

## **Bio-potentials Activity of *Sonneratia caseolaris* (Mangrove) Extract as Antibacterial Collected from The South Sumatera**

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**Abstract:** Crude extracts of four mangrove species (leaf, fruit, bark and root), i.e. *Avicennia alba*, *A. marina*, *Rhizophora mucronata*, and *Sonneratia caseolaris* collected from Teluk Payo, Banyuasin, South Sumatera was extracted in methanol, ethyl acetate, n-hexane and tested for different range of biological activities including antimicrobial activity isolates of *Escherichia coli* and *Staphylococcus aureus* pathogen and brine shrimp cytotoxic. The highest activity was recorded with the methanol extract of *S. caseolaris* in *E. coli* isolates (18 mm) and in *S. aureus* isolates (19 mm) exhibited more biopotency. Brine Shrimp Lethality Test showed that leaf of *S. caseolaris* methanolic was not toxic to *Artemia salina*. The highly active mangrove was evaluated further to analyze the chemical compounds using column chromatography with chloroform:methanol (9:1 to 1:9) eluted gave the best separation, thin layer chromatography with chloroform:methanol (9:1 to 1:9) eluted gave the best separation, and high performance liquid chromatography with detector photodiode array (PDA) at a wavelength of 200-400 nm showed mangrove extracts including flavonoid which might have functional role in bioactivity and can be used for the development of piscicides and biopharmaceuticals.

**Keywords:** Mangrove extracts, antibacterial activity, brine shrimp cytotoxicity, column chromatography, TLC, and HPLC