ABSTRACT

HPTLC Method Development and Validation for Determination of Andrographolide in Raw Material and Tablet Containing Ethyl Acetate Fraction of *Andrographis paniculata*

Andrographolide is the major active compound of *Andrographis paniculata* and determined as marker compund of ethyl acetate fractions of *A. paniculata* products. This fraction has a potential activity as antimalarial and prospective to be developed as phytopharmaceutical products. To ensure the quality, efficacy and safety of the phytopharmaceutical products, a rapid and selective analytical method becomes important for the determination of andrographolide in both the raw materials and products. The purpose of this study was to develop and validate a rapid, inexpensive, and selective High Performance Thin Layer Chromatography (HPTLC) for quantification andrographolide in raw material and tablet ethyl acetate fractions of *A. paniculata*. This method was performed using silica gel G60 F254 HPTLC plate as stationary phase with mobile phase of chloroform:metanol (90:10 v/v) and detected at 228 nm. The validated method was selective to separate andrographolide from other component with good resolution and retention factor andrographolide was 0.38 ±0.03. The data for calibration plots showed good linear relationship with r^2 = 0.998 in the concentration range 67.5-225.0 ppm. The Limit of Detection and Quantification were found 9.6 ng/spot and 28.8 ng/spot, respectively. The recovery method was found between 98.0 and 100.5% and the relative standard deviation method was found between 1.4% and 1.5%.

Key words : HPTLC, Method validation, *Andrographis paniculata*, Andrographolide, antimalarial.