ABSTRACT

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UTILIZATION OF GUAVA LEAVES (*Psidium guajava* L.) IN THE MAKING OF JELLY

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Leaves of *Psidium guajava* L. have been used as traditional folk remedies for various diseases due to the bioactive compounds the leaves contain. The aim of this research was to determine the optimum drying temperature that maintains the total phenolic content, total flavonoid content, and antioxidant capacity of guava leaves, as well as to determine the optimum concentration of dried guava leaves and sugar required to produce an acceptable guava leaf jelly. The leaves of *Psidium guajava* L. were dried using oven at 40°C, 50°C and 60°C. 40°C oven dried *Psidium guajava* L. leaves were found to exhibit significantly higher antioxidant activity when compared to 50°C and 60°C oven dried *Psidium guajava* L. leaves, indicated by an average total phenolic content of 6.36±0.26 mg GAE/g sample, average total flavonoid content of 5.20±0.30 mg QE/g sample, and average DPPH IC_{50} value of 2,912.01±4.73 ppm. 40°C oven dried leaves were incorporated into the making of jelly at 2.0%, 4.0% and 6.0% concentration, along with 1.0% *kappa*-carrageenan to produce jelly-like texture, and sugar at concentrations of 5.0%, 10.0% and 15.0%. The selected formulation was Guava leaf jelly made with 6.0% *Psidium guajava* L. leaves and 15.0% *kappa*-carrageenan, which displayed an antioxidant capacity measured with IC_{50} of 10,336.16±6.88 ppm, total phenolic content of 0.68±0.10 mg GAE/g sample, and total flavonoid content of 0.29±0.01 mg QE/g sample. It scored 4.20±1.32 in terms of overall acceptance in the 7-point hedonic scale.

Keywords : Antioxidant activity, guava leaf jelly, *Psidium guajava* L.
References : 60 (1992-2019)