

**Title: EVALUATION OF BIOLOGICAL ACTIVITIES AND PHYTOCHEMICAL STUDY OF**  
*Commiphora leptophloeos* (MART.) J. B. GILLETT

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**Abstract:**

The occurrence of multiresistant microorganisms is a global concern, once it has increased the morbidity and mortality rate, besides it raises treatment costs of infections caused by it. Such problem has taken the scientists to search for options of treatment in products of natural origin. *Commiphora leptophloeos* (Bursaceae), known popularly as imburana, is a plant species used on traditional medicine of Brazilian semi-arid region against several illnesses, among which stand out the infectious one. However, very little is known about its phytochemical and pharmacological properties. This article intends to carry out a phytochemical study and evaluate biological activities of *C. leptophloeos*. To collect the extract it was used the bark of the plant, ethanol 96° as solvent and extraction assisted by ultrasound of 40°C per 60 minutes. The presence of several secondary metabolics was revealed through qualitative phytochemical *screening*, and the levels of polyphenols and flavonoids determined by spectrophotometry UV-VIS. Tests on microbial susceptibility, by micro-dilution were carried out, before the strains of *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Streptococcus mutans*, *S. oralis*, *S. salivarius*, *Candida albicans*, *C. guilliermondii* e *C. krusei*, besides the acute toxicity on nauplii of *Artemia salina*. The qualitative phytochemical *screening* revealed the presence of phenolic compounds, tannins, anthocyanins, flavonoids, saponins, alkaloids and albumins. The contents of polyphenols and flavonoids were  $29,44 \pm 1,03$  e  $2,209 \pm 0,10 \mu\text{g}\cdot\text{g}^{-1}$ , respectively. The extract presented activity before *S. aureus* (CIM =  $125 \mu\text{g}\cdot\text{mL}^{-1}$ ) and moderate toxicity on *A. salina* ( $\text{DL}_{50} = 885,74 \mu\text{g}\cdot\text{mL}^{-1}$ ). Although the antimicrobial activity displayed by *C. leptophloeos*, it is suggested the continuation of the studies to evaluate the feasibility of this plant for the antimicrobial therapy.

**Keywords:** Medicinal plants, ethnopharmacology, antimicrobial activity, toxicity.