Zone diameter breakpoints and disk QC criteria for *Haemophilus influenzae* and ceftolozane-tazobactam

Addendum (June 2020) to EUCAST breakpoint tables v. 10.0
Breakpoints to be included in EUCAST breakpoint tables v 11.0, January 2021

EUCAST clinical MIC breakpoints for *H. influenzae* and ceftolozane-tazobactam (pneumonia) were set to S≤0.5, R>0.5 mg/L (EUCAST Breakpoint Tables v 10.0, January 2020). This addendum presents the corresponding zone diameter breakpoints and disk quality control (QC) criteria for ceftolozane-tazobactam 30-10 µg.

Antimicrobial susceptibility testing methodology

**Disk diffusion**

Disk diffusion according to EUCAST methodology for fastidious organisms on Mueller-Hinton agar with 5% defibrinated horse blood and 20 mg/L beta-NAD (MH-F), see EUCAST Disk Diffusion Manual.

Zone diameter breakpoints for ceftolozane-tazobactam have been set by EUCAST as follows

<table>
<thead>
<tr>
<th>Organisms</th>
<th>Disk content (µg)</th>
<th>Zone diameter breakpoint (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>S ≥</td>
</tr>
<tr>
<td><em>Haemophilus influenzae</em> (pneumonia)</td>
<td>30-10</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R &lt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ATU¹</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22-23</td>
</tr>
</tbody>
</table>

¹ Area of Technical Uncertainty, see sheet “Technical uncertainty” in EUCAST Breakpoint Tables.

Quality control ranges and targets to be used when testing *H. influenzae* with ceftolozane-tazobactam

<table>
<thead>
<tr>
<th>QC strains</th>
<th>Disk content (µg)</th>
<th>Inhibition zone diameter (mm)</th>
<th>Target</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Haemophilus influenzae</em> ATCC 49766¹</td>
<td>30-10</td>
<td>27</td>
<td>24-30</td>
<td></td>
</tr>
<tr>
<td><em>Klebsiella pneumoniae</em> ATCC 700603¹²</td>
<td>30-10</td>
<td>21</td>
<td>17-25</td>
<td></td>
</tr>
</tbody>
</table>

¹ The ceftolozane component is checked with the susceptible strain *Haemophilus influenzae* ATCC 49766 and the tazobactam component with the beta-lactamase-producing strain *Klebsiella pneumoniae* ATCC 700603.

² *Klebsiella pneumoniae* ATCC 700603 should be tested on un-supplemented Mueller-Hinton agar according to EUCAST methodology for non-fastidious organisms.
MIC-zone diameter correlates for *H. influenzae* and ceftolozane-tazobactam

**Ceftolozane-tazobactam 30-10 µg vs. MIC**

*H. influenzae*, 94 isolates (278 correlates)

**Breakpoints**

MIC: $S \leq 0.5$, $R > 0.5$ mg/L  
Zone diameter: $S \geq 23$, $R < 23$ mm  
ATU: 22-23 mm

**No of observations vs. Inhibition zone diameter (mm)**

- MIC (mg/L)
- 8
- 4
- 2
- 1
- 0.5
- 0.25
- 0.125
- 0.06