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Section: Wounds / Tissues / Aspirates Culture	Subject Title: Ear Specimens–Ear Swabs	
Manual		
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EAR SPECIMENS - EAR SWABS

I. Introduction

Ear swabs are collected for the diagnosis of otitis externa; they are not useful in the diagnosis of otitis media. Otitis externa is a bacterial infection of the external auditory canal usually caused by *P. aeruginosa, S. aureus, S. pneumoniae,* Group A streptococcus or fungus / yeast.

II. Specimen Collection and Transport

The ear swab should be collected using a clean, sterile swab and sent in Amies transport medium. If a delay in transport or processing is anticipated, the specimen should be kept at 4° C.

III. <u>Reagents / Materials / Media</u>

Refer to Appendix I.

IV. Procedure

A. Processing of Specimens:

a) Direct Examination:	Gram stain – Quantitate the presence of pus cells and organisms.
	(Refer to Appendix II).
	Calcofluor white stain (If fungus is requested) Refer to
	Mycology Manual.

b) Culture:

Media	Incubation	
Blood Agar (BA)	CO ₂ ,	35°C x 48 hours
MacConkey Agar (MAC)	O ₂ ,	35°C x 48 hours
Colistin Nalidixic Acid Agar (CNA)	O ₂ ,	35°C x 48 hours
If fungus culture is requested, add:		
Inhibitory Mold Agar (IMA)*	O ₂ ,	30° C x 3 weeks
Esculin Base Medium (EBM)*	O ₂ ,	30°C x 3 weeks

* Forward the fungal culture media to the Mycology section for incubation and workup.

PROCEDURE MANUAL

TORONTO MEDICAL LABORATORIES / MOUNT SINAI HOSPITAL MICROBIOLOGY DEPARTMENT

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B. Interpretation of Cultures:

Examine the culture plates after 24 and 48 hours incubation. Any growth of *S. aureus*, *P. aeruginosa*, *S. pneumoniae*, Group A streptococcus or yeast is significant. For specimens from neonates only, identify and report Group B streptococcus. For other organisms, a significant result is determined by the presence of a moderate to heavy growth of an organism which correlates with the predominant organism on the Gram stain. The Gram stain should also show $\geq 1+$ pus cells. Full identification is required for all significant organisms except yeast.

C. Susceptibility Testing:

Refer to Susceptibility Testing Manual.

V. <u>Reporting Results</u>

- a) Gram stain: Report with quantitation the presence of pus cells and organisms.
- b) Culture:

Negative Report:	"Commensal flora" or "No growth".
Positive Report:	Quantitate all significant isolates with appropriate sensitivities. If commensal flora is also present, report with quantitation.