



PC-1033



113th IAMM EQAS Microbiology: Bacteriology/ Serology

CMC MICRO EQAS

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MEMBER ID:

113th EQAS EVALUATION REPORT

FEBRUARY 2023

Marks Obtained: 65.5/66 (99.2%)

FEBRUARY 2023 / BACTERIOLOGY SMEARS

Question: Carry out the appropriate staining procedure and document the relevant observation.

Provide the Impression or probable organism seen (AS ASKED)

Please refer the attached evaluation format/answer template for details on the criteria for evaluation.

PLEASE NOTE: The inaccuracies in the participant report resulting in deduction of marks has been underlined in the expected smear report.

Exercise Number	Question	Expected Report	Evaluation									
S.M1	Please carry out a Gram stain on the given fixed smear prepared from a BLOOD culture specimen obtained from a 68-year-old gentleman presenting with high grade fever with fatigue, night sweats and joint pains for 10 days.	<p>Description of Organism/s (2marks):</p> <p>Gram-positive (1) spherical cocci arranged in groups (1), (pairs, scattered forms are also seen)</p> <p>Probable organism (1 mark): <i>Staphylococcus</i> spp (1) (<i>Staphylococcus aureus</i>)</p>	<table border="1"> <tr> <td>0</td> <td>0.5</td> <td>1</td> </tr> <tr> <td>1.5</td> <td>2</td> <td>2.5</td> </tr> <tr> <td colspan="3" style="text-align: center;">3</td> </tr> </table>	0	0.5	1	1.5	2	2.5	3		
0	0.5	1										
1.5	2	2.5										
3												

SM2	<p>Please carry out a Gram stain on the given fixed smear prepared from an ENDOTRACHEAL ASPIRATE obtained from a 55-year-old gentleman admitted with pneumonia. He has a history of regular alcohol consumption for 20 years.</p>	<p>Presence and grading of Host cells (1 mark): Many pus cells (1)</p> <p>Description of Organism/s (2marks): Many (0.5) (short & long) Gram-negative (1) thick bacilli (0.5)</p> <p>Probable organism (1 mark): <u>Gram negative bacilli – Probably <i>Klebsiella</i> spp (1)</u> Acinetobacter spp/ Hemophilus spp (0.5 marks)</p>	0	0.5	1
SM3	<p>Please carry out a Gram stain on the given fixed smear prepared from an CSF specimen obtained from a 6 day old neonate presenting with fever, irritability, poor feeding and vomiting and had one episode of seizures.</p>	<p>Presence and grading of Host cells (1 mark): Many pus cells (1)</p> <p>Description of Organism/s (2marks): Many (0.5) spherical Gram-positive cocci (1) arranged in pairs, chains (0.5) (Few oval cocci resembling <i>Enterococcus</i> spp seen)</p> <p>Probable organism (1 mark): Group B Streptococcus (1) Streptococcus spp/Enterococcus spp (0.5 marks)</p>	0	0.5	1
			1.5	2	2.5
			3	3.5	4

FEBRUARY 2023 / BACTERIOLOGY CULTURE:

Question: A freeze-dried (lyophilized) culture of an organism isolated from a clinical specimen is given. Carry out the appropriate techniques for each exercise and identify the pathogen. Carry out the antimicrobial susceptibility testing according to the panel given below.

Please refer the attached evaluation format for details on the criteria for evaluation.

A 'partially correct' or 'incorrect' component of the participant report which has resulted in a deduction of marks has been indicated in the evaluation report below.

“REMOVED FROM EVALUATION” refers to a test that has not been evaluated for ALL participants. The explanation can be found in the EQAS statistics and the EQAS explained documents.

CU1: Isolated from an ENDOTRACHEAL ASPITATE received from a 60-year-old gentleman admitted in the ICU on mechanical ventilation

FINAL IDENTIFICATION: *Pseudomonas aeruginosa*

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain)	✓		0 0.5 1
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 4
Final identification : <i>Pseudomonas aeruginosa</i>	✓		0.5 1 1.5 2

Susceptibility report Confirmed Manual, Vitek, BD, Etest, BMD	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation CLSI	Correct	Incorrect		
Ceftazidime 30µg	<=14	>/=32	Resistant	✓		-1 0 1 2	mE/ ME/ VME
Levofloxacin 5µg	<= 14	>/= 4	Resistant	✓		-1 0 1 2	mE/ ME/ VME
Piperacillin-tazobactam 100/10 µg	<= 17	>/= 64/4	Resistant	✓		-1 0 1 2	mE/ ME/ VME
Aztreonam 30µg	<= 15	>/= 32	Resistant			REMOVED FROM EVALUATION *	
Meropenem 10µg	<= 15	>/= 8	Resistant	✓		-1 0 1 2	mE/ ME/ VME

*Aztreonam susceptibility test: This been removed from the evaluation, however, you were among the 64% of participants that obtained the (correct) expected answer.

CU 3: Isolated from a BLOOD culture of a 19-year-old boy presenting in OPD with high grade fever, chills, headache and diarrhoea.

FINAL IDENTIFICATION: Salmonella enterica sub species enterica Serovar Paratyphi A

Identification details	Reported	Not reported	Evaluation (7 marks)
Microscopy (Gram stain + Motility)	✓		0 0.5 1
Salient culture and biochemical findings enabling final identification (Minimum 3 key characteristics)	✓		1 2 3 4
Final identification: Salmonella enterica sub species enterica Serovar Paratyphi A	✓		0.5 1 1.5 2

Susceptibility report Confirmed Manual, Vitek, BD, Etest, BMD	EXPECTED REPORT		PARTICIPANT REPORT	MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml) Interpretation CLSI			
Ampicillin 10µg	>/= 17	</= 8 Susceptible	✓	12 marks -1 0 1 2	Error mE/ ME/ VME
Chloramphenicol 30µg	>/= 18	</= 8 Susceptible	✓	-1 0 1 2	mE/ ME/ VME
Co-trimoxazole 1.25/23.75 µg	>/= 16	</= 2/38 Susceptible	✓	-1 0 1 2	mE/ ME/ VME
Ceftriaxone 30µg	>/= 23	</= 1 Susceptible	✓	-1 0 1 2	mE/ ME/ VME
Ciprofloxacin 5µg	21-30	0.12-0.5 Resistant / Intermediate*	✓	-1 0 1 2	mE/ ME/ VME
Pefloxacin 5µg	<23	Not available Resistant	✓	-1 0 1 2	mE/ ME/ VME

* Ciprofloxacin susceptibility test: Disk Diffusion method for ciprofloxacin/ levofloxacin/ofloxacin: Report is based on Pefloxacin reports. For Ciprofloxacin MIC reports falling in the Intermediate category, without a concomitant pefloxacin report – The report may be issued with a comment - “ Drug may develop resistance on therapy even with a higher dose therefore fluoroquinolones is to be avoided”

FEBRUARY 2023 / SEROLOGY

Please refer the attached evaluation format/answer template for details on the criteria for evaluation.

SE1: Test method employed for detection C-reactive protein (CRP) at your lab: Turbidimetry

Peer group (n) = 506

	Parameter	Your Result	Your Value (mg/L)	Intended Result	Robust Mean	Robust SD	Range (mg/L)	Uncertainty of Assigned value	Z & Z' score	Max Marks	Your Score
SE1	CRP	Not reported	3.0	Negative	3.4488	1.0177	0 to 66	0.0566	-0.4	2	2

SE2: Test method employed for detection Antistreptolysin O (ASO) at your lab: Turbidimetry

Peer group (n) = 266

	Parameter	Your Result	Your Value (IU/mL)	Intended Result	Robust Mean	Robust SD	Range (IU/mL)	Uncertainty of Assigned value	Z & Z' score	Max Marks	Your Score
SE2	ASO	Not reported	77.6	Negative	92.8652	23.2386	1.24 to 228.68	1.7844	-0.7	2	2

SE3: Test method employed for detection C-reactive protein (CRP) at your lab: Turbidimetry

Peer group (n) = 510

	Parameter	Your Result	Your Value (mg/L)	Intended Result	Robust Mean	Robust SD	Range (mg/L)	Uncertainty of Assigned value	Z & Z' score	Max Marks	Your Score
SE3	CRP	Not reported	51.4	Positive	50.6637	8.4384	2.3 to 1129	0.4680	0.1	2	2

