

TITLE: MICROBIOLOGICAL EVALUATION OF THE DRY EXTRACT SYAGRUS CEARENSIS (COCO CATOLÉ) AGAINST MICROORGANISMS OF INTEREST IN THE CLINICAL AREA.

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ABSTRACT:

Syagrus cearensis N. belongs to the Arecaceae family, popularly known as coco catole or coco babão. It is a little studied species, and most of its reports are made by the population that uses the fruit for the treatment of conjunctivitis and gastroenteritis. Therefore, the objective was to microbiologically evaluate the dry crude extract (DCE) of the coco catole bark in relation to the inhibitory potential and in relation to the minimum inhibitory concentration (MIC). The method used for the minimal inhibitory determination (MIC) of coco catole extracts followed the well technique performed with the following microorganisms: *Escherichia coli*, *Staphylococcus aureus*, *Candida albicans* previously suspended in saline solution. In the seeded plates the separate suspensions were used to inoculate the entire surface of the sterile MüllerHinton agar plates. Four 6mm diameter wells were made, for the insertion of 50µL of the extract in different percentage concentrations, 100%, 50%, 25% and 12.5% related to the initial sample. The plates were then incubated at 37°C for 24 hours. The same techniques used for the preparation of plates, wells and dilutions were performed for the standard antibiotic Amoxicillin, for bacteria and Fluconazole for *Candida*, used as a control. Likewise, to determine the minimum concentration adhesion (MIC) the microorganism colonies were suspended in saline solution. Then, 1 µL of suspension was transferred to a sterile tube containing Müller-Hinton broth and 0.5 mL of plant extract. This procedure was repeated individually for each extract concentration. Then, the tubes were placed at an angle of 30° in a botanical incubator at 37 °C for 18 hours for further analysis by adding fuchsin. The results for MIC showed inhibition at concentrations of 100%, 50%, 25%, 12.5% for the test with *E. coli* and *S. aureus*, however no inhibition halo was formed for any of the concentrations tested ahead of *Candida albicans*. For MICA, the extract showed activity at all concentrations for *E. coli* and *S. aureus*, with no biofilm formation present. The result obtained presupposes that the rind of the *S. cearensis* fruit is promising for microbiological studies in front of bacteria, so that in its lower concentration there is an inhibition of bacterial growth, which can relate our results with popular knowledge.

Keywords: Antimicrobial activity, Microbiology, *Syagrus cearensis*.

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