**Determination of Appropriate Disk Mass for Disk Diffusion Testing of Delafloxacin**

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**ABSTRACT**

Background: In a recent study (2010), an investigator recommended a disk solution with delafloxacin at a mass of 1.0 mg per disk. However, based on the inoculum, this choice may not be appropriate. The purpose of this study was to determine the appropriate disk mass for delafloxacin.

Methods: Delafloxacin disks were prepared at 1.0 mg per disk. The inoculum was prepared from a 24-hour broth culture of two bacterial species: E. coli (ATCC 25922) and S. aureus (ATCC 29213). The inoculum was then poured into 100-mm plastic Petri dishes, creating a nonuniform, uncontrolled inoculum. A series of four disk masses were used for testing: 0.5 mg, 1.0 mg, 1.5 mg, and 2.0 mg. The plates were incubated at 37°C for 24 hours. The diameter of the inhibition zone was measured to determine the appropriate disk mass.

Results: The appropriate disk mass for delafloxacin is 1.0 mg per disk. The 1.0 mg mass resulted in a more uniform and consistent inhibition zone diameter compared to the other masses tested. The 0.5 mg mass resulted in a nonuniform, uncontrolled inoculum, whereas the 1.5 mg and 2.0 mg masses resulted in inhibition zones that were too large, making it difficult to accurately measure.

Conclusions: The appropriate disk mass for delafloxacin is 1.0 mg per disk. This recommendation is based on the inoculum used in the study, and it is recommended that further studies be conducted to confirm these findings.

**REFERENCES**

