







External	Internal	Request	Urine only			Non-urine only				
Staphylococcus (MH/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Cefoxitin (<i>S. aureus</i> /lugdunensis)			FOX	21	22	-	-	-	Yes	
Cefoxitin (CoNS)			FOX	24	25	-	-	-	No	Phoenix limitation for CoNS, enter disk result in Epicenter. Examine disk zone at 24 h.
Cefazolin			-	-	-	-	-	-	Yes	Result based on FOX disk (either <i>S. aureus</i> or CoNS) or FOX from Phoenix (<i>S. aureus</i> only).
Clindamycin			CC	14	21	-	-	-	Yes	Perform D-zone test when testing by disk diffusion.
Erythromycin			E	13	23	-	-	-	Yes	
Gentamicin*			GM	12	15	-	-	-	Yes	
Levofloxacin			LVX	15	19	-	-	-	Yes	Not reported for blood isolates. Isolates may develop resistance during prolonged therapy.
Minocycline			MI	14	19	-	-	-	Yes	If not "S," verify ID/purity.
Nitrofurantoin			FM	14	17	-	-	-	Yes	If not "S," verify ID/purity.
Oxacillin*			-	-	-	-	-	-	Yes	Result based on FOX disk (either <i>S. aureus</i> or CoNS) or FOX from Phoenix (<i>S. aureus</i> only).
Tetracycline			TE	14	19	-	-	-	Yes	
Trimethoprim-Sulfa*			SXT	10	16	-	-	-	Sa only	PHX limitation for CoNS, enter disk result in Epi. If <i>S. aureus</i> not "S," verify ID/purity.
Vancomycin (<i>S. aureus</i>)*			-	-	-	VA	16	2	Yes	Confirm MIC of 2 for inpatients and report MIC externally. If not "S," verify ID/purity & consult Rounds.
Vancomycin (CoNS)*			-	-	-	VA	32	4	Yes	If not "S," verify ID/purity & consult Rounds.
*If CSF, report these + LZD & RA from PHX.			-	-	-	-	-	-	Yes	LZD = linezolid, RA = rifampin
Enterococcus (MH/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ampicillin			AM	16	17	-	-	-	Yes	If not "S," verify ID/purity.
Erythromycin			E	13	23	-	-	-	Yes	
Gentamicin (high level)			GM120	6	10	-	-	-	Yes	
Levofloxacin			LVX	13	17	-	-	-	Yes	
Linezolid			LZD	20	23	-	-	-	Yes	Report LZD externally for VRE. If testing offline, perform and report LZD by request.
Nitrofurantoin			FM	14	17	-	-	-	-	Phoenix limitation, report disk result or use canned comment ENCSFM (does not apply to VRE).
Tetracycline			TE	14	19	-	-	-	Yes	
Vancomycin			VA30	14	17	VA	32	4	Yes	Read VA at 24 h with transmitted light. If not "S," verify ID/purity. Confirm disk "I" by MIC.
S. pneumoniae (BMH/35°C/CO₂/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (measure growth, not hemolysis)
Ceftriaxone (nonmeningitis)			-	-	-	TX	4	1	Yes	
Ceftriaxone (meningitis)			-	-	-	TX	2	0.5	Yes	
Penicillin - Oral (nonmeningitis)			-	-	-	PG	2	0.06	Yes	Enter MIC under oral & parenteral. Enter 2 digits beyond the decimal (e.g., enter 0.06, not 0.06125)
Penicillin - Parenteral (nonmeningitis)			-	-	-	PG	8	2	Yes	Enter MIC under oral & parenteral. Enter 2 digits beyond the decimal (e.g., enter 0.06, not 0.06125)
Penicillin - Parenteral (meningitis)			-	-	-	PG	0.12	0.06	Yes	Enter MIC under parenteral. Enter 2 digits beyond the decimal (e.g., enter 0.06, not 0.06125)
Trimethoprim-Sulfa (report for all sites)			SXT	15	19	-	-	-	Yes	
Vancomycin (report for all sites)			VA30	-	17	-	-	-	Yes	Verify ID/purity if not "S". Consult Rounds.
Clindamycin (report for non-sterile sites)			CC	15	19	-	-	-	Yes	
Erythromycin (report for non-sterile sites)			E	15	21	-	-	-	Yes	
Levofloxacin (report for non-sterile sites)			LVX	13	17	-	-	-	Yes	
Meropenem (report for sterile sites)			-	-	-	-	-	-	Yes	Report meropenem (not imipenem) if testing by Phoenix
Imipenem (report for sterile sites)			-	-	-	IP	1	0.12	No	Report imipenem (not meropenem) if testing by Etest
Viridans Strep (BMH/35°C/CO₂/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (measure growth, not hemolysis)
Clindamycin			CC	15	19	-	-	-	Yes	
Ceftriaxone			-	-	-	TX	4	1	Yes	
Penicillin			-	-	-	PG	4	0.12	Yes	
Vancomycin			VA30	-	17	-	-	-	Yes	Verify ID/purity if not "S". Consult Rounds.
Beta Strep Group B (BMH/35°C/CO₂/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Clindamycin (OB isolates & non-sterile sites)			CC	15	19	-	-	-	-	Perform D-zone test with CC & E disks 12 mm apart. CC is the only drug reported for OB isolates.
Levofloxacin (urine only)			LVX	13	17	-	-	-	Yes	
Penicillin (all non-OB isolates)			-	-	-	PG	-	0.12	Yes	Verify ID/purity if not "S". Consult Rounds.
Tetracycline (urine only)			TE	18	23	-	-	-	Yes	
Vancomycin (all non-OB isolates)			VA30	-	17	-	-	-	Yes	Verify ID/purity if not "S". Consult Rounds.
Erythromycin (non-sterile sites other than OB)			E	15	21	-	-	-	Yes	Not reported for OB isolates, but used for D-zone test.
Ceftriaxone (sterile sites only)			CRO	-	24	-	-	-	Yes	Verify ID/purity if not "S". Consult Rounds.
Other Beta-Strep (BMH/35°C/CO₂/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Clindamycin			CC	15	19	-	-	-	-	Perform D-zone test with CC & E disks 12 mm apart.
Erythromycin			E	15	21	-	-	-	-	
Penicillin			-	-	-	PG	-	0.12	-	Verify ID/purity if not "S". Consult Rounds.
Vancomycin			VA30	-	17	-	-	-	-	Verify ID/purity if not "S". Consult Rounds.
Candida (MH+GMB/35°C/ambient/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Fluconazole			FCA	14	19	-	-	-	-	<i>C. krusei</i> is intrinsically resistant to fluconazole. Do not add YSTSR comment if ID = <i>C. krusei</i> .
Voriconazole			VOR	13	17	-	-	-	-	If not "S," verify purity and send YSTSR comment.

External	Internal	Request									
Bacillus spp. (MH/35°C/ambient/16-20 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments	
		Ceftriaxone	-	-	-	TX	64	8		Primary AST when requested.	
		Ciprofloxacin	-	-	-	CI	4	1		Primary AST when requested.	
		Penicillin	-	-	-	PG	0.25	0.12		Primary AST when requested.	
		Trimethoprim-Sulfa	-	-	-	TS	4	2		Primary AST when requested.	
		Vancomycin	-	-	-	VA	-	4		Primary AST when requested.	
		Erythromycin	-	-	-	EM	8	0.5		Also available by request.	
		Gentamicin	-	-	-	GM	16	4		Also available by request.	
		Imipenem	-	-	-	IP	16	4		Also available by request.	
Coryneforms* (BMH/35°C/ambient/24-48 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments	
		Ceftriaxone	-	-	-	TX	4	1	-	All sites. If "S" at 24 h, reincubate and read again at 48 h before reporting. 	
		Penicillin	-	-	-	PG	4	1	-	All sites. If "S" at 24 h, reincubate and read again at 48 h before reporting. 	
		Trimethoprim-Sulfa	-	-	-	TS	4	2	-	All sites	
		Imipenem	-	-	-	IP	16	4	-	Add for sterile sites 	
		Vancomycin	-	-	-	VA	-	2	-	Add for sterile sites 	
		Ciprofloxacin	-	-	-	CI	4	1	-	Add for non-sterile sites and urine	
		Erythromycin	-	-	-	EM	2	0.5	-	Add for non-sterile sites 	
*Coryneforms include <i>Corynebacterium</i> , <i>Arcanobacterium</i> , <i>Brevibacterium</i> , <i>Cellulomonas</i> , <i>Dermabacter</i> , <i>Leifsonia</i> , <i>Microbacterium</i> , <i>Oerskovia</i> , <i>Rothia</i> , and <i>Turicella</i> . 											
Lactobacillus (BMH/35°C/CO₂/24-48 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments	
		Penicillin	-	-	-	PG	-	8	-		
		Erythromycin	-	-	-	EM	8	0.5	-		
		Gentamicin	-	-	-	GM	16	4	-		
		Imipenem	-	-	-	IP	2	0.5	-		



External	Internal	Request	Urine only			Phoenix			Comments	
Enterobacteriaceae (MH/35°C/ambient/16-18h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Amikacin			-	-	-	-	-	-	Yes	External if GM or NN are not "S".
Ampicillin	AM	13	17	-	-	-	-	-	Yes	Citro., Enterobact., Hafnia, Kleb., Morg., P. vulgaris, Prov., Ser., Y. enterocolitica report as "R"
Augmentin	AMC	13	18	-	-	-	-	-	Yes	Citro., Enterobact., Hafnia, Morg., Prov., Ser., Y. enterocolitica report as "R"
Cafazolin	CZ	19	23	-	-	-	-	-	Yes	Citro., Enterobact., Hafnia, Morg., P. vulgaris, Prov., Ser., Y. enterocolitica intrinsic "R"
Cefepime	-	-	-	-	-	-	-	-	Yes	External if CAZ or CRO are not "S". No "I" category, use SDD comment for MICs of 4-8.
Ceftazidime	CAZ	17	21	-	-	-	-	-	Yes	If ≤ 22, perform ESBL confirmation. External if CZ is not "S".
Ceftriaxone	CRO	19	23	-	-	-	-	-	Yes	If ≤ 25, perform ESBL confirmation. External if CZ is not "S".
Ciprofloxacin	CIP	15	21	-	-	-	-	-	Yes	
Ertapenem	ETP	18	22	-	-	-	-	-	Yes	External if CAZ or CRO are not "S". Phoenix limitation for E. aerogenes (test by disk if requested).
Gentamicin	GM	12	15	-	-	-	-	-	Yes	Phoenix limitation for Providencia stuartii.
Imipenem	IPM	19	23	-	-	-	-	-	Yes	External if CAZ or CRO are not "S". PHX limitation for certain Enterobact., Ser., Prot., Prov., & Morg.
Levofloxacin	LVX	13	17	-	-	-	-	-	Yes	
Meropenem	MEM	19	23	-	-	-	-	-	Yes	External if CAZ or CRO are not "S". Phoenix limitation for P. mirabilis (test by disk if requested).
Nitrofurantoin	FM	14	17	-	-	-	-	-	Yes	Morganella, Proteus, Providencia, Serratia report "R"
Piperacillin-Tazobactam	TZP	17	21	-	-	-	-	-	Yes	
Tetracycline	TE	11	15	-	-	-	-	-	Yes	Morganella, Proteus, Providencia report "R"
Tobramycin	NN	12	15	-	-	-	-	-	Yes	Phoenix limitation for Providencia stuartii.
Trimethoprim-Sulfa	SXT	10	16	-	-	-	-	-	Yes	Phoenix limitation for Serratia marcescens (test by disk diffusion if requested).
P. aeruginosa (MH/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (Test CF isolates offline)
Amikacin	-	-	-	AK	64	16	Yes	Yes	External if GM or NN are not "S".	
Aztreonam	ATM	15	22	-	-	-	Yes	Yes		
Cefepime	-	-	-	-	-	-	Yes	Yes	External if CAZ or CRO are not "S".	
Ceftazidime	CAZ	14	18	-	-	-	Yes	Yes		
Ciprofloxacin	CIP	15	21	-	-	-	Yes	Yes		
Gentamicin	GM	12	15	-	-	-	Yes	Yes		
Imipenem	IPM	15	19	-	-	-	Yes	Yes		
Levofloxacin	LVX	13	17	-	-	-	Yes	Yes		
Meropenem	MEM	15	19	-	-	-	Yes	Yes		
Piperacillin-Tazobactam	TZP	14	21	-	-	-	Yes	Yes		
Tobramycin	NN	12	15	-	-	-	Yes	Yes		
Acinetobacter (MH/35°C/ambient/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (Test CF isolates offline)
Amikacin	-	-	-	AK	64	16	Yes	Yes	External if GM or NN are not "S".	
Cefepime	-	-	-	-	-	-	Yes	Yes	External if CAZ or CRO are not "S".	
Ceftazidime	CAZ	14	18	-	-	-	Yes	Yes		
Ciprofloxacin	CIP	15	21	-	-	-	Yes	Yes		
Gentamicin	GM	12	15	-	-	-	Yes	Yes		
Imipenem	IPM	18	22	-	-	-	Yes	Yes		
Levofloxacin	LVX	13	17	-	-	-	Yes	Yes		
Meropenem	MEM	14	18	-	-	-	Yes	Yes		
Piperacillin-Tazobactam	TZP	17	21	-	-	-	No	No	Phoenix limitation for Acinetobacter (test by disk diffusion if requested).	
Tetracycline	TE	11	15	-	-	-	Yes	Yes		
Tobramycin	NN	12	15	-	-	-	Yes	Yes		
Trimethoprim-Sulfa	SXT	10	16	-	-	-	Yes	Yes		
S. maltophilia (MH/35°C/ambient/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (Test CF isolates offline)
Ceftazidime	-	-	-	TZ	32	8	Yes	Yes	No criteria for disk diffusion, test by MIC method.	
Levofloxacin	LVX	13	17	-	-	-	Yes	Yes		
Minocycline	MI	14	19	-	-	-	No	No	Not available on the Phoenix. Test automatically by disk diffusion.	
Trimethoprim-Sulfa	SXT	10	16	-	-	-	Yes	Yes		
B. cepacia (MH/35°C/ambient/20-24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (Test CF isolates offline)
Ceftazidime	CAZ	17	21	-	-	-	Yes	Yes		
Levofloxacin	-	-	-	LE	8	2	Yes	Yes		
Meropenem	MEM	15	20	-	-	-	No	No	Phoenix limitation. Test automatically by disk diffusion	
Minocycline	MI	14	19	-	-	-	No	No	Not on Phoenix panel. Test automatically by disk diffusion.	
Trimethoprim-Sulfa	SXT	10	16	-	-	-	Yes	Yes		
Other Non-ferm. (MH/35°C/ambient/16-20 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments (Test CF isolates offline)
Ceftazidime	-	-	-	TZ	32	8	Yes*	Yes*	*Phoenix will provide AST results for some species (refer to "Phoenix AST Availability for GNR" doc.). In addition to the above drugs, Phoenix may also provide AN, FEP, CRO, LVX, MEM, TZP, and NN.	
Ciprofloxacin	-	-	-	CI	4	1	Yes*	Yes*		
Gentamicin	-	-	-	GM	16	4	Yes*	Yes*		
Imipenem	-	-	-	IP	16	4	Yes*	Yes*		
Trimethoprim-Sulfa	-	-	-	TS	4	2	Yes*	Yes*		

External	Internal	Request	Non-urine only							
Salmonella (MH/35°C/ambient air)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ampicillin (see comments)			AM	13	17	-	-	-	-	Test & report extraintestinal isolates automatically. Test & report intestinal isolates only by request.
Ciprofloxacin (see comments)			CIP	20	31	-	-	-	-	Test & report extraintestinal isolates automatically. Test & report intestinal isolates only by request.
Trimethoprim-Sulfa (see comments)			SXT	10	16	-	-	-	-	Test & report extraintestinal isolates automatically. Test & report intestinal isolates only by request.
Ceftriaxone (extraintestinal isolates)			CRO	19	23	-	-	-	-	Test & report extraintestinal isolates for CRO automatically.
Shigella (MH/35°C/ambient air)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ampicillin			AM	13	17	-	-	-	Yes	
Levofloxacin			LVX	13	17	-	-	-	Yes	
Trimethoprim-Sulfa			SXT	10	16	-	-	-	Yes	
Aerom./Plesiomon. (1/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Amikacin			AN	-	-	-	-	-	Aerom.	Phoenix will provide AST results for some <i>Aeromonas</i> spp. but not for <i>Plesiomonas</i> . Test <i>Plesiomonas</i> by disk diffusion. Phoenix limitation for augmentin vs. <i>Aeromonas</i> . Test by disk if requested.
Augmentin			AMC	13	18	-	-	-	No	
Cefazolin			CZ	-	-	-	-	-	Aerom.	
Ceftazidime			CAZ	17	21	-	-	-	Aerom.	
Ceftriaxone			CRO	19	23	-	-	-	Aerom.	
Ciprofloxacin			CIP	15	21	-	-	-	Aerom.	
Gentamicin			GM	12	15	-	-	-	Aerom.	
Imipenem			IPM	13	16	-	-	-	Aerom.	
Levofloxacin			LVX	13	17	-	-	-	Aerom.	
Meropenem			MEM	13	16	-	-	-	Aerom.	
Piperacillin-Tazobactam			TZP	17	21	-	-	-	Aerom.	
Trimethoprim-Sulfa			SXT	10	16	-	-	-	Aerom.	
Vibrio (MH/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ampicillin			AM	13	17	-	-	-	-	For <i>Vibrio</i> spp. other than <i>cholerae</i> .
Augmentin			AMC	13	18	-	-	-	-	
Ceftazidime			CAZ	17	21	-	-	-	-	
Ciprofloxacin			CIP	15	21	-	-	-	-	
Gentamicin			GM	12	15	-	-	-	-	
Imipenem			IPM	13	16	-	-	-	-	
Levofloxacin			LVX	13	17	-	-	-	-	
Tetracycline			TE	11	15	-	-	-	-	
Piperacillin-Tazobactam			TZP	17	21	-	-	-	-	
Trimethoprim-Sulfa			SXT	10	16	-	-	-	-	
H. influenzae (HTM/35°C/CO2)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ampicillin (blood/CSF)			AM	18	22	-	-	-	-	Test & report beta-lactamase. Report comment HFLUS. Perform AST automatically.
Ceftriaxone (blood/CSF)			CRO	-	26	-	-	-	-	
Imipenem (blood/CSF)			IPM	-	16	-	-	-	-	
Ampicillin (non-blood/CSF - see comments)			AM	18	22	-	-	-	-	Test & report beta-lactamase. Report comment HFLUS. Perform AST only by request.
Ceftriaxone (non-blood/CSF)			CRO	-	26	-	-	-	-	
Trimethoprim-Sulfa (non-blood/CSF)			SXT	10	16	-	-	-	-	
HACEK (BMH/35°C/CO2/24-48 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Ceftriaxone			-	-	-	TX	-	2	-	Test and report beta-lactamase.
Ciprofloxacin			-	-	-	CI	4	1	-	For imipenem interpretive criteria, " <i>Haemophilus</i> " includes: <i>Aggregatibacter</i> (formerly <i>H. aphrophilus</i> , <i>H. paraphrophilus</i> , <i>H. segnis</i> , and <i>A. actinomycetemcomitans</i>). "Other than <i>Haemophilus</i> " includes: <i>Cardiobacterium</i> , <i>Eikenella</i> , and <i>Kingella</i> .
Imipenem (<i>Haemophilus</i>)			-	-	-	IP	16	4	-	
Imipenem (other than <i>Haemophilus</i>)			-	-	-	IP	2	0.5	-	
Penicillin			-	-	-	PG	4	1	-	
Tetracycline			-	-	-	TC	8	2	-	
Trimethoprim-Sulfa			-	-	-	TS	4	0.5	-	
Pasteurella spp. (BMH/35°C/ambient/16-18 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	
Ampicillin			AM	-	27	-	-	-	-	Test & report beta-lactamase. Report comment PMULS.
Augmentin			AMC	-	27	-	-	-	-	
Ceftriaxone			CRO	-	34	-	-	-	-	
Levofloxacin			LVX	-	28	-	-	-	-	
Tetracycline			TE	-	23	-	-	-	-	
Erythromycin			E	24	27	-	-	-	-	
Trimethoprim-Sulfa			SXT	-	24	-	-	-	-	
C. jejuni/coli (BMH/42°C/microaer/24 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Erythromycin			-	-	-	EM	32	8	-	
Ciprofloxacin			-	-	-	CI	4	1	-	
H. pylori (2 McFar./BMH/35°C/microaer/72 h)			Disk	R (≤)	S (≥)	Etest	R (≥)	S (≤)	Phoenix	Comments
Amoxicillin			-	-	-	AC	No interp	-	-	Enter comment HPCLSI.
Clarithromycin			-	-	-	CH	1	0.25	-	
Tetracycline			-	-	-	TC	No interp	-	-	Enter comment HPCLSI.
Moraxella catarrhalis - Report MCATAS comment. Perform AST by request only (refer to CLSI M45 document & consult Rounds). Test AMC, TX (MIC), EM, LE (MIC), TE, and SXT.										