

TITLE: IDENTIFICATION AND GROWTH CURVE OF ISOLATED AIR BACTERIA IN ICU OF SANTA CASA HOSPITAL, CAMPO GRANDE, MS

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SUMMARY:

Hospital infections have been a major public health problem since it is possible to find bacteria on any surface, including suspended in the air. The assessment of air quality in health facilities is totally linked to ensuring the health of employees, patients and visitors, as bacteria present in the ambient air can settle on any surface, causing a contamination of the place. Therefore, the objective of this study was to identify and verify the growth curve of airborne microorganisms suspended in the ICUs of Santa Casa de Campo Grande, MS. The technique of plate exposure was used for the collection of samples and biochemical tests to identify bacterial species. In total, the growth of seven colonies was observed. Five of these colonies were identified as *Staphylococcus* spp, one as *Staphylococcus aureus* and the other as *Acinetobacter* spp. Then, the colony forming unit (CFU) was used to standardize the growth curve of each species. While *Staphylococcus* reached the stationary phase between 450 and 510 minutes, *Acinetobacter* spp reached in only 330 minutes. Therefore, through the results, it was observed that *Acinetobacter* spp had a significantly faster growth than *Staphylococcus* spp and *S. aureus*. The data obtained in this study point to alarming factors in public health, since the presence of bacteria of the genus *Acinetobacter* present in the air, for example, is one of the main responsible for causing respiratory infections in hospitals of hospitalized immunosuppressed patients, in addition this genus usually has high resistance to several types of antibiotics, generating an increase in the patient's hospitalization time or until death.

Keywords: *Acinetobacter*; *Staphylococcus*; infection.