ABSTRACT

THE STUDY OF ANTIOXIDANT ACTIVITY OF LUO HAN GUO (Siraitia grosvenorii) UNDER DIFFERENT EXTRACTION CONDITIONS

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Luo han guo (Siraitia grosvenorii) is a fruit known to have many medical benefits, one of it is its potential as antioxidant source. In this research, the effect of extraction solvent and period on two different temperatures of extraction towards antioxidant activity of luohanguo were observed. The fruit was extracted with two different temperatures (maceration and heat reflux), in which on each extraction temperature, there are two different solvents used (70% methanol and 70% acetone) and four different extraction periods (maceration for 2 hours, 4 hours, 8 hours, 16 hours and heat reflux for 1 hour, 2 hours, 3 hours, 4 hours). The effect of different extraction conditions on the yield, total phenolic content, total flavonoid content and antioxidant activity using DPPH radical scavenging assay of the fruit luohanguo were observed. There were correlations between the three extraction factors that impacted the antioxidant activity of luohanguo extract. 70% methanol with one hour heat reflux extraction produced the highest yield. However, the highest antioxidant activity was observed on luohanguo extracted with 70% acetone with heat reflux for 1 hour, which was 497.71 mg/L. The highest total phenolic and flavonoid content yielded were 614.96 mg GAE/g sample and 15.99 mg QE/g sample, respectively. The phenolic and flavonoid content of luohanguo were also known to have positive correlation with its antioxidant activity.

Keywords: Siraitia grosvenorii, antioxidant, total phenolic content, total flavonoid content, DPPH free radical scavenging

References: 45 (1992 – 2012)