# Breakpoints Eliminated From CLSI Document M100 Since 2010

<table>
<thead>
<tr>
<th>Antimicrobial Agent</th>
<th>Disk Content</th>
<th>Interpretive Categories and Zone Diameter Breakpoints, nearest whole mm</th>
<th>Interpretive Categories and MIC Breakpoints, µg/mL</th>
<th>M100 Edition in Which Breakpoints Were Last Included/Comments</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enterobacteriales</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Cephalothin (surrogate test for uncomplicated UTI)</td>
<td>30 µg</td>
<td>≥18</td>
<td>15-17</td>
<td>≤14</td>
<td>≤8</td>
</tr>
<tr>
<td>Nalidixic acid</td>
<td>30 µg</td>
<td>≥19</td>
<td>14-18</td>
<td>≤13</td>
<td>≤16</td>
</tr>
<tr>
<td>Piperacillin</td>
<td>100 µg</td>
<td>≥21</td>
<td>18-20</td>
<td>≤17</td>
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</tr>
<tr>
<td>Ticarcillin</td>
<td>75 µg</td>
<td>≥20</td>
<td>15-19</td>
<td>≤14</td>
<td>≤16</td>
</tr>
<tr>
<td><strong>Pseudomonas aeruginosa</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cefoperazone</td>
<td>75 µg</td>
<td>≥21</td>
<td>16-20</td>
<td>≤15</td>
<td>≤16</td>
</tr>
<tr>
<td>Cefotaxime</td>
<td>30 µg</td>
<td>≥23</td>
<td>15-22</td>
<td>≤14</td>
<td>≤8</td>
</tr>
<tr>
<td>Ceftizoxime</td>
<td>30 µg</td>
<td>≥20</td>
<td>15-19</td>
<td>≤14</td>
<td>≤8</td>
</tr>
<tr>
<td>Ceftiraxone</td>
<td>30 µg</td>
<td>≥21</td>
<td>14-20</td>
<td>≤13</td>
<td>≤8</td>
</tr>
<tr>
<td>Moxalactam</td>
<td>30 µg</td>
<td>≥23</td>
<td>15-22</td>
<td>≤14</td>
<td>≤8</td>
</tr>
<tr>
<td>Ticarcillin</td>
<td>75 µg</td>
<td>≥24</td>
<td>16-23</td>
<td>≤15</td>
<td>≤16</td>
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<tr>
<td><strong>Acinetobacter spp.</strong></td>
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<tr>
<td>Mezlocillin</td>
<td>75 µg</td>
<td>≥21</td>
<td>18-20</td>
<td>≤17</td>
<td>≤16</td>
</tr>
<tr>
<td>Ticarcillin</td>
<td>75 µg</td>
<td>≥20</td>
<td>15-19</td>
<td>≤14</td>
<td>≤16</td>
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<tr>
<td><strong>Other Non-Enterobacteriales</strong></td>
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<td>Carbenicillin</td>
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<tr>
<td>Mezlocillin</td>
<td>N/A</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>≤16</td>
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<tr>
<td>Ticarcillin</td>
<td>N/A</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>≤16</td>
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<tr>
<td><strong>Staphylococcus spp.</strong></td>
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<tr>
<td>Oxacillin (S. aureus/ S. lugdunensis)</td>
<td>1 µg</td>
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<td>11-12</td>
<td>≤10</td>
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</tr>
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</table>

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<table>
<thead>
<tr>
<th>Antimicrobial Agent</th>
<th>Disk Content</th>
<th>Interpretive Categories and Zone Diameter Breakpoints, nearest whole mm</th>
<th>Interpretive Categories and MIC Breakpoints, µg/mL</th>
<th>M100 Edition in Which Breakpoints Were Last Included/Comments</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staphylococcus spp. (Continued)</strong></td>
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<tr>
<td>Amoxicillin-clavulanate</td>
<td>20/10 µg</td>
<td>≥ 20 - 19</td>
<td>≤ 4/2 - 8/4</td>
<td>M100-S22</td>
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<tr>
<td>Ampicillin-sulbactam</td>
<td>10/10 µg</td>
<td>≥ 15 12-14</td>
<td>≤ 8/4 16/8 32/16</td>
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<tr>
<td>Piperacillin-tazobactam</td>
<td>100/10 µg</td>
<td>≥ 18 - 17</td>
<td>≤ 8/4 - 16/8</td>
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<tr>
<td>Ticarcillin-clavulanate</td>
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<td>≥ 23 - 22</td>
<td>≤ 8/2 - 16/2</td>
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<tr>
<td>Cefaclor</td>
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<tr>
<td>Cefamandole</td>
<td>30 µg</td>
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<tr>
<td>Cefazolin</td>
<td>30 µg</td>
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<td>≤ 8 16 32</td>
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<tr>
<td>Cefepime</td>
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<tr>
<td>Cefdinir</td>
<td>5 µg</td>
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<tr>
<td>Cefmetazole</td>
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<tr>
<td>Cefonicid</td>
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<tr>
<td>Cefoperazone</td>
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<td>≤ 16 32</td>
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<tr>
<td>Cefotaxime</td>
<td>30 µg</td>
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<td>Cefotetan</td>
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<td>Cefpodoxime</td>
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<td>Cefprozil</td>
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<td>Ceftazidime</td>
<td>30 µg</td>
<td>≥ 18 15-17</td>
<td>≤ 8 16 32</td>
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<tr>
<td>Ceftizoxime</td>
<td>30 µg</td>
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<tr>
<td>Ceftiraxone</td>
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<td>Cefuroxime (oral)</td>
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<td>Cefuroxime (parenteral)</td>
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<td>Cephalothin</td>
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<tr>
<td>Loracarbef</td>
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<td>Moxalactam</td>
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<tr>
<td>Doripenam</td>
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<td>≤0.5</td>
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<tr>
<td>Ertapenem</td>
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<td>≤ 2 4 8</td>
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<tr>
<td>Imipenem</td>
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<tr>
<td>Meropenem</td>
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<tr>
<td>Amikacin</td>
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<td>M100, 27th ed.</td>
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<tr>
<td>Kanamycin</td>
<td>30 µg</td>
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<td>According to current guidelines, if an aminoglycoside is warranted, only gentamicin in combination with another active drug should be used for treatment of methicillin-resistant staphylococcal infections; none of these other aminoglycosides should be considered.</td>
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<tr>
<td>Netilmicin</td>
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<td>≤ 8 16 32</td>
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</tr>
<tr>
<td>Tobramycin</td>
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<td>≥ 15 13-14</td>
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<tr>
<td>Telithromycin</td>
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<td>≥ 22 19-21</td>
<td>≤ 1 2 4</td>
<td>M100, 28th ed.</td>
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</table>

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<tbody>
<tr>
<td>Anaerobes</td>
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<td>S</td>
<td>I</td>
<td>R</td>
<td>S</td>
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<td>Mezlocillin</td>
<td>N/A</td>
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<td>–</td>
<td>–</td>
<td>≤ 32</td>
</tr>
<tr>
<td>Ticarcillin</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>≤ 32</td>
</tr>
<tr>
<td>Piperacillin</td>
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<td>–</td>
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<td>S</td>
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<td>R</td>
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<td>Neisseria gonorrhoeae</td>
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<td>I</td>
<td>R</td>
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<td>26-30</td>
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<tr>
<td>Cefmetazole</td>
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<td>28-32</td>
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<td>Ceftazidime</td>
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<td>Cefetamet</td>
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<td>Lomefloxacin</td>
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</tbody>
</table>

Abbreviations: I, intermediate; MIC, minimal inhibitory concentration; R, resistant; S, susceptible; UTI, urinary tract infection.

### References


