Pengaruh Perbedaan Metode Ekstraksi Dan Variasi Lokasi Terhadap Kadar Antosianin Serta Aktivitas Antioksidan Ekstrak Etanol Bunga Telang (*Clitoria ternatea* L)

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ABSTRAK

Bunga telang dikenal sebagai sumber senyawa antosianin yang memiliki aktivitas antioksidan tinggi, namun kandungan senyawa tersebut dapat dipengaruhi oleh lokasi tumbuh dan metode ekstraksi. Penelitian ini mengkaji pengaruh perbedaan metode ekstraksi dan variasi wilayah terhadap kadar antosianin serta aktivitas antioksidan bunga telang (*Clitoria ternatea L*.). Peneliti menggunakan dua metode ekstraksi, yaitu maserasi dan ultrasonik, terhadap sampel bunga telang dari dua wilayah berbeda, yaitu Blora dan Tangerang. Setelah diperoleh ekstrak kental, dilakukan perhitungan rendemen, penetapan kadar air, skrining fitokimia, serta pengujian kadar antosianin dan aktivitas antioksidan. Penetapan kadar antosianin dilakukan dengan metode pH *differential*, sedangkan aktivitas antioksidan diuji menggunakan metode DPPH. Hasil penelitian menunjukkan bahwa ekstrak bunga telang asal Blora yang diekstraksi dengan metode maserasi mengandung rata-rata antosianin sebesar 7,6920 mg/L dan nilai IC_{50} sebesar 32,2080 ppm. Data yang diperoleh kemudian dianalisis secara statistika melalui uji two-way ANOVA. Hasil uji two-way ANOVA menunjukkan nilai signifikansi < 0,05 yang berarti perbedaan metode ekstraksi dan wilayah tumbuh dapat memberikan pengaruh signifikan terhadap kadar antosianin serta aktivitas antioksidan bunga telang. Hasil penelitian ini memberi kesimpulan bahwa sampel bunga telang asal Blora yang diekstraksi dengan metode maserasi merupakan sampel dengan kadar antosianin dan aktivitas antioksidan yang optimal.

Kata kunci: antioksidan, maserasi, ultrasonik, telang, wilayah

The Effect of Different Extraction Methods and Regional Variations on the Anthocyanin Content as Well as the Antioxidant Activity of Ethanolic Extracts of Butterfly Pea Flowers (*Clitoria ternatea* L.)

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ABSTRACT

Butterfly pea flower (*Clitoria ternatea* L.) was known as a source of anthocyanin compounds with high antioxidant activity. However, the content of these compounds could be influenced by the plant's growing location and the extraction method used. This study investigates the impact of various extraction methods and regional differences on the anthocyanin content and antioxidant activity of *Clitoria ternatea* flower extracts. Two extraction methods—maceration and ultrasonic-assisted extraction—are applied to the flower samples collected from two different regions: Blora and Tangerang. After obtaining concentrated extracts, yield calculation, moisture content determination, phytochemical screening, anthocyanin content analysis, and antioxidant activity testing were carried out. Anthocyanin levels are determined using the pH differential method, while antioxidant activity is measured using the DPPH assay. The results showed that the extract from Blora obtained using maceration extraction contained an average anthocyanin level of 7.6920 mg/L with an IC_{50} value of 32.2080 ppm. The collected data were then analyzed using a two-way ANOVA test, which showed that the data had a significance value of < 0.05 which meant that different extraction methods and growing location gave significant effects towards the anthocyanin content as well as antioxidant activity of butterfly pea flowers. It can be concluded from the results of the study that the optimal sample was the butterfly pea flower from Blora extracted using the maceration method.

Keywords: antioxidant, butterfly pea, maceration, region, ultrasonic