

Extended Abstract

# Phytochemical Compounds and Antioxidant Activity of Two Types of Medicinal Plants <sup>†</sup>

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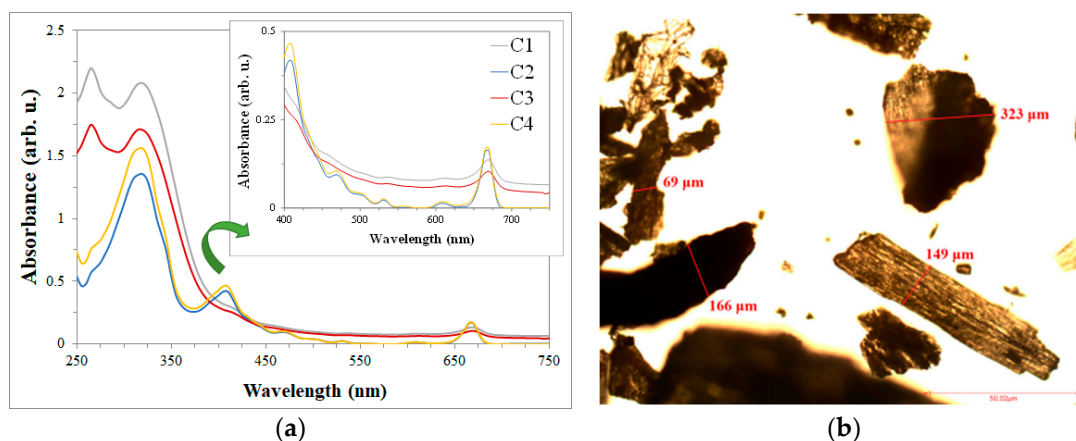
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The present research describes the components of two types of medicinal plants (*Lavandula angustifolia* and *Matricariae flos*). Lavender and chamomile have a variety of therapeutic and curative properties. The aim of our study was to quantitatively (polyphenols, tannins, flavonoids, and antioxidant activity via the DPPH method) and qualitatively (saponins, proteins, terpenoids, steroids) characterize the plant extracts obtained using different types of solvents [1,2]. The samples were analyzed via UV–VIS and optical microscopy techniques.

Medicinal plants (*Lavandula angustifolia* and *Matricariae flos*) were collected from Prahova’s valley. The solvents (ethanol, methanol, lactic acid, and hexane) used for extraction were from Merck. The components and phytosynthesis of extracts were confirmed via UV–VIS spectroscopy, and optical microscopy showed the dimensions of the grinded plants.

UV–VIS spectroscopy was used to characterize the hydroalcoholic plant extracts. The spectrum was registered between 250 and 750 nm, Figure 1a. Specific wavelengths for flavonoids and phenolic acids between 300 and 350 nm were identified. Another peak appears between 400 and 420 nm which is specific to carotenoids and another one at around 600–650 nm, specific to chlorophyll A and B.



**Figure 1.** UV–VIS spectra and optical microscopy image of chamomile (*Matricariae flos*).

UV–VIS spectroscopy showed specific wavelengths for flavonoids, carotenoids, and phenolic acids. Optical microscopy, Figure 1b, allowed seeing a structural parallel arrangement of chamomile plant and rods for the lavender plant. The tannins content of both extracts decreased in five days between 2% and 19%, even in dark, cold conditions. High values for antioxidant activity represent a good scavenging capacity for free radicals.

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