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MANUAL OF SYSTEMIC BACTERIOLOGY LABORATORY DIAGNOSIS

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reviewed by:

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Applied Health Sciences, Professor of Microbiology

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Overview of Bacterial infections

Bacterial meningitis

- *Streptococcus pneumoniae*
- *Neisseria meningitidis*
- *Haemophilus influenzae*
- *Streptococcus agalactiae*
- *Listeria monocytogenes*

Otitis media

- *Streptococcus pneumoniae*

Pneumonia

Community-acquired:

- *Streptococcus pneumoniae*
- *Haemophilus influenzae*
- *Staphylococcus aureus*

Atypical:

- *Mycoplasma pneumoniae*
- *Chlamydia pneumoniae*
- *Legionella pneumophila*

Tuberculosis

- *Mycobacterium tuberculosis*

Eye infections

- *Staphylococcus aureus*
- *Neisseria gonorrhoeae*
- *Chlamydia trachomatis*

Sinusitis

- *Streptococcus pneumoniae*
- *Haemophilus influenzae*

Upper respiratory tract infection

- *Streptococcus pyogenes*
- *Haemophilus influenzae*

Gastritis

- *Helicobacter pylori*

Food poisoning

- *Campylobacter jejuni*
- *Salmonella*
- *Shigella*
- *Clostridium*
- *Staphylococcus aureus*
- *Escherichia coli*

Skin infections

- *Staphylococcus aureus*
- *Streptococcus pyogenes*
- *Pseudomonas aeruginosa*

Sexually transmitted diseases

- *Chlamydia trachomatis*
- *Neisseria gonorrhoeae*
- *Treponema pallidum*
- *Ureaplasma urealyticum*
- *Haemophilus ducreyi*

Urinary tract infections

- *Escherichia coli*
- Other Enterobacteriaceae
- *Staphylococcus saprophyticus*
- *Pseudomonas aeruginosa*

Samples in Microbiology are classified according to collection site to:

1. Non- Sterile: Sputum, swabs (Wound Swabs, urogenital, skin, & soft tissues) & feces.
2. Sterile: Urine, Blood, CSF, Body effusions.

Bacteriology Report 6

Patient Information:

Name..... Fatima.....

Age..... 55 years old..... Sex..... Female.....

Type of Specimen..... Stool.....

Date and Time of Specimen Collection..... 27/6/2024.....

Laboratory Findings:

- Gram Stain Result (include Morphology (e.g., cocci, bacilli) & Arrangement (e.g., clusters, chains))
..... direct and indirect gram stain..... ⇒ gram negative bacilli
..... in chain.....
- Culture and Identification:
- Bacterial Species Identified through :colonial morphology , additional characteristics (e.g., growth on specific media, biochemical reactions)
..... SSA :-..... DCA :-..... enterapubri test :-
..... black coloni..... Small
..... large..... yellow coloni
..... Flate..... low convex
..... dry..... dry
- Interpretation (e.g., significant pathogen, commensal flora) tetracyclin → susceptible
..... Ampicillin :- susceptible..... penicillin :- resistant
..... chloramphenicol :- susceptible..... streptomycin :- susceptible
- Antimicrobial Susceptibility Testing: Antibiotics Tested & Results (e.g., susceptible, intermediate, resistant):
..... Ampicillin, streptomycin, chloramphenicol and
..... tetracyclin.....

Clinical Interpretation (e.g., recommended antibiotic therapy)
.....
.....

Comments/Notes: Additional Information or Observations/ Limitations of the Test or Interpretation
.....
.....

Lab. Technician Signature:
.....

Lab. Supervisor Signature:
.....

Student Name: __ Allailak Mohammed Fadhil Al Shaqsi __

Higher Education Institution: __ A 'Sharqiyah University __

Degree/Major: __ Bachelor of Science in Medical Laboratory Science __ Sub major: __

Total of Credit Hours for Program: __ 125 Hours __

Credit Hours Earned: __ 115 __ Credit Hours Remaining: __ 10 __

Academic Program Start Date: __ Fall 2021 __ Graduation Date: __ 30/06/2026 __

Current GPA: __ 3.7 __ The cumulative GPA: __ 3.27 __

☒ Academic Term:

Year: 2025-2026

#	Course Code	Course Title	Credits
	MDLS410	Research for Med. Science	3
	MDLS411	Health Educationand Wellness	2
	MDLS336	Clinical Microscopy (Elective 2)	3
	APSC312	Professional Ethics	2
			1

Academic Term:

Year:

2

Bacteriology Report

Patient Information:

Name..... Ali

Age..... 35

Sex..... male

Type of Specimen..... wound / Swab

Date and Time of Specimen Collection..... 25/6/2024

Laboratory Findings:

- Gram Stain Result (include Morphology (e.g., cocci, bacilli) & Arrangement (e.g., clusters, chains))

..... direct gram stain: gram positive cocci in chain

..... indirect gram stain: gram positive bacilli in chain with some forming

- Culture and Identification:

- Bacterial Species Identified through: colonial morphology, additional characteristics (e.g., growth on specific media, biochemical reactions)

..... colonial morphology: white, dry, small, flat, and confluent

..... hemolysis in blood agar, No growth in Mac agar

..... Biochemical test:

..... Catalase +ve, motility (Semi solid media) +ve

- Interpretation (e.g., significant pathogen, commensal flora)

..... *Bacillus aureus* species

- Antimicrobial Susceptibility Testing: Antibiotics Tested & Results (e.g., susceptible, intermediate, resistant):

..... resistant to penicillin

Clinical Interpretation (e.g., recommended antibiotic therapy)

Comments/Notes: Additional Information or Observations/ Limitations of the Test or Interpretation

Lab. Technician Signature:

Lab. Supervisor Signature: