ABSTRAK

Analisis Sidik Jari Daun Titanus (*Leea aequata L*) menggunakan Metode Spektrofotometri FTIR kombinasi dengan PCA

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Titanus merupakan tanaman obat tradisional yang memiliki khasiat untuk mengobati peradangan, gatal-gatal pada kulit. Pengetahuan tradisional umumnya disampaikan secara lisan dan pemahaman yang didapat hanya pengalaman orang. Karena keterbatasan pemahaman obat tradisional sedikit, maka kualitas obat tradisional harus ditingkatkan. Tahapan penelitian meliputi pengumpulan sampel dari tiga daerah yaitu Ciamis, Banjar dan Bogor, kemudian sampel diekstraksi menggunakan etanol 96%. Ekstrak tersebut dianalisis menggunakan FTIR pada rentang bilangan gelombang 4000-650 cm^{-1} dengan resolusi 4 cm^{-1}. Hasil penelitian menunjukkan spektrum FTIR yang sama dari tiga jenis sampel. Diperoleh profil sidik jari daun titanus menggunakan FTIR dari tiga jenis sampel kombinasi dengan PCA. Profil sidik jari dalam *Score* plot menunjukkan daun titanus Banjar memiliki perbedaan dengan daerah Ciamis dan Bogor.

Kata kunci: Titanus; FTIR; analisis sidik jari; kemometrik; PCA

ABSTRACT

Analysis of Leaf Fingerprint of Titanus (*Leea aequata L*) using FTIR Spectrophotometry combined with PCA

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Titanus is a traditional medicinal plant that has properties to treat inflammation, skin itching. Traditional knowledge is generally conveyed orally and the understanding gained is only people's experience. Due to the limited understanding of traditional medicine, the quality of traditional medicine must be improved. The research stages include collecting samples from three regions namely Ciamis, Banjar and Bogor, then the samples were extracted using 96% ethanol. The extract was analysed using FTIR in the wave number range of 4000-650 cm-1 with a resolution of 4 cm-1. The results showed similar FTIR spectra of the three types of samples. Fingerprint profiles of titanus leaves using FTIR from three types of samples combined with PCA were obtained. The fingerprint profile in Score plot shows that Banjar titanus leaves have differences with Ciamis and Bogor regions.

Key word: Titanus; FTIR; fingerprint analysis; chemometrics; PCA