ABSTRACT

The purposes of this study were: firstly, to determined the content of phenolic compounds of solid herb waste. Secondly, to determined its antioxidant activity and Sun Protection Factor (SPF) value. The extraction has been conducted by maceration method using ethanol and ethyl acetate with two levels of temperature (which were 27°C and 50°C) and three levels of extraction time (which were 90, 120 and 150 minutes). The content, antioxidant activity and SPF value of phenolic compounds were determined by spectrometric method.

The result of the study showed that: 1) the optimum phenolic compounds has obtained on extraction condition of 27°C and 90 minutes using ethanol solvent, with amount of 13.14 ± 0.87 mg GAE/gram sample, 2) the IC50 of ethanol extract has obtained on concentration of 5,000.67 ppm. Meanwhile, it had SPF value of 17.19 ± 0.01 on concentration of 900 µg/mL.

Keyword: antioxidant, phenolic, herb, SPF value, wastes