ABSTRACT

HPLC ANALYSIS OF 80% ETHANOL EXTRACT AND FRACTIONS FROM RUTA ANGUSTIFOLIA (L.) PERS. HERBS

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One of some herbs that is potentially developed as a new drug for antihepatitis C is *Ruta angustifolia* (L.) Pers. It is commonly known as “inggu” in Indonesia and has been traditionally used for jaundice remedies. The 96% ethanol extract of this herbs has been also confirmed in the previous study for its inhibiting activity against hepatitis C viral replication, with IC$_{50}$ value 2.23 µg/ml. In order to develop this herb as antihepatitis C phytopharmaceutical product, a control quality is required to ensure the compounds within the herb stay steady from batch to batch. The aim of this study is to acquire the chromatogram profile of 80% ethanol extract and its fractions of *Ruta angustifolia* herbs using HPLC instrument in order to be used as a standard for quality control purpose. This study comprises selecting a suitable analytical wavelength, mobile phase, selectivity test, precision test, purity test and a similarity between analyte UV spectrum and standard UV spectrum. The HPLC instrument that is used for this study is Shimadzu LC-6 series with a RP column Shim-pack Shimadzu (4.6 x 250 mm), meanwhile the mobile phase conditions are acetonitrile – water (20:80 v/v), eluted isocratically, flow rate 0.6 ml/minute and analyzed at wavelength 255 nm for 120 minutes. A rutin compound has been detected on 80% ethanol extract and butanol fraction in Rt min 16.425; 16.469; and 16.737 for 80% ethanol extract, and 16.936; 16.371; and 16.392 for butanol fraction. Those rutins, both in 80% ethanol extract and butanol fraction, have a similar spectrum with standard rutin, with match factor > 0.9500, hence chromatogram profile of 80% ethanol extract and butanol fraction of *Ruta angustifolia* herbs can be used to standardize, with rutin as its standard. Regarding the precision test, 80% ethanol extract and all of its fractions meet the criteria (≤ 5%).

Keywords: *Ruta angustifolia*, 80% ethanol extract, fraction, butanol, rutin, HPLC, chromatogram profile.