

Total Flavonoid Content and Antioxidant Activity by Different Drying and Extraction Methods of *Clinacanthus nutans* Leaves

ABSTRACT

This report presents a study on the total flavonoid content and antioxidant activity of *Clinacanthus nutans* leaves from different drying and extraction methods. The *C. nutans* leaves were subjected through three different drying methods: oven (40°C, 60°C and 80°C), vacuum oven and air drying. Afterwards, extraction on the dried leaves was performed using three different extraction techniques: soxhlet, maceration and ultrasoundassisted solvent extraction. Finally, total flavonoid and antioxidant activity was determined spectrophotometrically by aluminium chloride colorimetric assay and 2-Diphenyl-1-picryl hydrazyl (DPPH) method respectively. The results showed that the choice of drying and extraction methods had a significant influence on total flavonoid and antioxidant content of *C. nutans* extract. The combination of drying *C. nutans* leaves using laboratory oven at 60°C and soxhlet extraction obtained the highest amount of total flavonoid and antioxidant content at 24.53 ± 0.95 mg RU/g and 89.73 ± 4.39 mg TE/ g respectively. The highest antioxidant activity for *C. nutans* from air-dried samples and vacuum oven-dried samples were obtained through maceration extraction at 85.46 mg TE/ g and 83.96 mg TE/ g respectively.