HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank (Microbiology)		
Document:	Internal Policy and Procedures		
Title:	Sputum Culture		
Applies To:	All Laboratory Staff		
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1. PURPOSE:

1.1 To establish system and set responsibilities for processing sputum culture.

2. DEFINITONS:

2.1 N/A

3. POLICY:

3.1 Sputum specimens are obtained from a deep cough and expelled into a clean, sterile container.
3.2 If a delay in transport or processing is anticipated, the specimen should be kept at 4 °C.

4. PROCEDURE:

4.1 **Direct Examination (Gram Stain):**

4.1.1 Sputum is always contaminated to some degree with oro - pharyngeal organisms.
4.1.2 Consequently, a screening procedure for routine culture is required to exclude grossly contaminated specimens or saliva.
4.1.3 An acceptable specimen will yield less than 10 squamous epithelial cells/ low power field. the number of white blood cells may not be relevant, because some patients are severely neutropenic & such specimens will not show WBCs on Gram stain examination.
4.1.4 On the other hand; the presence of 25 or more neutrophils/ 100x field, together with few squamous epithelial cells, implies an excellent specimen.
4.1.5 If yeast is the predominant organism seen, then report with quantitation. If yeast is seen mixed with other organisms and is not the predominant organism, then report as Commensal flora without specifically commenting on the presence of yeast.

4.2 **Culture& sensitivity:**

4.2.1 Culture Media: Sample will be inoculated on the following media

Media	Incubation
Blood Agar (BA)	O2, 35+2 °C x 48 hours
MacConkey's Agar (MAC)	O2, 35+2 °C x 48 hours
Chocolate Agar (CHOC)	CO2, 35+2 °C x 48 hours
If fungal culture is requested, add: Sabouraud Agar (SD)	O2, 30°C x 3 weeks

4.2.2 Interpretation of Cultures:

4.2.2.1 Full identification is required for all significant organisms.
4.2.2.2 The presence of yeast:
4.2.2.2.1 If growth of yeast is few, report as part of Commensal flora without

specifically mentioning its presence.

4.2.2.2.2 If growth is moderate or heavy, perform Germ Tube test and identify yeast.

4.2.2.2.3 Identify any amount of filamentous fungi.

4.2.2.3 Potential pathogens include: S. pneumoniae, M. catarrhalis, H. influenzae, Group A streptococcus, S. aureus, Enterobacteriaceae, Pseudomonas species and other gram negative bacilli if <3 morphotypes.

4.2.2.4 Perform direct latex agglutination testing on suspected alpha haemolytic streptococci to screen for S. pneumoniae.

4.2.3 Susceptibility Testing: Refer to Susceptibility Testing Manual.

4.3 **Reporting Results:**

4.3.1 Gram Stain: Report with quantitation presence of pus cells, epithelial cells and organisms.

4.3.2 Negative Culture Report: "Normal flora of upper respiratory tract" or "No growth".

4.3.3 Positive Report: Quantitate and report significant isolates with appropriate sensitivities.

4.4 **TB culture & PCR (Send out test):**

4.4.1 For TB culture and TB PCR the specific form should be completed and attached to the lab request with doctor signature and stamp.

4.4.2 All samples will be recorded in the register/ computer.

4.4.3 All samples will be referred to Central TB lab. in Regional lab.

4.4.4 Once received, results will be distributed and a copy will be kept in the lab.

5. MATERIAL AND EQUIPMENT:

5.1 Ordinary culture media

5.2 O2 & CO2 Incubators

5.3 Microscan panels/ Vitek2 system ID & AST cards

6. RESPONSIBILITIES:

6.1 The assigned technician/ technologist for microbiology lab.

6.2 The C. Pathology Specialist/ Consultant.

7. APPENDICES:

7.1 N/A

8. REFERENCES:

8.1 Procedure Manual, Toronto Medical laboratories / Mount Sinai Hospital department of microbiology.

8.2 Bailey & Scott's Diagnostic Microbiology. Finegold & Baron;12th. Ed.2007, C.V. Mosby Co. p. 301.

8.3 Clinical Microbiology Procedures Handbook,American Society of Microbiology,Washington DC, 2005 9.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Dr. Kawther M. Abdou	Consultant & Lab. Medical Director		January 06, 2025
Reviewed by:	Ms. Noora Melfi Alanizi	Laboratory & Blood Bank Director		January 08, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 12, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 13, 2025
Approved by:	Mr. Fahad Hazam Alshammari	Hospital Director		January 20, 2025