Background: We conducted a study to establish MIC quality control (QC) ranges for WCK 4282 (high-dose cepofepime-tazobactam) with tazobactam at a fixed concentration of 0.03 mg/L, using the reference broth microdilution (BMD) method. Cepofepime-tazobactam is under clinical development for the treatment of serious Gram-negative infections.

Materials and methods: An eight-laboratory study design followed CLSI M31-A3 guidelines. Seven QC strains were tested (Escherichia coli ATCC 25922, E. coli ATCC 27853, Klebsiella pneumoniae ATCC 70063, Pseudomonas aeruginosa ATCC 27853, Haemophilus influenzae ATCC 44347, Staphylococcus aureus ATCC 49169 and Staphylococcus epidermidis ATCC 29213), using three media lots (three manufacturers) of cation-adjusted Mueller-Hinton broth (CA-MHB). Haemophilus Test Medium (HTM) and CA-MHB supplemented with 0.2% cysteine were used for each QC organism generating 240 BMD values (QC strain x dilution x result). Colony counts were performed on each of the QC strains tested (count ≤0.015). Good inter-laboratory reproducibility with the following CLSI QC reference strains was noted: Escherichia coli ATCC 25922, Klebsiella pneumoniae ATCC 70063, Pseudomonas aeruginosa ATCC 27853, Haemophilus influenzae ATCC 44347, Staphylococcus aureus ATCC 49169 and Staphylococcus epidermidis ATCC 29213. This reference strain would be necessary to QC the tazobactam component of the cepofepime-tazobactam combination for β-lactamase inhibition.

Conclusions: The recently approved CLSI breakpoints for WCK 4282 were utilized for this study, and recently published in Tables 1A and 1B of the M100-S26 document.

Acknowledgements: The CLSI subcommittee on Antimicrobial Susceptibility Testing approved WCK 4282 (cepofepime-tazobactam) QC ranges for these 7 reference strains in January 2015, and recently published them in Tables 1A and 1B of the M100-S26 document.

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