

TITLE: MICROBIOLOGICAL TEST FOR MESOPHILIC COUNTING AND RESEARCH OF *Escherichia coli* IN HOMEMADE FORMULATIONS BASED ON *Acanthospermum hispidum* CONTAINING DIFFERENT NATURAL AND CHEMICAL PRESERVATIVES

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ABSTRACT: Homemade syrup formulations are products of traditional use, most used in Brazilian popular medicine. Medicinal herbal products are susceptible to contamination from collection to handling, so there is a need to add preservatives so as not to compromise product stability, therapeutic efficacy or consumer safety. The study evaluated the antimicrobial activity of the natural aromas of cinnamon and clove, as well as propolis, facing the association of chemical preservatives Nipagin® and Nipazol® in six samples containing *Acanthospermum hispidum*, handled according to the recipe of home medicine. The objective was to investigate the presence of mesophilic bacteria and *Escherichia coli* in the samples, after six months of preparation, containing the different natural and chemical preservatives. The methodology used for counting viable microorganisms was pour plate, followed by the *Escherichia coli* pathogen search, in selective culture medium described in the 5th edition of the Brazilian Pharmacopeia. The six samples showed bacterial counts within the limits established by the Brazilian Pharmacopeia when using the pour plate technique and the test for *E. coli* showed the absence of the specific microorganism in a selective culture medium. Considering the obtained results, we verified that the samples analyzed after six months of production were within the microbial limits established for non-sterile products of natural origin.

Keywords: Pharmaceutical Preservatives, *Escherichia coli*, Medicinal Plants

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