

## 2. PSEUDOMONAS SPP.

MH agar, McFarland 0.5, incubation air 35°C ± 1°C, incubation time 18h ± 2 h.

QC strains: *Pseudomonas aeruginosa* ATCC 27853, *Escherichia coli* ATCC 35218 (piperacillin-tazobactam).

### • STANDARD PANEL (all specimen types)

**MDRO setting:** resistance to ≥ 3 drug classes (aminoglycosides, third and fourth generation cephalosporins, fluoroquinolones) or carbapenemase positive strain (e.g: VIM).

PRIMARY TESTING	SUGGESTED REPORTING (NON MDRO SETTING)	SUGGESTED REPORTING (MDRO SETTING)
Ticarcillin <sup>1</sup> .		
Ticarcillin-clavulanate <sup>1</sup> .		
Piperacillin-tazobactam.	+	+
Ceftazidime.	+	+
Cefepime.	+	+
Imipenem.		
Meropenem.	+	+
Ciprofloxacin <sup>2</sup> or levofloxacin <sup>2</sup> .	+	+
Amikacin.	+	+
Gentamicin.	+	+

SUPPLEMENTAL TESTING	SUGGESTED REPORTING (NON MDRO SETTING)	SUGGESTED REPORTING (MDRO SETTING)
Aztreonam		+
Ceftolozane-tazobactam <sup>6</sup> .		+
Ceftazidime-avibactam <sup>7</sup> .		+
Tobramycin <sup>3</sup> .	+	+
Colistin <sup>4</sup> .		+
Fosfomycin <sup>5</sup> .		+

- Optional: may be useful for the screening of acquired enzymatic resistance (e.g. carbapenemases).
- Results cannot be extrapolated from ciprofloxacin to levofloxacin or vice versa, fluoroquinolone drug tested should match with the molecule used in the clinical setting.
- Optional: topical use in specific settings (infections in cystic fibrosis, ocular infections).
- Colistin susceptibility result should be verified by broth microdilution if considered for treatment.
- No EUCAST clinical breakpoint, use a fosfomycin (+G6P) MIC method; can be used in combination with other agents for the treatment of infections caused by wild type isolates (ECOFF = 128 µg/ml).
- Ceftolozane-tazobactam (not commercially available in Belgium) retains an activity against most multidrug resistant *Pseudomonas aeruginosa* isolates (including ceftazidime, cefepime and carbapenem resistance) not mediated by the presence of carbapenemases (i.e: AmpC and efflux pump overproducers, OprD porin deficiency/cell wall impermeability)
- Ceftazidime-avibactam is inactive against MBL producing *Pseudomonas aeruginosa* (i.e: VIM or IMP) and has limited in vitro activity against non carbapenemase producing multidrug resistant *Pseudomonas aeruginosa*.