TITLE: PRESERVATION OF BACTERIA OF CLINICO INTEREST IN CONVENTIONAL COOLER

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ABSTRACT:

The pure cultures of microorganisms are extremely important for teaching activities and in the practice of clinical analysis due to the unique genotypic and phenotypic characteristics. In order for this set of characteristics not to be altered by successive mutations, the preservation methods that vary according to the quality and the time intended to preserve the microorganism are used. This study aimed to evaluate the efficacy of preserving bacterial isolates by freezing (-6ºC) in a conventional refrigerator. Bacterial inoculum of *Staphylococcus aureus, Streptococcus agalactiae, Enterococcus faecalis, Pseudomonas aeruginosa, Escherichia coli* and *Klebsiella pneumoniae* were standardized in the scales 0.5, 1 and 2 of McFarland, in BHI broth. Aliquots of 1,2 mL were transferred to sterile microtubes containing 300 µL of glycerol at 20%, which were frozen in a freezer/conventional refrigerator for a period of seven months. The bacterial viability (morphology, growth, biochemical parameters) was verified monthly after defrosting in increasing stages of temperature with intervals of 24 hours between each stage: refrigerator (3±1°C), ambient temperature (28±1°C) and incubation at 37°C. The reactivation of the bacteria was carried out in BHI broth and later in Muller-Hinton agar. The results show that all bacteria remained viable, in all aspects, for a period of seven months, without morphological alterations, characteristics of growth and physiological. Thus, the preservation of bacteria of clinical interest in conventional freezer is an alternative for the maintenance of of microbiological resources, eliminating the high investment in advanced technologies and also facilitating the availability of them for teaching, research, diagnosis, quality testing and other activities.

Keywords: Bacterial viability, Preservation, Refrigerator

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