

THESIS

**ANALYSIS OF MEDICINAL CHEMICALS CONTENT ON JAMU PEGAL
LINU CIRCULATING IN THEMANTINGAN DISTRICT USING THE
HPLC METHOD(*HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY*)**



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FACULTY OF HEALTH SCIENCES
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**ANALYSIS OF MEDICINAL CHEMICAL CONTENT ON JAMU PEGAL
LINU CIRCULATING IN MANTINGAN DISTRICT USING THE HPLC
METHOD(*HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY*)**

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ABSTRACT

Jamu circulating in the society must meet safety and quality standards, one of the requirements is that it does not contain medicinal chemical. The medicinal chemical content that is often added to jamu pegal linu is paracetamol. Paracetamol is a drug that has analgesic and antipyretic properties, which is used to reduce mild pain such as headaches and fever. However, use of paracetamol in inappropriate doses will damage the liver. This study aims to test the paracetamol content found on jamu pegal linu circulating in Mantingan District. The method used in this study is qualitative analysis with TLC(**Thin-layer chromatography**) and quantitative analysis using HPLC (High-Performance Liquid Chromatography). The samples analyzed consisted of 5 brands of jamu pegal linu circulating in the Mantingan District. The results of qualitative analysis with TLC showed that one of the five samples of jamu contained by paracetamol, namely Sample E, while the other four samples does not contain paracetamol. Sample E has an R_f value of 0.36 which is close to the paracetamol standard, namely 0.36. The results of quantitative analysis of paracetamol levels were obtained using the High-Performance Liquid Chromatography (HPLC) method. The mobile phase used was methanol pa and aquabides with a ratio of 40: 60, and the stationary phase used was a C18 column with an injection volume of 20 µL. Paracetamol content was found in one of the samples with a level of 10%.

Keywords: Medicinal Chemical Content, HPLC, Jamu Pegal Linu, TLC, Paracetamol.

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**ANALYSIS OF MEDICINAL CHEMICALS IN JAMU PEGAL LINU
CIRCULATING IN MANTINGAN MARKET USING HIGH
PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) METHOD.**

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ABSTRACT

Jamu circulating in the community must meet safety and quality standards, one of which is by not containing medicinal chemicals. The chemical that is often added to jamu pegal linu is paracetamol. Paracetamol is a drug that has analgesic and antipyretic properties, which is used to reduce mild pain such as headaches, as well as fever. However, the use of paracetamol that is not in accordance with the dose can cause damage to the liver. This study aims to test whether there is paracetamol content that may be present in jamu pegal linu circulating in the Mantingan market. The methods used in this study were qualitative analysis with KLT and quantitative analysis using HPLC (High Performance Liquid Chromatography). Samples analyzed consisted of 5 brands of jamu pegal linu circulating in Mantingan market. The results of qualitative analysis by KLT showed that one of the five jamu samples contained paracetamol, namely Sample E, while the other four samples did not contain paracetamol. Sample E has an R_f value of 0.36 which is close to the paracetamol standard of 0.36. The results of quantitative analysis of paracetamol levels were obtained using the High Performance Liquid Chromatography (HPLC) method. The mobile phase used was methanol pa and aquabides in a ratio of 40: 60, and the stationary phase used was a C18 column with an injection volume of 20 μ L. Paracetamol content was found in one of the samples with a level of 10%.

Keywords: Medicinal Chemicals, HPLC, Herbal medicine, TLC, Paracetamol.

VALIDITY SHEET

It is hereby stated that the thesis with the title :

**“ANALYSIS OF MEDICINAL CHEMICALS IN PEGAL LINU JAMU
CIRCULATING IN MANTINGAN DISTRICT USING HPLC METHOD”**

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Kecamatan Mantingan Menggunakan Metode Hplc (*High Performance Liquid
Chromatography*)

Saya dengan tulus menyatakan bahwa penelitian yang tersusun dalam skripsi ini aslinya adalah karya saya sendiri dan bukan melik penelitian lain untuk derajat yang berbeda. Lebih lanjut, skripsi ini tidak pernah diterbitkan sebelumnya kecuali beberapa bagian dengan referensi aslinya.

Apabila dikemudian hari ditemukan bahwa karya ini adalah plagiat, saya siap diberikan sanksi secara administrasi dan akademis.

Ponorogo, 16 Januari 2025

Peneliti,



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FOREWORD

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