

***BRINE SHRIMP LETHALITY TEST (BSLT) PADA EKSTRAK  
AIR KAYU SECANG (CAESALPINIA SAPPAN L.) SECARA IN  
VITRO***

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**Abstrak**

Tanaman secang (*Caesalpinia sappan* L.) merupakan tanaman yang termasuk dalam famili *Fabaceae* yang telah lama digunakan sebagai tanaman obat. Kayu *Caesalpinia sappan* L. diketahui terdapat senyawa aktif berupa brazilin, flavonoid, tananin, alkaloid, saponin, serta terpenoid yang memiliki sifat berupa antioksidan, antiinflamasi, antibakteri, antivirus, dan antikanker. Penelitian ini memiliki tujuan untuk mengetahui nilai *lethal concentration* (LC<sub>50</sub>) pada ekstrak air kayu *Caesalpinia sappan* L. menggunakan metode *Brine Shrimp Lethality Test* (BSLT). LC<sub>50</sub> adalah nilai konsentrasi senyawa yang menyebabkan kematian pada *Artemia salina* Leach sebanyak 50%. Penelitian ini menggunakan 4 perlakuan konsentrasi yaitu 1000 ppm, 500 ppm, 100 ppm, dan 50 ppm beserta kontrol negatif yang masing-masing dilakukan tiga kali pengulangan. Larva *Artemia salina* Leach yang digunakan sebanyak 10 ekor larva untuk tiap konsentrasi lalu diamati mortalitas larvanya setelah 24 jam perlakuan. Nilai LC<sub>50</sub> sebesar 322,54 ppm menunjukkan bahwa ekstrak kayu *Caesalpinia sappan* L. masuk ke dalam kategori toksik sedang dan memiliki potensi sebagai senyawa antikanker.

**Kata kunci:** Ekstrak kayu *Caesalpinia sappan* L., BSLT, *Artemia salina* Leach, Toksisitas, LC<sub>50</sub>

**BRINE SHRIMP LETHALITY TEST (BSLT) ON WATER  
EXTRACT OF SAPPANWOOD (*CAESALPINIA SAPPAN* L.)  
IN VITRO**

**Nathasya Angelia Satya**

**Abstract**

*Caesalpinia sappan* L. is a plant belonging to the *Fabaceae* family, which has long been known and used as a medicinal plant. *Caesalpinia sappan* L. wood is known to contain active compounds in the form of brazilin, flavonoids, tannins, alkaloids, saponins, and terpenoids which have antioxidant, anti-inflammatory, antibacterial, antiviral, and anticancer properties. The aim of this study was to determine the lethal concentration (LC<sub>50</sub>) of the aqueous *Caesalpinia sappan* L. wood extract using the Brine Shrimp Lethality Test (BSLT) method. LC<sub>50</sub> is the concentration value of the compound that causes death in *Artemia salina* Leach as much as 50%. This study used 4 concentration treatments, namely 1000 ppm, 500 ppm, 100 ppm, and 50 ppm along with negative controls, each of which was repeated three times. Larvae of *Artemia salina* Leach were used as many as 10 larvae for each concentration and then the larval mortality was observed after 24 hours of treatment. The LC<sub>50</sub> value of 322,54 ppm indicates that the aqueous extract of *Caesalpinia sappan* L. is in the moderately toxic category and has potential as an anticancer compound.

**Keywords:** *Caesalpinia sappan* L. wood extract, BSLT, *Artemia salina* Leach, Toxicity, LC<sub>50</sub>