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/ microaerophilic (atmosphere produced by a gas-generating system suitable for Campylobacter) 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 microaerophilic incubation has been recommended by some investigators as a better option.

**Reading precautions**
*H. pylori* 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.

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**Example of ANTIBIOGRAM**

<table>
<thead>
<tr>
<th></th>
<th>Quality Control</th>
<th>CLSI INTERPRETATION</th>
<th>EUCAST INTERPRETATION</th>
<th>Example of ANTIBIOGRAM</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>H. pylori ATCC® 43504</td>
<td>M.I.C. Criteria (µg/mL)</td>
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<td>140 mm petri dish</td>
</tr>
<tr>
<td><strong>AMX</strong> AMOXICILLIN</td>
<td>0.015-0.12</td>
<td>S</td>
<td>≤0.125</td>
<td>✓</td>
</tr>
<tr>
<td><strong>CLM</strong> CLARITHROMYCIN</td>
<td>0.015-0.12</td>
<td>≤0.25</td>
<td>&gt;0.25</td>
<td>✓</td>
</tr>
<tr>
<td><strong>MTZ</strong> METRONIDAZOLE</td>
<td>64-256</td>
<td>0.5</td>
<td>≥1</td>
<td>✓</td>
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<tr>
<td><strong>TET</strong> TETRACYCLINE</td>
<td>0.12-1</td>
<td>≤8</td>
<td>&gt;8</td>
<td>✓</td>
</tr>
</tbody>
</table>

**References**