

**TITLE:** ANTIMICROBIAL ACTIVITY EVALUATION ON THE ACTION OF HIBISCUS FLOWER EXTRACT (*Hibiscus rosa-sinensis* L.)

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**ABSTRACT:**

*Hibiscus rosa-sinensis* L. is a plant long used as functional food and in traditional medicine. The *Hibiscus* species have been largely used in the manufacture of teas because they help in the process of reduction, they have anti-inflammatory action and they have potent antibacterial action. In recent years, interest in derivative products of medicinal plants that have bioactive compounds has been intensified. The present work searched to evaluate the antibacterial action of crude metanolic extracts of *Hibiscus rosa-sinensis* L. against different Gram-positive and Gram-negative bacteria such as *Staphylococcus aureus*, *Bacillus subtilis*, *Escherichia coli* and *Enterococcus faecalis*. The flowers of *H. rosa-sinensis* L. were collected in an area of the Federal University of Amazonas (UFAM), and submitted to drying through the kiln and later to different extraction processes of their organic compounds such as Soxhlet, Ultrasound and Static. The yields obtained at the end of each extraction were 8.9 g; 8.3 g and 8.2 g respectively. The microorganisms were activated in Mueller Hinton Broth and then inoculated in plates with Mueller Hinton agar medium. Concerning antimicrobial activity, it was done in triplicate, the antibiotic used was Amoxiline for negative control and DMSO for positive control. It was observed in the results that the three different extracts presented antibacterial activity against *Bacillus subtilis* bacteria. Posteriorly, analyzes of the active extract were performed in Thin Layer Chromatography (TLC) and Mass Spectrometry (MS) for a better chemical understanding of its compounds. Towards these results, it is possible to recognize that extracts of *Hibiscus rosa-sinensis* have an antimicrobial action potential, and may become a possible treatment in the fight against diseases associated with this type of bacteria.

**Keywords:** *Hibiscus rosa-sinensis*, organic extracts, antibacterial activity.

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