Physical Properties and Total Phenolic Content by Different Drying and Extraction Techniques of Clinacanthus Nutans Leaves

ABSTRACT

This report presents a series of different drying condition and extraction methods on Clinacanthus nutans leaves. C. nutans leaves were dried using three different drying conditions: oven (40°C, 60°C and 80°C), vacuum oven and air drying. Then, the physical properties of dried leaves obtained were analyzed in terms of the moisture content and water activity. Thus, the series of extraction was performed using three different extraction techniques: soxhlet, maceration and ultrasound-assisted solvent extraction respectively. Finally, the total phenolic content of each extracts were determined with the Folin-Ciocalteu method. The results showed that the choice of drying method and extraction technique influenced the phenolic compound yield of C. nutans extract. Excellent performance of the combination of drying C. nutans leaves using laboratory oven at 60°C and soxhlet extraction obtained the highest total phenolic content yield at 65.92 ± 2.19 mg GAE/g.