



RAPID ASSESSMENT TOOL FOR MONITORING LABORATORY CAPACITY FOR ANTIMICROBIAL SURVEILLANCE

Respiratory secretions: Other secretions / exudates: Fluid: Blood:	ame of the institution	Country		Name of the lab	manager	Date
o of beds			•			
Observations Average Monthly Production Sample Total N° of positives Total N° with sensitivity test Urine: Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Stool: Observations Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Characteristics of the Insti	tution				
Average Monthly Production Sample Total N° of positives Turnaround tines and the sensitivity test Turnaroun	Io of beds N	o of professional st	taff No of techn	ical staff	No of auxiliar	y staff
Average Monthly Production Sample Total N° positives Total N° with sensitivity test Urine: Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Disservations Observations Observations Observations Observations Observations Observations Observations						
Sample Total Nº lotal Nº of positives Urine: Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Disservations Observations Observations Observations Observations Observations Observations Observations	bservations					
Sample Total Nº lotal Nº of positives Urine: Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Disservations Observations Observations Observations Observations Observations Observations Observations						
Sample Urine: Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Disservations Observations Observations Observations Observations Observations Observations Observations Observations	Average Monthly Productio	n	T-4-1 NO -f	T-1-1 NO:11		
Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Disservations Observations	Sample	Total No			Turnarour	nd time
Respiratory secretions: Other secretions / exudates: Fluid: Blood: Stool: Observations Observations Observations Observations Observations Observations Occidence of activities of the secretic of samples Yes No Criteria for rejection of samples	Urine					Days
Fluid: Blood: Stool: Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples						 Days
Fluid: Blood: Stool: Observations Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Other secretions / exudates:					 Days
Blood: Stool: Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples						Days
Stool: Disservations Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Fluid:					
Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Blood:					Days
Pre-Analytical Phase Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Stool:					Days
Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Observations					
Adequate infrastructure (physical space / lighting / separation of activities) Yes No Sampling manual Yes No Criteria for rejection of samples	Pro Analytical Phace					
Sampling manual Yes No Yes No Criteria for rejection of samples	-		Observatio	ons		
Sampling manual Yes No Criteria for rejection of samples	Adequate infrastructure (physical separation of activities)	al space / lighting /				
○ Yes ○ No Criteria for rejection of samples						
Criteria for rejection of samples	Sampling manual					
⊚ Yes ⊚ No	Criteria for rejection of samples					
	⊚ Yes ⊚ No					

Procedure manu	al			
a. for identification	on-			
⊚ Yes ⊚ No				
b. for susceptibili	ty test			
c. includes list of	antibiotics/pathogen			
⊚ Yes ⊚ No				
Biosafety				Observations
Biosafty standard	ls .			
Staff training				
Guidelines for sa	mple transport			
-Availability of per	rsonal protection supplies			
⊚ Yes ⊚ No				
Fire contingency	plan Fire extinguisher			
⊚ Yes ⊚ No	⊚ Yes ⊚ No			
Control of biologi	cal spills			
⊚ Yes ⊚ No				
Measures in case	of injuries or other accidents			
⊚ Yes ⊚ No	,			
Aughstian Dhana	_			
Analytical Phas <u>Salmonella spp.</u> –	e Identification methods	Antibiogu	om mathada	Screening methods
	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method	Automat	ution	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test
	 Morphology ☐ Coagulase Microscopic characteristic ID kits ☐ Oxidase 			Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	ID kits Oxidase Molecular methods	Ohser	vations	
	PCR RT PCR Hybridization Sequencing Whole genome sequencing			

<u>Shiqella spp.</u>	Identification methods	Antibiogram methods	Screening methods
Yes No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization Sequencing Whole genome sequencing	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	-1		
E. coli Yes No	Identification methods Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization Sequencing Whole genome sequencing	Antibiogram methods Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	Screening methods ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
H. influenzae	Identification methods	Antibiogram methods	Screening methods
	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods	 □ Disk diffusion method □ Automated method □ Epsilometer method □ Microdilution □ Broth dilution □ Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	PCR RT PCR Hybridization Sequencing Whole genome sequencing	Observations	

N. meningtidis	Identification methods	Antibiogram methods	Screening methods
O Yes O No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization Sequencing Whole genome sequencing	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
N. gonorrhoeae	Identification methods	Antibiogram methods	Screening methods
Yes No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization Sequencing Whole genome sequencing	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
<u>β-hemolytic</u> Streptococcus	Identification methods	Antibiogram methods	Screening methods
Yes No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	Molecular methods	Observations	
	PCR RT PCR Hybridization Sequencing Whole genome sequencing		

S. pneumoniae	Identification methods	Antibiogram methods	Screening methods
O Yes O No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization Sequencing Whole genome sequencing	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
<u>Campylobacter</u>	Identification methods	Antibiogram methods	Screening methods
SPP. O Yes O No	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR Hybridization	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	Sequencing		
Staphylococcus —	Whole genome sequencing Identification methods	Antibiogram methods	Screening methods
Spp.	Manual (Biochemical tests) Automated method Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR RT PCR	Disk diffusion method Automated method Epsilometer method Microdilution Broth dilution Agar dilution Observations	ESBL Hodge test AMP-C test Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	Hybridization Sequencing Whole genome sequencing		

<u>Enterobacter</u> cloacae	Identification methods	Antibiogram methods	Screening methods
O Yes O No	Manual (Biochemical tests) Automated method Ministration d (ADI)	Disk diffusion method Automated method	ESBL Hodge test AMP-C test
	Miniaturized (API) Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase	Epsilometer method Microdilution Broth dilution Agar dilution	Immunological method Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	Molecular methods	Observations	
	PCR RT PCR Hybridization Sequencing Whole genome sequencing		
<u>Klebsiella</u> pneumoniae	Identification methods	Antibiogram methods	Screening methods
○ Yes ○ No	 Manual (Biochemical tests) □ Automated method □ Miniaturized (API) 	 Disk diffusion method Automated method Epsilometer method 	ESBL Hodge test AMP-C test Immunological method
	Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase	Microdilution Broth dilution Agar dilution	Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	Molecular methods	Observations	
	PCR RT PCR Hybridization Sequencing Whole genome sequencing		
Enterococcus	Identification methods	Antibiogram methods	Screening methods
SPP.	Manual (Biochemical tests) Automated method Miniaturized (API)	Disk diffusion method Automated method	ESBL Hodge test AMP-C test Immunological method
	Serology Genotypic method Chromogenic method Morphology Coagulase Microscopic characteristic ID kits Oxidase Molecular methods PCR	Epsilometer method Microdilution Broth dilution Agar dilution Observations	Reduced susceptibility to FQ Differentiation of carbapenemases β-lactamase test Colorimetric method (Blue-Carba/ Carba NP) D-test Latex for PBP2a (MRSA)
	RT PCR Hybridization Sequencing Whole genome sequencing		

P. aeruginosa	Identification methods	Antibiogram methods	Screening methods
Yes No	Manual (Biochemical tests)	Disk diffusion method	ESBL Hodge test
	Automated method	Automated method	AMP-C test
	Miniaturized (API)	Epsilometer method	☐ Immunological method
	Serology	Microdilution	Reduced susceptibility to FQ
	Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	□ β-lactamase test
	Morphology Coagulase		Colorimetric method (Blue-Carba/ Carba NP)
	Microscopic characteristic		D-test Latex for PBP2a (MRSA)
	☐ ID kits ☐ Oxidase		D-test Catex for FBF2a (MK3A)
	Pigment		
	Molecular methods	Observations	
	PCR		
	■ RT PCR		
	☐ Hybridization		
	Sequencing		
	Whole genome sequencing		
<u>Acinetobacter</u>	Identification methods	Antibiogram methods	Screening methods
<u>baumannii</u>		_	
Yes No	Manual (Biochemical tests)	Disk diffusion method	ESBL Hodge test
	Automated method	Automated method	AMP-C test
	Miniaturized (API)	Epsilometer method	Immunological method
	Serology	Microdilution	Reduced susceptibility to FQ
	Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	Solarization and the district Control ND
	Morphology Coagulase		Colorimetric method (Blue-Carba/ Carba NP)
	Microscopic characteristic		D-test Latex for PBP2a (MRSA)
	☐ ID kits ☐ Oxidase		
	Molecular methods	Observations	
	PCR		
	RT PCR		
	Hybridization		
	Sequencing		
	Whole genome sequencing		
	Identification methods	Antibiogram methods	Screening methods
Others-1		_	
	Manual (Biochemical tests) Automated method	Disk diffusion method Automated method	■ ESBL ■ Hodge test ■ AMP-C test
	Miniaturized (API)	Epsilometer method	Immunological method
		Microdilution	Reduced susceptibility to FQ
	Serology Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	β-lactamase test
	Morphology Coagulase		
	Microscopic characteristic		Colorimetric method (Blue-Carba/ Carba NP)
	ID kits Oxidase		D-test Latex for PBP2a (MRSA)
	Molecular methods	Observations	
	PCR	Observations	
	RT PCR		
	- HVDDGGTSTOD	1	
	Hybridization		
	Sequencing Whole genome sequencing		

Others-2	Identification methods	Antibiogram methods	Screening methods
	Manual (Biochemical tests)	Disk diffusion method	ESBL Hodge test
	Automated method	Automated method	AMP-C test
	Miniaturized (API)	Epsilometer method	Immunological method
	Serology	Microdilution	Reduced susceptibility to FQ
	Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	β-lactamase test
	Morphology Coagulase		Colorimetric method (Blue-Carba/ Carba NP)
	Microscopic characteristic		D-test Latex for PBP2a (MRSA)
	☐ ID kits ☐ Oxidase		_
	Molecular methods	Observations	
	PCR		
	RT PCR		
	Hybridization		
	Sequencing		
	Whole genome sequencing		
Others-3	Identification methods	Antibiogram methods	Screening methods
	Manual (Biochemical tests)	Disk diffusion method	ESBL Hodge test
	Automated method	Automated method	AMP-C test
	Miniaturized (API)	Epsilometer method	Immunological method
	Serology	Microdilution	Reduced susceptibility to FQ
	Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	β-lactamase test
	Morphology 🔲 Coagulase		Colorimetric method (Blue-Carba/ Carba NP)
	Microscopic characteristic		D-test Latex for PBP2a (MRSA)
	ID kits Oxidase		
	Molecular methods	Observations	
	PCR		
	RT PCR		
	Hybridization		
	Sequencing		
	Whole genome sequencing		
Others-4	Identification methods	Antibiogram methods	Screening methods
	Manual (Biochemical tests)	Disk diffusion method	ESBL Hodge test
	Automated method	Automated method	AMP-C test
	Miniaturized (API)	Epsilometer method	Immunological method
	Serology	Microdilution	Reduced susceptibility to FQ
	Genotypic method	Broth dilution	Differentiation of carbapenemases
	Chromogenic method	Agar dilution	β-lactamase test
	Morphology 🔲 Coagulase		Colorimetric method (Blue-Carba/ Carba NP)
	Microscopic characteristic		D-test Latex for PBP2a (MRSA)
	☐ ID kits ☐ Oxidase		
	Molecular methods	Observations	
	PCR		
	RT PCR		
	Hybridization		
	Sequencing		
	Whole genome sequencing		

Antibiogram	
Disk diffusion method	Observations
Halo size registry	
Temperature control	
a. incubator	
b. refrigerator	
c. freezer	
Mueller Hinton media control a. lot #	
⊚ Yes ⊚ No	
b. date	
c. sterility control	
Water	
a. distilled	
b. demineralized	
pH of the media	
a. pH meter	
b. strip (range available)	
c. biological	
⊚ Yes ⊚ No	

Thickness of the agar (4mm)	Observations
a. Is it determined	
b. evaluate random thickness (2-3 plates)	
⊚ Yes ⊚ No	
c. records	
⊚ Yes ⊚ No	
d. perfectly leveled table	
⊚ Yes ⊚ No	
Use of blood	
a. sheep	
b. human	
Control of thymine/thymidine	
E. faecalis ATCC 29212 against SXT (check registry)	
Control of Ca, Mg, and Zn	
P. aeruginosa ATCC 27853 against gentamicin (check registry)	
(check registry)	
Quality of the disks / ATCC strains	
a. expiration record	
⊚ Yes ⊚ No	
b. disks maintenance	
⊚ Yes ⊚ No	
c. ATCC strains Specify which	
⊚ Yes ⊚ No	
d. correct storage of ATCC strains (check registry)	
⊚ Yes ⊚ No	
e. frequency of the control (check registry)	
Trequency of the control (check registry) ▼	
f. corrective actions (check registry)	
Yes No	

	d standards		
a. availa	ble		
Yes	⊚ No		
b. Is it e	xpired	expiration year	
	⊚ No		
c. correc	t storage		
	⊚ No		
	n adjustment and con	itrol	
a. manua			
Yes	⊚ No		
b. nephe	lometer		
Yes	⊚ No		
c. other-			
	⊚ No		
Correct	number of disks per	plate	
Yes			
CLSI do	cument	Document year	
Yes	⊚ No	•	
Automate	_		Observations
Expert s	system is on (See ac	ctivated rules)	OBSCI VALIONS
Yes	◎ No		
Prevent	ive maintenance		
Yes	⊚ No		
Correcti	ve maintenance		
Yes	⊚ No		
	ontrol of identification	n tests	
a. gram- ⊚ Yes	⊚ No		
b. catalas	se		
Yes			
c. coagul	ase		

d. oxidase	
e. hemolysis	
Quality control of panels/cards/ATCC strains a. expiration registry	Observations
○ Yes○ No	
b. correct storage of cards or panels	
c. ATCC strains Specify which	
⊚ Yes ⊚ No	
d. correct storage of ATCC strains (check registry)	
e. frequency of control (check registry)	
•	
f. corrective actions (check registry)	

Post-Analytical Phase	
Availability of clinical/epidemiological data	Observations
a. patient identification	
b. age	
c. sex	
d. ward of the sample origin	
e. type of sample	
f. date of hospitalization	
⊚ Yes ⊚ No	
g. date of sampling	
⊚ Yes ⊚ No	
h. purpose of sampling	
i. diagnosis	
⊚ Yes ⊚ No	
j. underlying disease(s)	
⊚ Yes ⊚ No	
k. risk factor	
I. can differentiate infection / colonization / contamination	
⊚ Yes ⊚ No	
Can separate sample results from community — acquired infections to those associated with health-care	
⊚ Yes ⊚ No	
Evaluation of results before delivery	
⊚ Yes ⊚ No	

Record of results delivery		Observations
⊚ Yes ⊚ No		
Periodic surveillance reports are services of the institution	e sent to various	Observations
⊚ Yes ⊚ No		
b. surgery		
c. obstetrics		
⊚ Yes ⊚ No		
d. traumatology		
⊚ Yes ⊚ No		
e. others		
⊚ Yes ⊚ No		
Computer		
⊚ Yes ⊚ No		
Internet connection		
⊚ Yes ⊚ No		
Results of external quality ass	surance	
⊚ Yes ⊚ No		
Dissemination of results: hosp prevalent species and resistan	ital, community, — nce profiles	
⊚ Yes ⊚ No		
Send samples to the reference	center	
⊚ Yes ⊚ No		
Reference center answered		
⊚ Yes ⊚ No	Timing	
Data are sent nationally		
⊚ Yes ⊚ No	Frequency	
Data are sent regionally		
⊚ Yes ⊚ No	Frenquency	
Surveillance software If yes,	specify which	
•		

- Other Methodologies		
Perform dilution tests	Method	Microorganisms
⊚ Yes ⊚ No		
	Observations	
Conduct molecular epidemiology (confirmation	Method	Microorganisms
of outbreaks, dissemination of microorganisms, etc.)		
⊚ Yes ⊚ No		
	Observations	
- Persons that carried out the evaluation		
eneral comments		