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ANALISIS NATRIUM DIKLOFENAK DALAM SAMPEL JAMU PEGAL LINU YANG DIJUAL DI KABUPATEN SEMARANG SECARA KLT - SPEKTROFOTOMETRI UV-VIS

ABSTRAK

Latar Belakang : Jamu Pegal Linu merupakan salah satu produk obat tradisional yang banyak diminati oleh masyarakat karena memiliki banyak manfaat. Bahan Kimia Obat (BKO) sering ditambahkan pada Jamu Pegal Linu untuk menambah khasiatnya, salah satunya adalah Natrium Diklofenak. Berdasarkan Permenkes RI No. 246 tahun 2010, obat tradisional dilarang mengandung Bahan Kimia Obat (BKO). Penelitian ini bertujuan untuk menganalisis kandungan Bahan Kimia Obat (BKO) Natrium Diklofenak pada sediaan Jamu Pegal Linu yang dijual di Kabupaten Semarang.

Metode : Jenis penelitian dilakukan menggunakan metode eksperimental laboratorium yang secara deskriptif menggambarkan hasil penelitian berdasarkan data yang didapatkan. Metode penelitian terdiri dari uji organoleptis, analisis kualitatif dan analisis kuantitatif terhadap sampel Jamu Pegal Linu. Uji Organoleptis dilakukan dengan cara mencicipi rasa, mencium bau, melihat warna dan meraba bentuk sediaan sampel Jamu Pegal Linu. Analisis kualitatif dilakukan dengan Kromatografi Lapis Tipis (KLT) dan analisis kuantitatif dilakukan dengan Spektrofotometri UV-Vis dengan 3 sampel yang dianggap positif.

Hasil : Sampel B, D, dan E yang dijual di Kabupaten Semarang positif mengandung Natrium Diklofenak berdasarkan nilai R_f yang didapatkan dari sampel berturut-turut yaitu 0.28, 0.3, dan 0.3 yang mendekati nilai R_f baku Natrium Diklofenak yaitu 0.26. Fase diam menggunakan Silica Gel 254 dan fase gerak menggunakan Etil Asetat dan N-Heksan dengan perbandingan 25 : 25. Pada analisis kuantitatif diperoleh panjang gelombang 275 nm dengan persamaan garis linier $y = 0,0245x + 0,0989$ dan nilai $r = 0.9994$ dengan kadar yang diperoleh pada sampel B, D, E berturut-turut adalah 39.27%, 2.67% dan 4.9%.

Kesimpulan : Terdapat 3 sampel yaitu B, D, dan E yang mengandung Bahan Kimia Obat (BKO) Natrium Diklofenak pada Jamu Pegal Linu yang dijual di Kabupaten Semarang, dengan rentang kadar 2.67% - 39.27%.

Kata kunci : Jamu pegal linu, natrium diklofenak, kromatografi lapis tipis, spektrofotometri UV-Vis.

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**ANALYSIS OF DICLOFENAC SODIUM IN A SAMPLE OF HERBAL
MEDICINE FOR RHEUMATIC PAIN WHICH IS SOLD IN SEMARANG
REGENCY BY THIN LAYER CHROMATOGRAPHY AND UV-VIS
SPECTROPHOTOMETRY**

ABSTRACT

Background: Herbal medicine for rheumatic pain is one of the traditional medicinal products that are massively demanded by the public because it has many benefits. Medicinal Chemicals (MC) are often added to herbal medicine for rheumatic pain to increase their efficacy, one of which is Diclofenac Sodium. Based on the Decree of the Minister of Health of the Republic of Indonesia No. 246 of 2010, traditional medicines are prohibited from containing Medicinal Chemicals (MC). This study aims to analyze the content of Diclofenac Sodium Medicinal Chemicals (MC) in the herbal medicine for rheumatic pain which is sold in Semarang Regency.

Methods: This type of research was conducted using a laboratory experimental method which descriptively describes the results of the study based on the data obtained. The research method consisted of organoleptic test, qualitative analysis and quantitative analysis of the samples of Herbal medicine for rheumatic pain. Organoleptic test was carried out by tasting the taste, smelling the smell, seeing the color and feeling the dosage form of the herbal medicine for rheumatic pain sample. Qualitative analysis was performed by Thin Layer Chromatography (TLC) and quantitative analysis was performed by UV-Vis Spectrophotometry with 3 samples considered positive.

Results: Samples B, D, and E which is sold in Semarang Regency were positive for Diclofenac Sodium based on the Rf values obtained from the samples, namely 0.28, 0.3, and 0.3, which were close to the standard Rf value of Diclofenac Sodium, which was 0.26. The stationary phase used Silica Gel 254 and the mobile phase used Ethyl Acetate and N-Hexane with a ratio of 25: 25. In quantitative analysis, the wavelength was 275.80 nm with the linear equation $y = 0.0245x + 0.0989$ and the value of $r = 0.9994$ with a concentration of obtained in samples B, D, E were 39.27%, 2.67% and 4.9%, respectively.

Conclusion: There were 3 samples namely B, D, and E containing Diclofenac Sodium Medicinal Chemicals (MC) in the herbal medicine for rheumatic pain which sold in Semarang Regency, with rate range from 2.67% to 39.27%.

Key words : Herbal medicine for rheumatic pain, diclofenac sodium, thin layer chromatography, UV-Vis spectrophotometry.