



MIC Test Strip Technical Sheet **Fastidious Gram Positive Bacilli**

Listeria monocytogenes, *Bacillus*, *Corynebacterium*, *Erysipelothrix* and *Lactobacillus* spp.

Specimen

Blood, Cerebrospinal Fluid, sterile sites (eye, fluids, tissues) and wounds.

Procedure

Medium	Mueller Hinton II Agar (Sheep Blood 5%), Ref. 10131 or Mueller Hinton Fastidious Agar (Horse blood 5% + 20 mg/L β-NAD), Ref. 10132.
Inoculum	Suspension in Mueller Hinton Broth (Ref. 24107) to 1 McFarland (Ref. 80405).
Incubation	35 ± 2°C / 5%CO ₂ (if needed) / 24-48 h or longer if slow grower.
Evaluating the results	Bactericidal drugs: interpret the M.I.C. at complete growth inhibition including microcolonies, hazes and isolated colonies. Bacteriostatic drugs: interpret the M.I.C. at 80% inhibition when trailing is seen.

	Quality Control (M.I.C. µg/mL)	Examples of ANTIBIOGRAM					
		<i>S. pneumoniae</i> ATCC® 49619	<i>Bacillus</i> spp. 140 mm petri dish	<i>Corynebacterium</i> spp. 140 mm petri dish	<i>Erysipelothrix</i> spp. 140 mm petri dish	<i>Lactobacillus</i> spp. 140 mm petri dish	<i>L. monocytogenes</i> 90 mm petri dish
FEP CEFEPIME	0.03-0.25			✓ or CTX	✓ or CTX		
CTX CEFOTAXIME	0.03-0.12		✓ or CRO				
CRO CEFTRIAZONE	0.03-0.12						
C CHLORAMPHENICOL	2-8						
CD CLINDAMYCIN (-CO ₂)	0.03-0.12						
CD CLINDAMYCIN (+CO ₂)	0.064-0.25		✓	✓	✓	✓	
DAP DAPTOMYCIN	0.06-0.5						
E ERYTHROMYCIN (-CO ₂)	0.03-0.12						
E ERYTHROMYCIN (+CO ₂)	0.064-0.25		✓	✓	✓	✓	
IMI IMIPENEM	0.03-0.12				✓ or MRP		
LEV LEVOFLOXACIN	0.5-2						
LNZ LINEZOLID	0.25-2						
MRP MEROPENEM	0.06-0.25						
P PENICILLIN G	0.25-1		✓	✓	✓	✓	✓
QDA QUINUPRISTIN-DALFOPRISTIN	0.25-1						
RD RIFAMPICIN	0.015-0.06						
TE TETRACYCLINE	0.06-0.5						
SXT TRIMETHOPRIM-SULFAMETHOXAZOLE (1/19) ¹	0.12-1						✓
VA VANCOMYCIN	0.12-0.5		✓	✓		✓	

		CLSI INTERPRETATION M.I.C. Criteria (µg/mL)			EUCAST INTERPRETATION M.I.C. Criteria (µg/mL)	
		S	I	R	S	R
<i>Bacillus</i> spp. (not <i>B. anthracis</i>)	CTX CEFOTAXIME	≤8	16-32	≥64		
	CRO CEFTRIAZONE	≤8	16-32	≥64		
	C CHLORAMPHENICOL	≤8	16	≥32		
	CD CLINDAMYCIN	≤0.5	1-2	≥4		
	E ERYTHROMYCIN	≤0.5	1-4	≥8		
	IMI IMIPENEM	≤4	8	≥16		
	LEV LEVOFLOXACIN	≤2	4	≥8		
	P PENICILLIN G	≤0.12	-	≥0.25		
	RD RIFAMPICIN	≤1	2	≥4		
	TE TETRACYCLINE	≤4	8	≥16		
	SXT TRIMETHOPRIM-SULFAMETHOXAZOLE (1/19) ¹	≤2	-	≥4		
	VA VANCOMYCIN	≤4	-	-		
<i>Corynebacterium</i> spp.	FEP CEFEPIME	≤1	2	≥4		
	CTX CEFOTAXIME	≤1	2	≥4		
	CRO CEFTRIAZONE	≤1	2	≥4		
	CD CLINDAMYCIN	≤0.5	1-2	≥4	≤0.5	>0.5

			CLSI INTERPRETATION M.I.C. Criteria (µg/mL)			EUCAST INTERPRETATION M.I.C. Criteria (µg/mL)	
			S	I	R	S	R
	DAP	DAPTOMYCIN	≤1	-	-		
	E	ERYTHROMYCIN	≤0.5	1	≥2		
	IMI	IMIPENEM	≤4	8	≥16		
	LNZ	LINEZOLID	≤2	-	-	≤2	>2
	MRP	MEROPENEM	≤4	8	≥16		
	P	PENICILLIN G	≤1	2	≥4	≤0.12	>0.12
	QDA	QUINUPRISTIN-DALFOPRISTIN	≤1	2	≥4		
	RD	RIFAMPICIN	≤1	2	≥4	≤0.06	>0.5
	TE	TETRACYCLINE	≤4	8	≥16	≤2	>2
	SXT	TRIMETHOPRIM-SULFAMETHOXAZOLE (1/19) ¹	≤2	-	≥4		
	VA	VANCOMYCIN	≤4	-	-	≤2	>2
<i>Erysipelothrix</i> spp.	FEP	CEFEPIME	≤1	-	-		
	CTX	CEFOTAXIME	≤1	-	-		
	CRO	CEFTRIAZONE	≤1	-	-		
	CD	CLINDAMYCIN	≤0.25	0.5	≥1		
	E	ERYTHROMYCIN	≤0.25	0.5	≥1		
	IMI	IMIPENEM	≤0.5	-	-		
	LEV	LEVOFLOXACIN	<2	-	-		
	MRP	MEROPENEM	≤0.5	-	-		
	P	PENICILLIN G	≤0.12	-	-		
<i>Lactobacillus</i> spp.	CD	CLINDAMYCIN	≤0.5	1-2	≥4		
	E	ERYTHROMYCIN	≤0.5	1-4	≥8		
	IMI	IMIPENEM	≤0.5	-	-		
	P	PENICILLIN G	≤8	-	-		
	VA	VANCOMYCIN	≤4	8-16	≥32		
<i>Listeria monocytogenes</i>	P	PENICILLIN G	≤2	-	-	≤1	>1
	SXT	TRIMETHOPRIM-SULFAMETHOXAZOLE (1/19) ¹	≤0.5	1-2	≥4	≤0.06	>0.06

Notes:

1. Value on the M.I.C. scale refers to the first component of the combination.

References

- CLSI M45-A, 2006. Methods for Antimicrobial Dilutions and Disk Susceptibility Testing of Infrequently Isolated or Fastidious Bacteria; Approved Guideline.
- CLSI M100-S25, 2015. Performance Standards for Antimicrobial Susceptibility Testing; Twenty-Fifth Informational Supplement.
- CLSI M7-A10, 2015. Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that Grow Aerobically; Approved Standard - Tenth Edition.
- EUCAST. Breakpoint tables for interpretation of MICs and zone diameters; Version 5.0, 2015.

MIC Test Strip, Patent No. 1395483

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