VALIDATION OF THE ANALYSIS METHOD OF DEXAMETHASONE CONTENT IN JAMU PEGAL LINU USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Lidha Semmeru
D3 Study Program of Pharmaceutical and Food Analysis Poltekkes Kemenkes Malang
Email: lsmmru@gmail.com

ABSTRACT

Background: *Chemical Drugs (BKO) are still often found in traditional medicines (OT), one of which is in jamu pegal linu. Identification of BKO in traditional medicines according to BPOM is carried out using the TLC and Spectrophotodesitometry methods, however there are other methods that can be used to identify BKO more quickly, efficiently and with high resolution, namely using the HPLC method. This method needs to be optimized and validated because it does not yet have a standard method for identifying BKO in OT using HPLC.* ***Objective:*** *This study aims to validate the method for identifying dexamethasone in herbal medicine for aches and pains based on the parameters of linearity, accuracy, precision, Limit of Detection (LOD), Limit of Quantification (LOQ), and specificity of the most optimal mobile phase.* ***Research Method:*** *Optimization was carried out using 4 variations of the ratio of methanol and water mobile phases. Determination of the optimal mobile phase was based on the parameters of retention time, tailing factor, resolution value, and theoretical plate. The most optimal mobile phase was continued to the validation test with parameters of specificity, linearity, LOD, LOQ, accuracy, and precision.* ***Results:*** *The optimal HPLC method was found in the variation of the methanol: water mobile phase (60:40) based on the parameters of retention time (6.744 minutes), resolution value (2.339), tailing factor (1.123), and theoretical plate (2.262). The results of the validation test of the method obtained parameters that met the requirements including good specificity; with good linearity with a value of r = 0.9988; LOD 1.147 µg/mL; LOQ 28.827 µg/mL; accuracy with % recovery of 101,107% and precision with a %RSD of 1.918%.. Conclusion: Based on the validation results, this HPLC method is suitable for the quantitative determination of dexamethasone in jamu pegal linu.*

Keywords: *HPLC, Validation, Dexamethasone, Jamu Pegal Linu*