, or Mycoplasma should be forwarded to the Public Health Lab (PHL) for processing.

### **II. Specimen Collection and Transport**

See [Pre-analytical Procedure - Specimen Collection QPCMI02001](#)

### **III. Reagents / Materials/ Media**

See [Analytical Process - Bacteriology Reagents\\_Materials\\_Media List QPCMI10001](#)

### **IV. Procedure**

## A. Processing of Specimens

See [Specimen Processing Procedure QPCMI06003](#)

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- a) Direct Examination: Not indicated for Group A streptococcus, *Neisseria gonorrhoeae* or *Neisseria meningitidis*.

If yeast (thrush) is suspected / requested: Gram stain. Examine for presence of pseudohyphae and/or budding yeast.

If Vincent's angina is suspected / requested: Gram stain. Examine for presence of spirochetes and/or fusiform bacilli and pus cells.

- b) Culture:

<b>Media</b>	<b>Incubation</b>
Blood Agar (BA)	AnO <sub>2</sub> , 35°C x 18-24 hours
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If <i>Neisseria gonorrhoeae</i> requested, <b>add</b> :	
Martin-Lewis Agar (ML)	CO <sub>2</sub> , 35°C x 72 hours
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If <i>Corynebacterium diphtheriae</i> requested, forward swab to Public Health Laboratory (PHL) for processing.	

**Note:** The ML plate is inoculated by rolling the swab in a "Z" pattern over the medium followed by cross streaking with a sterile loop over the entire plate.

## B. Interpretation of Cultures:

- a) Examine the BA plate after 18-24 hours incubation and identify all morphologically distinct beta hemolytic colonies by performing:
- Gram stain: Gram positive cocci in pairs and chains
  - Strep grouping: Identify only group A
- b) For all specimens processed after 1600 hours, re-incubate BA anaerobically for a further 24 hours.
- c) Examine the ML plate after 48 and 72 hours incubation.

C. Susceptibility Testing:

Refer to Susceptibility Testing Manual.

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## V. Reporting

- a) Gram stains: “No yeast seen on direct examination. Yeast culture not done”  
 “No organisms suggestive of Vincent’s angina seen”  
 “Yeast seen on direct examination. Yeast culture not done”  
 “Organisms suggestive of Vincent’s angina seen”

b) Culture:

Negative report: “No Group A streptococcus isolated”.  
 “No *Neisseria gonorrhoeae* isolated” if requested.  
 “No *Neisseria meningitidis* isolated” if requested.  
 “No *Corynebacterium diphtheriae* isolated” if requested.

Positive report: “Group A streptococcus”.  
 “*Neisseria gonorrhoeae*, beta-lactamase negative or positive” (enter beta lactamase result under “Breakpoint Panel” in LIS Isolate Screen).  
 “*Neisseria meningitidis*”  
 “*Corynebacterium diphtheriae* (toxigenic/non-toxigenic)”.

Telephone all positive *N. gonorrhoeae*, *N. meningitidis* and Group A streptococci isolates to ward / ordering physician. (For MSH Family Medicine Patients, call the Family Medicine Resident on-call through locating when reporting positives on weekends).

For Centenary Health Centre (CHC) in-patients, inform CHC infection control of all positive GC isolates.

## VI. References

P.R. Murray, E.J. Baron, M.A. Pfaller, R.H. Tenover, R.M. Tenover. 2003. Manual of Clinical Microbiology, 8<sup>th</sup> ed. ASM Press, Washington, D.C.

H.D. Izenberg. 2003. Respiratory Tract Cultures, 3.11.1.1 in Clinical Microbiology Procedures Handbook, 2<sup>nd</sup> ed. Vol.1 ASM Press, Washington, D.C.

H.D. Izenberg. 2003. Group A Streptococcus Culture, 3.11.8.1 in Clinical Microbiology Procedures Handbook, 2<sup>nd</sup> ed. Vol.1 ASM Press, Washington, D.C.