

COMPARISON OF MICROSCAN WALKAWAY 40 PLUS AND BRUKER MALDI BIOTYPER SYSTEMS FOR IDENTIFICATION OF ENTERIC PATHOGENS IN KENYA

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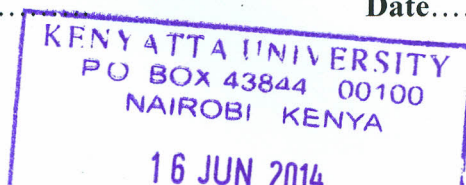
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ABSTRACT

Enteric bacteria pathogens is a group of microbes that are responsible for causing bacterial gastroenteritis which is a condition that is characterized by diarrhea, vomiting, abdominal pain and cramping. The pathogens are a public health concern due to the increased rates of morbidity and mortality. In a clinical microbiology laboratory, the current method of identifying bacterial isolates is mainly based on phenotypic characterization and biochemical testing. These techniques are costly and time-consuming so new technologies are now being considered for pathogen identification and susceptibility profiling. This study will compare the performance and agreement of the Bruker MALDI Biotyper and the MicroScan WalkAway 40 Plus technologies for diagnosing enteric pathogens. A total of 104 bacterial isolates obtained from previously collected stool samples used for surveillance of enteric pathogens will be randomly selected from the Microbiology Hub Laboratory sample archive. A fresh culture of the bacteria will be generated and then characterized using the Bruker MALDI Biotyper and MicroScan WalkAway analyzers. Results from the two systems will be compared and the outcome indicators to be assessed will include turnaround time, system capability, test and acquisition cost and percent agreement at the genus and species level. Validation of the Bruker MALDI Biotyper and MicroScan WalkAway 40 Plus techniques will result in introduction of methods that creates scope for rapid, reliable, and cost savings strategies.