

TITLE: PRODUCTION OF NA *Eugenia uniflora* L. CREAM WITH ANTIBACTERIAL ACTION AGAINST ACNE

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ABSTRACT:

The usage of medicinal plants on the production of medicine represents a considerable part of the innovations on the pharmaceuticals market. Herbal medicines have active substances that are chemically characterized substances, such as the alkaloids and flavonoids that are responsible for the pharmacological action and the therapeutic effects they have. Brazil is the largest carrier of plant biodiversity in the world, and has a great ethnic and cultural diversity that conserves a vast traditional knowledge to the use of medicinal plants. Even though, the studies on the usage of medicine of natural origin have the final objective of turning common sense into scientific knowledge. Due to this, researchers focused on developing *Eugenia Uniflora Extract* based creams with anti-bacteria properties against acne. The extract obtainment process is performed through maceration by alcohol solution, followed by the evaporation of the solvent using a rotary evaporator, followed by antimicrobial effect tests (extract diffusion on plates and the measurement of inhibiting halos), toxicity tests (counting of *Artemia Salina*) and stability tests (exposure of the formulation to different temperatures), obtaining relevant results of antimicrobial activities against pathogens commonly found on acne and of epidemiologic relevance, with low toxicity display. It was observed that the crude extract of *Eugenia uniflora* L. expressed antibacterial action as well as in gram negative bacteria, as evidenced by *Escherichia coli* and *Pseudomonas aeruginosa*, and in gram positive bacteria, such as *Staphylococcus aureus*, *Propionibacterium acnes* and *Streptococcus*. Therefore, the formulation showed satisfactory results in relation to its antibacterial activity against species of microorganisms commonly found in infections, mainly in the skin, the main purpose of the tests. In addition to presenting low toxicity, providing greater security to the user, thus complementing popular knowledge with scientific knowledge regarding the species tested. With respect to the formulation produced, it has been contacted that it is suitable for use as soon as it is stored correctly. It was evidenced that *Eugenia uniflora* L. is a favorable option in the treatment of certain infections like acne, not excluding the necessity of the development of clinical tests according to the current legislation.

Keywords: acne vulgaris; eugenia; toxicity tests.

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