

**S4 Table. MIC values from CellDirector 3D and Etest for quality control strains.**

MIC values for QC strains determined by Etest and CellDirector 3D from pure cultures at the optimal inoculum size.

Species, antibiotic	Replicate	Etest	CellDirector 3D		
		MIC (mg/L)	MIC (mg/L)	Mean MIC (SD) (mg/L)	Inoculum (CFU/mL)
<i>S. aureus</i> (VSSA), vancomycin	1	1.5	1.30	1.4 (0.45)	5.0·10 <sup>5</sup>
	2	1.5	1.98		2.8·10 <sup>5</sup>
	3	1.5	0.90		2.2·10 <sup>5</sup>
<i>P. aeruginosa</i> , ciprofloxacin	1	0.25	0.38	0.39 (0.014)	1.1·10 <sup>6</sup>
	2	0.125	0.37		1.6·10 <sup>6</sup>
	3	0.19	0.41		4.2·10 <sup>5</sup>
	4	0.19			
<i>P. aeruginosa</i> , ceftazidime	1	1	0.94	1.0 (0.050)	7.2·10 <sup>5</sup>
	2	1	1.0		9.0·10 <sup>5</sup>
	3	0.75	1.0		8.4·10 <sup>5</sup>
<i>E. coli</i> , ciprofloxacin	1	0.008	0.012	0.013 (0.0014)	2.6·10 <sup>5</sup>
	2	0.006	0.014		3.3·10 <sup>5</sup>
	3	0.008	0.011		4.7·10 <sup>5</sup>
<i>E. coli</i> , ceftazidime	1	0.19	0.060	0.11 (0.034)	4.1·10 <sup>5</sup>
	2	0.125	0.12		3.2·10 <sup>5</sup>
	3	0.19	0.14		3.3·10 <sup>5</sup>
<i>E. coli</i> , tigecycline	1	0.094	0.14	0.13 (0.013)	4.6·10 <sup>5</sup>
	2	0.19	0.14		3.8·10 <sup>5</sup>
	3	0.125	0.11		4.5·10 <sup>5</sup>
	4	0.19			
<i>K. pneumoniae</i> , ciprofloxacin	1	0.008	0.0025	0.0046 (0.0016)	4.4·10 <sup>5</sup>
	2	0.004	0.0065		4.2·10 <sup>5</sup>
	3	0.006	0.0049		4.2·10 <sup>5</sup>
	4	0.006			