CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

journal homepage: **http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

DETERMINATION OF PHENOLIC CONTENTS AND ANTIOXIDANT ACTIVITIES OF INFUSIONS PREPARED FROM LEMONGRASS (*Melissa officinalis*)

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https://doi.org/10.34302/crpjfst/2022.14.1.8

Article history:
Received:
21 February 2021
Accepted:
25 December 2021

Keywords:
Antioxidant;
Infusion;
Lemongrass;
Phenolics.

Lemongrass (*Melissa officinalis*) contains high amount of phenolic acids, specifically rosmarinic acid. In this study, dried *Melissa officinalis* teas were prepared at different water temperatures (65, 80, 95 °C) and infusion times (60, 120, 240 s) to determine the total amounts of phenolic compounds, antioxidant activities, and the physical properties of the prepared infusions. From the result the highest total phenolics content (TPC) in ground samples was recorded in infusions prepared at 95 °C at 240 s, but no statistically significant difference ($p > 0.05$) was found between the TPC of infusions prepared at lower temperatures in the same period. It was determined that the effect of time was not significant ($p > 0.05$) during each heat application in both ground and non-ground samples except for the ground lemongrass tea samples at 80 °C. Rosmarinic acid content in the ground samples increased significantly ($p < 0.05$) due to the increase in water temperature and achieved the highest value of 19.04±0.21 mg/g when a temperature of 95 °C was applied. As the water temperature of each treatment increased, the pH values of the ground infusions decreased significantly ($p < 0.001$), with the lowest pH value of 5.51±0.01 at 95°C water temperature and 240 s infusion time samples. The effect of water temperature and infusion time on the soluble solid content of the samples was not significant ($p > 0.05$) (except non-ground sample at 120 s infusion time). The results will help future research on factors such as water temperature and infusion time, as well as grinding, to ensure that bioactive components are transferred to antioxidant-rich infusions.