

**PENENTUAN KANDUNGAN METABOLIT SEKUNDER, KADAR FENOLIK TOTAL,
FLAVONOID TOTAL DAN UJI AKTIVITAS ANTIOKSIDAN SERTA TOKSISITAS
DARI EKSTRAK ETIL ASETAT DAUN PUCUK MERAH (*Syzygium myrtifolium*
Walp.)**

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PROGRAM SARJANA

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FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

UNIVERSITAS ANDALAS

PADANG

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**PENENTUAN KANDUNGAN METABOLIT SEKUNDER, KADAR FENOLIK TOTAL,
FLAVONOID TOTAL DAN UJI AKTIVITAS ANTIOKSIDAN SERTA TOKSISITAS
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ABSTRACT

DETERMINATION OF SECONDARY METABOLITE CONTROLS, TOTAL PHENOLIC CONTENT, TOTAL FLAVONOIDS AND ANTIOXIDANT ACTIVITY AND CYTOTOXIC OF ETIL ASETATE EXTRACT OF LEAVES OF PUCUK MERAH (*Syzygium myrtifolium* Walp.)

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Syzygium myrtifolium Walp., commonly known as pucuk merah, is a species within the Myrtaceae family, which comprises approximately 1200 species distributed across tropical and subtropical regions. The ethanol extract from pucuk merah leaves is recognized for containing secondary metabolites such as alkaloids, flavonoids, triterpenoids, steroids, and phenolics. These secondary metabolites have been reported to exhibit antioxidant, anti-inflammatory, antibacterial, and antifungal properties. This study aims to evaluate the content of secondary metabolites, total phenolic content, total flavonoid content, antioxidant activity, and toxicity of the ethyl acetate extract from the red-colored leaves of pucuk merah. The extraction was performed through multistage maceration using hexane and ethyl acetate solvents, with total phenolic content measured using the Folin-Ciocalteu reagent, total flavonoid content assessed using the $AlCl_3$ reagent, antioxidant activity determined by the DPPH method, and toxicity tested using the *Brine-Shrimp Lethality Test* (BSLT). The findings indicated that the ethyl acetate extract of pucuk merah leaves contains secondary metabolites including flavonoids, phenolics, steroids, and coumarins, with a high total phenolic content of 311.0520 mg GAE/g extract and a total flavonoid content of 211.788 mg QE/g extract. The extract demonstrated very high antioxidant activity with an IC_{50} of 19.606 mg/L and exhibited strong toxicity with an LC_{50} of 51.75 mg/L.

Keywords: *Syzygium myrtifolium* Walp., secondary metabolites, total phenolic, antioxidant, total flavonoid, cytotoxic.

