OPTIMASI PELARUT EKSTRAKSI METODE SONIKASI TERHADAP KADAR FLAVONOID TOTAL PADA DAUN UNGU (*Graptophyllum pictum (L) Griff)*

ABSTRAK

Tujuan

Daun ungu memiliki senyawa flavonoid berperan penting terhadap kesehatan manusia. Senyawa flavonoid tersebut didapatkan melalui proses ekstraksi. Metode ekstraksi yang membutuhkan waktu singkat tetapi mampu menghasilkan kondisi ekstrak yang optimal adalah metode sonikasi. Salah satu ekstraksi adalah jenis pelarut. Flavonoid dapat larut pada pelarut ekstraksi yang bersifat polar. Penelitian sebelumnya membuktikan adanya kandungan flavonoid dalam pelarut ekstraksi daun ungu berupa aquades, etanol 30%, etanol 50%, dan etanol 70%. Penelitian ini dilakukan untuk mengetahui jenis pelarut ekstraksi daun ungu yang terbaik berdasarkan kadar flavonoid total tertinggi melalui proses ekstraksi metode sonikasi.

Metode

Daun ungu diekstrak perlarut aquades, etanol 30%, 50%, dan 70%; serta ditambahkan HCl 2M untuk membantu proses hidrolisis. Lalu, dilakukan penentuan kadar flavonoid total menggunakan Spektrofotometer Nano setelah disonikasi.

Hasil

Nilai flavonoid total pada kelompok pelarut etanol 70% lebih unggul (0,2515 mg QR/g DW). Berdasarkan uji Hipotesis *One-Way ANOVA*, hasil menunjukkan adanya perbedaan antara dua kelompok atau lebih dengan signifikansi 0,006.

Kesimpulan

Hal ini dapat disimpulkan bahwa adanya temuan baru bahwa kondisi ekstraksi dapat dioptimalkan menggunakan pelarut etanol 70%.

Kata Kunci : Daun Ungu, Ekstrak, Pelarut Etanol, Kadar Flavonoid Total, Sonika

DETERMINING EXTRACTION SOLVENT USING SONICATION METHOD FOCUSED ON TOTAL FLAVONOID CONTENT IN UNGU LEAVES (Graptophyllum pictum (L) Griff)

ABSTRACT

Objective

Wungu leaves contain flavonoids that has an crucial role in human health and obtained through an extraction process. The extraction method that requires a short time but can produce optimal extract conditions is the sonication. One of the important factors of the extraction process is the type of solvent. Flavonoids can dissolve in polar extraction solvents. The prior research has proven the presence of flavonoids in the extraction solvents of purple leaf, namely aquades, 30% ethanol, 50% ethanol, and 70% ethanol. This goal is to determine the best type of extraction solvent for wungu leaves based on the highest total flavonoid content through the sonication extraction method.

Method

The wungu leaves were extracted using aquades, 30%, 50%, and 70% ethanol; and 2M HCl was added to assist the hydrolysis process. Then, the flavonoid content was calculated by a Nano Spectrophotometer after sonication.

Result

The total flavonoid value in the 70% ethanol solvent group was superior (0.2515 mg QR/g DW). Based on the hypothesis test, the results indicate a difference between two or more groups with a significance of 0.006.

Conclusion

It can be assumed that there is a new finding that extraction conditions can be optimized using 70% ethanol solvent.

Keywords : ethanol solvent, extract, sonication, total flavonoid content, wungu leave