

Components of Bark Extracts from *Artocarpus lanceifolius* Roxb and their Biological Activities

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ABSTRACT

Artocarpus lanceifolius Roxb is one of the plants included in the genus *Artocarpus* and *Moraceae* family. Flavonoid compounds are the main component in the genus *Artocarpus* and are unique compared to flavonoids isolated from other plants. OH (hydroxyl) substituents in ring B are in positions C-2' and C-4', whereas flavonoids originating from other plants are generally in positions 4' or 3' and 4' or 3', 4' and 5'. In addition, there are also isoprenyl substituents that open or form furano or pyano flavones rings as previously found from *Artocarpus lanceifolius* namely artelastin, artobilosanton or KB-1, cycloartobilosantonone, artoindonesianin G and artonol B.

To complement the existing data multilevel extraction was carried out using n-hexane, chloroform, ethyl acetate and methanol as well as phytochemical tests, toxicity to *Artemia salina* and antioxidant tests using 2,2-Diphenyl-1-Picrylhydrazyl (DPPH) on all three extracts. The test results showed that the n-hexane extract contained terpenoids and steroids, chloroform extract contained flavonoids and phenols, while alkaloids were found in ethyl acetate and methanol extracts.

The toxicity test results showed that LC₅₀ values for n-hexane, chloroform, ethyl acetate and methanol were 1,0853 µg/mL, 0.1635 µg/mL, 0.3615 µg/mL and 0.2609 µg/mL, respectively. Antioxidant test results showed that the IC₅₀ values of chloroform, ethyl acetate and methanol extract were 19.66 µg/mL, 15.85 µg/mL and 19.01 µg/mL, respectively. Based on the data shows that toxicity is positively correlated with antioxidants.

Keywords: *Artocarpus lanceifolius* Roxb, Flavonoid, Toxicity, Antioxidant

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