Background: MIC data from MicroScan Dried Gram-negative MIC (MSDGN) Panels with piperacillin/tazobactam were evaluated with CLSI M100 ED3 assays. The study was performed with reference isolates of Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa from a multicenter study. The results were compared to results obtained with frozen broth microdilution panels prepared according to CLSI methodology. Material and Methods: The study included all 683 clinical isolates tested using the Prompt and turbidity methods of inoculation during the combined phases of efficacy and challenge. MSDGN panels were evaluated at three clinical sites and the results compared to values obtained using the MSDGN panels to MICs utilizing a CLSI broth microdilution reference method. The results of the six replicates for each inoculation method (on the MSDGN MIC panels and singly on the frozen WalkAway system) were analyzed by the WalkAway system, autoSCAN 4 instrument, and visually. Quality Control: When compared to frozen reference panel results, essential and categorical agreements for all isolates tested in efficacy and challenge are as follows: (1) - 3% agreement values obtained using the MSDGN MIC panel combination. When compared to frozen reference panels and P. rettgeri, A. aeruginosa ATCC 35218 and P. rettgeri, A. aeruginosa ATCC 27853 E. coli ATCC 25922 E. coli ATCC 27853 (Tables 6 and 7). Overall quality control rates were >9% for each inoculation method used on the frozen MIC panels for the Prompt method, >95% for the frozen reference panel, which were read manually with turbidity inoculation method. The number of replicates and percentage within range is indicated in Tables 7 and 8. Variations in total number tested for each method are due to technical error elimination. Table 6. Quality Control – Dried Test Results

ABSTRACT

Multicenter Assessment of the Accuracy of MIC Results for Piperacillin/Tazobactam with MicroScan Dried Gram Negative Panels using CLSI Breakpoints


UC Davis Geffen School of Medicine, Los Angeles, CA, 2 Loyola University Medical Center, Maywood, IL, 3 Clinical Microbiology Institute, Wilmington, OR, and 4 Beckman Coulter, West Sacramento, CA

METHODS (Continued)

RESULTS

Quality Control Expected Results (CLSI M100 ED33)

Efficacy (Tables 2 and 3)

A total of 683 Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa clinical isolates tested among three sites. MSDGN panels were inoculated using the turbidity inoculation method. Essential Agreement for all isolates combined between the frozen reference panel and the frozen reference panel was 98.0% (66/683) for manual read method, 96.1% (656/683) for WalkAway System, 96.1% (656/683) for autoSCAN 4 instrument using the turbidity inoculation method.

Conclusions: Piperacillin/tazobactam CLSI MIC results for gram-negative clinical isolates obtained with the MSDGN product were well with MICs obtained using reference panels with updated CLSI interpretive criteria in this multicenter study.

Multicenter Study: MSDGN MIC panels were tested concurrently with a CLSI frozen broth microdilution reference panel at three sites on a total of 683 isolates. Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa isolates with CLSI interpretive breakpoints.

INTRODUCTION

A multicenter study was performed to evaluate the performance of a MicroScan Dried Gram-negative MIC panel with piperacillin/tazobactam using Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa isolates with CLSI interpretive breakpoints.

RESULTS

Quality Control Expected Results (CLSI M100 ED33)

Efficacy (Tables 2 and 3)

A total of 683 Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa clinical isolates tested among three sites. MSDGN panels were inoculated using the turbidity inoculation method. Essential Agreement for all isolates combined between the frozen reference panel and the frozen reference panel was 98.0% (66/683) for manual read method, 96.1% (656/683) for WalkAway System, 96.1% (656/683) for autoSCAN 4 instrument using the turbidity inoculation method.

Conclusions: Piperacillin/tazobactam CLSI MIC results for gram-negative clinical isolates obtained with the MSDGN product were well with MICs obtained using reference panels with updated CLSI interpretive criteria in this multicenter study.

Multicenter Study: MSDGN MIC panels were tested concurrently with a CLSI frozen broth microdilution reference panel at three sites on a total of 683 isolates. Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa isolates with CLSI interpretive breakpoints.

INTRODUCTION

A multicenter study was performed to evaluate the performance of a MicroScan Dried Gram-negative MIC panel with piperacillin/tazobactam using Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa isolates with CLSI interpretive breakpoints.

RESULTS

Quality Control Expected Results (CLSI M100 ED33)

Efficacy (Tables 2 and 3)

A total of 683 Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa clinical isolates tested among three sites. MSDGN panels were inoculated using the turbidity inoculation method. Essential Agreement for all isolates combined between the frozen reference panel and the frozen reference panel was 98.0% (66/683) for manual read method, 96.1% (656/683) for WalkAway System, 96.1% (656/683) for autoSCAN 4 instrument using the turbidity inoculation method.

Conclusions: Piperacillin/tazobactam CLSI MIC results for gram-negative clinical isolates obtained with the MSDGN product were well with MICs obtained using reference panels with updated CLSI interpretive criteria in this multicenter study.

Multicenter Study: MSDGN MIC panels were tested concurrently with a CLSI frozen broth microdilution reference panel at three sites on a total of 683 isolates. Acinetobacter spp., Enterobacter spp., Other Non-Enterobacteriaceae, and Pseudomonas aeruginosa isolates with CLSI interpretive breakpoints.