UJI AKTIVITAS ANTIOKSIDAN, TOKSISITAS KANDUNGAN FENOLIK TOTAL FRAKSI HEKSANA, ETIL ASETAT DAN METANOL-AIR DARI DAUN SRIKAYA (*Annona Squamosa* L.)

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INTISARI

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***Pembimbing**

Srikaya *(Annona squamosa* L.*)* merupakan tanaman yang sering dijumpai di Indonesia khususnya di daerah Sumatera, Jawa dan Kalimantan. Tanaman srikaya juga tersebar di daerah subtropis dan tropis yaitu Asia, Afrika, dan Amerika. Buah srikaya kaya akan kandungan nutrisi seperti karbohidrat, vitamin C, serat, glikosida, mineral dan metabolit sekunder. Berbagai bagian dari tanaman srikaya *(Annona squamosa* L.*)* telah diketahui mengandung senyawa metabolit sekunder, antara lain mengandung senyawa alkaloid, flavonoid, glikosida, tannin dan fenolik yang berpotensi sebagai antioksidan dan antidiabetik. Penelitian ini bertujuan untuk menguji aktivitas antioksidan, toksisitas dan kandungan fenolik total fraksi heksana, etil asetat dan metanol-air dari daun srikaya. Fraksinasi ekstrak metanol daun srikaya dilakukan secara partisi cair-cair menggunakan corong pisah menggunakan pelarut heksana dan etil asetat. Kadar fenolik total diukur dengan reagen *Folin Ciocalteu*, aktivitas antioksidan dengan metode DPPH dan toksisitas dengan metode *Brine-Shrimp Lethality Test* (BSLT). Hasil penelitian menunjukkan bahwa Kandungan fenolik total tertinggi diperoleh pada fraksi metanol-air (296,785 mg GAE/g ekstrak), diikuti fraksi etil asetat (203,928 mg GAE/g) dan heksana (112,857 mg GAE/g). Aktivitas antioksidan juga sejalan dengan kandungan fenolik total, di mana fraksi metanol-air memiliki aktivitas antioksidan sangat kuat dengan nilai IC_{50} terendah (6,089 mg/L), diikuti fraksi etil asetat (18,349 mg/L) dan heksana (41,218 mg/L). Aktivitas toksisitas menunjukkan fraksi etil asetat dengan nilai LC_{50} 0,3727 mg/L dan heksana nilai LC_{50} 0,7169 mg/L bersifat sangat toksik, sedangkan fraksi metanol-air nilai LC_{50} 527,2298 mg/L menunjukkan toksisitas lemah.

***Kata kunci*:** Aktivitas antioksidan*, Annona squamosa* L*,* fenolik total, metabolit sekunder, toksisitas

ABSTRACT

ANTIOXIDANT ACTIVITY, TOXICITY, TOTAL PHENOLIC CONTENT OF HEXANE, ETHYL ACETATE, AND METHANOL-WATER FRACTIONS FROM SRIKAYA LEAVES (Annona Squamosa L)

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Srikaya (Annona squamosa L.) is a plant commonly found in Indonesia, particularly in the regions of Sumatra, Java, and Kalimantan. The srikaya plant is also distributed in subtropical and tropical regions such as Asia, Africa, and the Americas. The srikaya fruit is rich in nutrients such as carbohydrates, vitamin C, fiber, glycosides, minerals, and secondary metabolites. Various parts of the srikaya plant (Annona squamosa L.) are known to contain secondary metabolites, including alkaloids, flavonoids, glycosides, tannins, and phenolics, which have potential as antioxidants and antidiabetics. This study aims to test the antioxidant activity, toxicity, and total phenolic content of the hexane, ethyl acetate, and methanol-water fractions of srikaya leaf. The fractionation of srikaya leaf was performed using liquid-liquid partitioning with a separatory funnel using hexane and ethyl acetate as solvents. Total phenolic content was measured using the Folin Ciocalteu reagent, antioxidant activity using the DPPH method, and toxicity using the Brine-Shrimp Lethality Test (BSLT). The results showed that the highest total phenolic content was obtained in the methanol-water fraction (296.785 mg GAE/g extract), followed by the ethyl acetate fraction (203.928 mg GAE/g) and hexane fraction (112.857 mg GAE/g). Antioxidant activity also correlates with total phenolic content, where the methanol-water fraction exhibits very strong antioxidant activity with the lowest IC_{50} value (6.089 mg/L), followed by the ethyl acetate fraction (18.349 mg/L) and hexane (41.218 mg/L). Toxicity activity showed that the ethyl acetate fraction with an LC_{50} of 0.3727 mg/L and the hexane fraction with an LC_{50} of 0.7169 mg/L were highly toxic, while the methanol-water fraction with an LC_{50} of 527.2298 mg/L exhibited only weak toxicity.

Keywords: Annona squamosa L., Antioxidant activity, secondary metabolites, total phenolics, toxicity