



MIC Test Strip Technical Sheet *Helicobacter pylori*

Specimen

Stomach biopsy, composed of samples from multiple sites.

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	72 h (or older) viable colonies are suspended in broth (Mueller Hinton or other) supplemented with 5% serum; adjust turbidity to 3 McFarland. Use 1 MIC Test Strip per 90 mm plate; position the handle of the strip against the edge of the plate.
Incubation	35 ± 2°C/ microaerobic (atmosphere produced by a gas-generating system suitable for <i>Campylobacter</i>), 72 hours (or longer i.e. until a visible inhibition ellipse is seen). For metronidazole, a 24 hours anaerobic pre-incubation followed by 48 hours or longer microaerobic incubation has been recommended by some investigators as a better option.
Reading precautions	<i>H. pylori</i> colonies are pin-point, translucent and difficult to see. Tilt the plate and/or use oblique light or a magnifying glass when reading the M.I.C. endpoint. Bactericidal drugs: interpret the M.I.C. at the point of complete inhibition of all growth, including microcolonies, hazes and isolated colonies. Bacteriostatic drugs: interpret the M.I.C. of hazy zone edges at 80% inhibition.

	Quality Control (MIC µg/mL)	CLSI INTERPRETATION MIC Criteria (µg/mL)			EUCAST INTERPRETATION MIC Criteria (µg/mL)		Example of ANTIBIOGRAM		
		<i>H. pylori</i> ATCC® 43504	<i>S. pneumoniae</i> ATCC® 49619	S	I	R		S	R
AML AMOXICILLIN	0.016-0.12						≤0.125	>0.125	✓
CLR CLARITHROMYCIN	0.016-0.12			≤0.25	0.5	≥1	≤0.25	>0.5	✓
MTZ METRONIDAZOLE	64-256						≤8	>8	✓
LEV LEVOFLOXACIN			0.5-2				≤1	>1	
RD RIFAMPICIN			0.016-0.06				≤1	>1	
TE TETRACYCLINE	0.12-1						≤1	>1	✓

Susceptible (S), Intermediate (I), Resistant (R)

Disclaimer: The table is intended for general guidance only and may not contain all the necessary information. Also reported interpretive criteria and QC MIC ranges might be out of date. Always current guidelines from CLSI and/or EUCAST should be consulted.

References

1. CLSI M100. Performance Standards for Antimicrobial Susceptibility Testing. 31st Edition, 2021.
2. EUCAST. Breakpoint tables for interpretation of MICs and zone diameters. Version 11.0, 2021.
3. Routine and extended internal quality control for MIC determination and disk diffusion as recommended by EUCAST. Version 11.0, 2021.
4. CLSI M07. Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobically. 11th Edition, 2018.
5. CLSI M45. Methods for Antimicrobial Dilutions and Disk Susceptibility Testing of Infrequently Isolated or Fastidious Bacteria; 3rd Edition, 2016.

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