PC-1033

111th IAMM EQAS Microbiology: Bacteriology/ Serology

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JULY 2022

111th EQAS EVALUATION REPORT

MEMBER ID: M 0 6 3 0

Marks Obtained: 73/75 (97.3%)

JULY 2022 / 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		
SM1	**Please carry out a Gram stain on the given fixed smear prepared from a BLOOD culture specimen obtained from a 2-year-old boy presenting with high-grade fever, loose stools and non-projectile vomiting for 7 days.**	Description of Organism/s (2marks): **(Long and short), slender Gram negative bacilli**	0	0.5	1
		Probable organism (1 mark): **Gram negative bacteraemia (1) – probably Salmonella species**	1.5	2	2.5
			3		

SM2	Please carry out a Gram stain on the given fixed smear prepared from a EXUDATE specimen received from a 65-year-old lady with a 24-hour history of High-grade fever and diffuse erythema and oedema of the lower limb associated with severe pain and crepitus on examination.	Presence and grading of Host cells (1 mark): Many Pus cells (1) Description of Organism/s (2marks): Many (0.5) spherical (0.5), Gram positive cocci in pairs and short chains(1) Probable organism (1 mark): *Streptococcus* spp – probably *Streptococcus pyogenes*	0 1.5 3	0.5 2 3.5	1 2.5 (4)
SM3	Please carry out a Gram stain on the given fixed smear prepared from an Endotracheal aspirate (ETA) specimen obtained from a 56-year-old lady, Post-RTA in ICU with fever, purulent secretions and reduced breath sounds with crackles on examination.	Presence and grading of Host cells (1 mark): Many Pus cells (1) Description of Organism/s (2marks): Many (0.5) Gram negative (0.5) cocco-bacilli (1) Probable organism (1 mark): *Acinetobacter* species	0 1.5 3	0.5 2 3.5	1 2.5 (4)

JULY 2022 / 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 in 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.

CU 1: Isolated from a BLOOD culture from the central venous line of a 64-year-old farmer admitted in ICU.

FINAL INDENTIFICATION: ***Staphylococcus haemolyticus***

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	✓		0.5 1 1.5 (2)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation CLSI	Correct	Incorrect	12 marks	Error
Cefoxitin 30µg	</= 24 (cefoxitin)	>/= 1 *(oxacillin)	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Tetracycline 30µg	>/= 19	</= 4	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Erythromycin 15µg	</= 13	>/= 8	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Clindamycin 2µg	</= 14	>/= 4	Resistant **	✓		-1 0 1 (2)	mE/ ME/ VME
Linezolid 30µg	>/= 21	</= 4	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Vancomycin	NO INTERPRETATION	</= 4***	Susceptible		✓	-1 (0) 1 2	Wrong methodology

* Only oxacillin MIC recommended for *S.haemolyticus*
** No D-zone test required for clindamycin interpretation
*** Only vancomycin MIC recommended for testing

CU 2: Isolated from a FAECES specimen received from a 44-year-old gentleman presenting with a 3-day history of fever, abdominal pain and loose stools after attending a community function.

FINAL IDENTIFICATION: *Salmonella enterica* subspp *enterica* serovar Kentucky (Group C2)

Identification details	Reported	Not reported	Evaluation (6 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	✓	SPECIES / SEROVAR REMOVED FROM EVALUATION	0.5 (1)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation CLSI	Correct	Incorrect	10 marks	Error
Ampicillin 10µg	</= 13	>/= 32	RESISTANT	✓		-1 0 1 (2)	mE/ ME/ VME
Ciprofloxacin 5µg	</= 20	>/= 1	RESISTANT	✓		-1 0 1 (2)	mE/ ME/ VME
Co-trimoxazole 1.25/23.75µg	>/= 16	</= 2/38	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Chloramphenicol 30µg	>/= 18	</= 8	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Ceftriaxone 30µg	</= 19	>/= 4	RESISTANT	✓		-1 0 1 (2)	mE/ ME/ VME

CU 3: Isolated from a SPUTUM specimen of a 49-year-old gentleman admitted in ICU with a history of alcohol-induced liver disease with ascites, high-grade fever, productive cough and breathlessness.

FINAL IDENTIFICATION: ***Klebsiella pneumoniae***

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	✓		0.5 1 1.5 (2)

Susceptibility report	EXPECTED REPORT			PARTICIPANT REPORT		MARK	TYPE OF ERROR
	Zone size (mm)	MIC (µg/ml)	Interpretation CLSI	Correct	Incorrect	10 marks	Error
Cefotaxime 30µg	</= 22	>/= 4	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Ceftazidime 30µg	</= 17	>/= 16	Resistant	✓		-1 0 1 (2)	mE/ ME/ VME
Amikacin 30µg	>/= 17	</= 16	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME
Piperacillin-tazobactam 100/10 µg	21-24	16/4	SUSCEPTIBLE DOSE DEPENDENT	✓		-1 0 1 (2)	mE/ ME/ VME
Meropenem 10µg	>/= 23	</= 1	Susceptible	✓		-1 0 1 (2)	mE/ ME/ VME

JULY 2022 / SEROLOGY

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

Peer group (n) = 142

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

	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	Negative	0.89	Negative	1.2964	0.6477	0.12 to 23.51	0.0684	-0.6	2	2
SE2	CRP	Positive	47.81	Positive	58.1072	9.2334	0.83 to 157.19	0.9686	-1.1	2	2
SE3	CRP	Positive	38.51	Positive	40.5496	6.1394	1.43 to 70.20	0.6440	-0.3	2	2

JULY 2022 / SEROLOGY

Test method employed for detection Rheumatoid Factor (RF) at your lab: Nephelometry

Peer group (n) = 153

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

	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
SE1	RF	Negative	<10	Negative	Not Applicable					2	2
SE2	RF	Negative	<10	Negative	11.3593	1.9487	8 to 49.4	0.1976	-0.7	2	2
SE3	RF	Positive	65.35	Positive	61.8940	10.0969	10 to 81.88	1.0204	0.3	2	2

Disclaim

Disclaimer:

This is a confidential document and subject to the rules of confidentiality as described by the ISO 17043:2010 standard.

MEMBER ID: M 0 6 3 0

SM1	SM2	SM3	CU1	CU2	CU3	SE1	SE2	SE3	Marks obtained	
3	4	4	17	16	17	4	4	4	73	97.3%
3	4	4	19	16	17	4	4	4	Maximum marks =75	

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Scientific Co-ordinator

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PT Co-ordinator

Report Dispatch Date: 15.11.2022

********** End of Report **********