

IDENTIFIKASI SENYAWA TOTAL TANIN EKSTRAK DAUN KERSEN (*Muntingia calabura* L.) DENGAN SPEKTROFOTOMETRI UV-VIS

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INTISARI

Latar Belakang: Tanin adalah salah satu senyawa metabolit sekunder yang bermanfaat bagi kesehatan. Tanin memiliki efek farmakologi berupa antidiare, antiinflamasi, astringen, antibakteri dan antioksidan. Salah satu tanaman yang memiliki kandungan tanin adalah kersen (*Muntingia calabura* L.). Penelitian telah menunjukkan bahwa daun kersen memiliki beberapa efek farmakologi, termasuk antidiabetes, antioksidan, antibakteri, anthelmintika, antihiperlipidemia dan antiinflamasi. Pemanfaatan daun kersen di masyarakat masih sangat kurang karena biasanya masyarakat menganggap daun kersen hanya sebagai limbah.

Tujuan Penelitian: Mengidentifikasi senyawa tanin pada ekstrak metanol daun kersen dan mengetahui kadar senyawa total tanin pada ekstrak metanol daun kersen (*Muntingia calabura* L.) yang diekstraksi dengan metode UAE.

Metode Penelitian: Serbuk daun kersen diekstraksi menggunakan metode UAE (1:10) dengan pelarut metanol selama 10 menit pada suhu 40°C. Dilakukan analisis kualitatif meliputi uji organoleptik, kadar air, identifikasi senyawa tanin dengan reagen FeCl₃ dan uji KLT, serta dilakukan analisis kuantitatif berupa penetapan kadar total tanin menggunakan asam tanat sebagai standar. Total tanin dinyatakan dengan mgTAE/g.

Hasil: Pada penelitian ini diperoleh nilai rendemen ekstrak metanol daun kersen sebesar 20%. Hasil uji organoleptis menunjukkan ekstrak metanol daun kersen berwarna hijau kehitaman, teksturnya kental dan memiliki aroma khas. Pada uji kadar air didapatkan hasil yaitu 2,90%. Hasil uji tabung dan uji KLT ekstrak metanol daun kersen positif mengandung tanin dan diperoleh kadar total tanin sebesar 78,5 ± 0,763 mgTAE/g sampel.

Kesimpulan: Ekstrak metanol daun kersen (*Muntingia calabura* L.) yang diekstraksi dengan metode UAE mengandung senyawa tanin dengan kadar sebesar 78,5 ± 0,763 mgTAE/g sampel.

Kata kunci: Daun kersen, *Muntingia calabura* L. Metanol, Tanin, UAE.

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IDENTIFICATION OF TOTAL TANNIN COMPOUNDS OF KERSEN LEAF EXTRACT (*Muntingia calabura* L.) USING SPECTROPHOTOMETRY UV-VIS

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ABSTRACT

Background: Tannin is a secondary metabolite compound that is beneficial for health. Tannins have pharmacological effects in the form of antidiarrheal, anti-inflammatory, astringent, antibacterial and antioxidant. One plant that contains tannin is *Muntingia calabura* L. Scientific research has shown that *Muntingia calabura* L. leaves have several pharmacological effects, including antidiabetic, antioxidant, antibacterial, anthelmintic, antihyperlipidemic and anti-inflammatory. The use of cherry leaves in society is still less than optimal because cherry plants are usually considered only as shade plants and the leaves are waste

Objectives: Identify tannin compounds in methanol extract of *Muntingia calabura* L. leaves and determine the total tannin compound content in methanol extract of *Muntingia calabura* L. leaves extracted by UAE method.

Method: *Muntingia calabura* L. leaf powder was extracted using the UAE method (1:10) with methanol solvent for 10 minutes at 40°C. Qualitative analysis was carried out including organoleptic test, water content, identification of tannin compounds with FeCl₃ reagent and KLT test, and quantitative analysis was carried out in the form of determining the total tannin content using tannic acid as a standard. Total tannins were expressed as mgTAE/g.

Results: In this study, the yield value of methanol extract of *Muntingia calabura* L. leaves was 20%. Organoleptical test results showed that the methanol extract of *Muntingia calabura* L. leaves was blackish green in color, thick in texture and had a distinctive aroma. In the water content test, the result is 2.90%. The results of the tube test and KLT test of kersen leaf methanol extract are positive for tannins and the total tannin content is 78,5±0,763 mgTAE/g sample.

Conclusion: The methanol extract of *Muntingia calabura* L. leaves extracted by the UAE method contains tannin compounds with a level of 78,5±0,763 mgTAE/g sample.

Keywords: *Muntingia calabura* L. leaves, Methanol, Tannic. UAE.

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