



PC-1033

119th IAMMM EQAS Microbiology: Bacteriology/ Serology
CMC MICRO EQAS
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FEBRUARY 2025

119th EQAS PACKAGE

MEMBER ID:

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Last date for receiving reports: APRIL 30th, 2025

FEBRUARY 2025/ BACTERIOLOGY SMEARS:

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

Evaluation format:

Presence and grading of host cells & debris (many/ moderate/few/no) (1 mark)

Presence & grading of organism/s gram stain finding, morphology (shape), arrangement and any other special characteristics observed (2 marks)

Interpretation: Probable organism **OR** Impression- as asked in the question (1 mark)

Exercise Number	Question	Report	Evaluation			
SMI	Please carry out a Gram stain on the given fixed smear prepared from a URINE specimen obtained from a 58-year-old man in ICU- Day 6, with new onset fever.	<p>Presence and grading of Host cells (1 mark): few epithelial cells seen. Moderate number of pus cells seen.</p> <p>Description of Organisms (2 mark): Moderate number of gram positive budding yeast cells of 3-5u in size, with scanty pseudohyphae seen.</p> <p>* Clinical Interpretation (1 mark): [Please note: <u>Not</u> probable organism] Hospital acquired urinary tract infection.</p>	0	0.5	1	
			1.5	2	2.5	
			3	3.5	4	

SM2	Please carry out a Gram stain on the given fixed smear prepared from a BLOOD culture specimen obtained from 2-day-old baby with fever, tachycardia, and tachypnoea.	Description of Organism/s (2 mark): Gram Positive cocci 1-1.5 micron in size in short and long chains and in singles seen.	<table><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></table>	0	0.5	1	1.5	2	2.5
0	0.5	1							
1.5	2	2.5							
SM3	Please carry out a Gram stain on the given fixed smear prepared from a BLOOD culture collected from 29-year-old salesman seen in OPD with high grade fever and chills along with diarrhoea, for 5-days. He is not a smoker /alcoholic and has had no significant past illness.	Description of Organism/s (2marks): Slender gram negative bacilli of 2-3 micron in size. arranged in singles, small groups. * <u>Probable organism</u> (1 mark): Salmonella species, probably serotype - typhi Salmonella enterica serotype Typhi	<table><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></table>	0	0.5	1	1.5	2	2.5
0	0.5	1							
1.5	2	2.5							

FEBRUARY 2025/ 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.

INSTRUCTION: RECONSTITUTION OF LYOPHILIZED CULTURES

The vial containing freeze-dried material must be handled carefully. These vials contain infectious organisms.

Please follow standard safety procedures and usual universal precautions when handling this material.

It is advised to open the vial in a Bio-safety cabinet Type 2A2.

Opening of the lyophilized vial

1. The lyophilized material provided must be rehydrated. When reconstituting them, exercise extreme caution not to create aerosols or spills.
2. Do not mouth pipette.
3. Reconstitute when you are ready to inoculate onto culture plates.
4. Do not remove the whole cap. Lift only the pre-cut section of the metal cap.
5. Disinfect the rubber stopper with 70% alcohol/ rectified spirit.
6. With a sterile needle and syringe pierce the rubber cap and inoculate the rehydrating broth.

Re-hydration and Recovery

1. Add about **0.5ml of Nutrient broth** using a sterile needle and syringe.
2. Gently swirl the vial and allow 5-10 minutes for the dried material to rehydrate completely.
3. Hold the vial vertically.
4. Draw the reconstituted fluid up into the syringe slowly.
5. Separate the needle tip from the syringe carefully.
6. Inoculate the specimen / organism appropriate enriched and/or selective media to facilitate recovery of the organisms.
7. Incubate both vial with remaining contents and plate cultures in the appropriate environment – ambient / CO₂ incubator at 35-37°C as per routine procedures.
8. Overnight vial contents can be sub-cultured again, if required.
9. After use decontaminate and then discard the vial according to your hospital / lab policy.

Note: The viability and culture purity of all batches of lyophilized cultures have been verified prior to packing. The identification has been confirmed by conventional, automated and molecular methods.

INFORMATION ON THE EVALUATION FORMAT FOR CULTURE AND SUSCEPTIBILITY EXERCISES

EVALUATION FORMAT:

Culture microscopy & identification:

- Microscopy (1 mark), culture characteristics (2 mark)
- Biochemical key identification characteristics (2 marks)
- Final identification (2 marks)
- Susceptibility testing: (2 marks per drug)

For culture identifications or susceptibility tests that have been performed by automated systems, the printouts of the automated report **MUST** be attached along with the report for the evaluator's reference.

Susceptibility reports:

- Provide only ONE FINAL susceptibility report for each drug tested.
- If two reports with discrepant interpretations are reported, they will be marked as an incorrect answer.
- Incomplete forms will NOT be evaluated.

✓THE REPORT AS ENTERED IN THE SPACE PROVIDED ON THE FORM WILL BE CONSIDERED AS THE FINAL REPORT SUBMITTED FOR EVALUATION

Regarding AST, the first package must always follow the standard guidelines from the previous year, and the other two packages must follow the guidelines from this year.

SUSCEPTIBILITY INTERPRETATION ERRORS:

- Minor error (mE) : Susceptible / resistant isolate reported as intermediate susceptible (1 mark deducted)
- Major error (ME) : Susceptible isolate reported as resistant (2 marks deducted)
- Very major error (VME) : Resistant isolate reported as susceptible (3 marks deducted)

✓ VITEK/ E-test MIC will be awarded the complete mark if the interpretation is consistent with the expected report.

INSTRUCTION: BROKEN OR MISSING SAMPLES

1. The receipt of missing and damaged samples should be reported, along with supporting documents or photos, via email to egas@cnevellore.ac.in or by post to the PTP coordinator for all communications participants are requested to mention their complete contact details: EQAS code number, name, address...etc.,
2. DO NOT retrieve any material from the vials broken/damaged.
3. Discard the vials as per laboratory Biomedical waste management policy.

CU 2: Isolated from a FECS specimen collected from a 6-year-old child with abdominal pain.

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 KEY characteristics)					Method used in identification: (Please circle which is method has been used)
Gram Stain - Slender - 2-3 µg Gram Negative bacilli Motility - Non motile	Blood Agar - grey shiny. Translucent, round colonies of 2mm with convex surface non hemolytic MacConkey Agar - lactose fermenting colonies. Xylose lysine Desferal medium - Pink pinpoint colonies.	Oxidase - Negative Catalase - Positive Triple sugar Iron medium - Alkaline slant with acid butt with gaseous gas and no H ₂ S production. Citrate medium - Negative, Urease medium - Negative Growth - Negative	<div>Manual</div> <div>Automation Detail:</div>				
FINAL Identification of given organism	Genus <i>Shigella</i>	Species <i>sonnei</i>	Serotype (if applicable)				
Method: Manual / Automation	Ampicillin	Cotrimoxazole	Ciprofloxacin	Ceftriaxone	Azithromycin	Meropenem	
For Manual: Zone size (mm) OR MIC(µg/ml)	NO zone	NO zone	NO zone	14 mm	21 mm	24 mm	
Interpretation (S / MS / R)	R	R	Resistant	R	S	S	
For automated susceptibility: Provide Automated report HERE:	QA (1)	≥ 320 (1)	≥ 4 (1)	16 (1)	4 (1)	≤ 0.25 (1)	

CU 1: Isolated from a BLOOD culture of a 66-year-old diabetic gentleman, admitted in the ICU. - CU 1

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 KEY characteristics)	Method used in identification: (Please circle which is method has been used)
Gram Stain - 2-4 u long slender gram negative bacilli arranged in singles. Motility - motile	Blood Agar - grey moist; flat, irregular margins, non hemolytic colonies. MacConkey Agar - Non lactose fermenting colonies.	Oxidase - Positive Triple Sugar Iron Medium - alkaline by no change, no gases, no H ₂ S production Citrate Utilization - negative positive Urease medium - Negative Indole - Negative	Manual Automation Detail:
FINAL Identification of given organism	Genus	Species	Serotype (if applicable)
	<i>Pseudomonas</i>	<i>aeruginosa</i> .	

Method: Manual / Automation	Ceftazidime	Cefepime	Aztreonam	Imipenem	Meropenem	Colistin
For Manual: Zone size (mm) OR MIC (µg/ml)	NO zone	NO zone	8 mm	NO zone	NO zone	14 mm
Interpretation (S / MS / R)	R.	R.	R	R	R.	MS
For automated susceptibility: Provide Automated report HERE:	≥ 64 (R)	≥ 32 (R)		≥ 16 (R)	≥ 16 (R)	

CU 3: Isolated from a URINE specimen of an 18-year-old lady with dysuria for 2 days.

Microscopy Gram stain / motility	Culture characteristics	Biochemical identification MAIN / KEY identification characteristics required for the identification of the organism (Minimum: 3 KEY characteristics)			Method used in identification: (Please circle which is method has been used)
Gram stain - 1 run size Gram positive cocci arranged in clusters. <u>motility</u> - Nonmotile.	Blood Agar - White opaque 1-2mm can be motility colonies with convex surface and entire margins. MacConkey Agar - No growth Urduen Agar - White opaque colonies.	Lactulose - Positive. Sile lactulose - Negative. True lactulose - Negative. Novobion - Resistant.			<div>Manual</div> Automation Detail:
FINAL Identification of given organism	Genus	Species	Serotype (if applicable)		
	Staphylococcus	aerophyticus.			
Method: Manual / Automation	Nitrofurantoin	Cotrimoxazole	Ciprofloxacin	Novobiocin	Linezolid
For Manual: Zone size (mm) OR MIC(µg/ml)	32 16	-36 mm ≤ 10	≤ 0.5	14 mm	32 mm
Interpretation (S / MS / R)	S	S	S	R.	R.S
For automated susceptibility: Provide Automated report HERE:	≤ 16 (S)	≤ 10 (S)	≤ 0.5 (S)	-	2 (S)

Please indicate the exercises that you have participated in: ☒ Bacteriology smears ☒ Cultures ☒ Serology

Laboratory head name: Dr. Saadiya Sultana.

Signature/Seal: TRUST LAB DIAGNOSTICS PRIVATE LIMITED, Date of dispatch: 22/04/2025
HIDEKABAD

Member ID:

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SMT1	SMT2	SMT3	CU1	CU2	CU3	SE1	SE2	SE3	Marks obtained
4	3	3	19	19	17	2	2	2	Maximum marks

TOTAL MARKS:

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 Evaluator name / Signature _____ Date _____