

**RADICAL SCAVENGING CAPACITY AND CHEMICAL COMPOSITION OF
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Radvilenu pl. 19, Kaunas, LT – 50254, Lithuania**Introduction**

Aromatic and medicinal plants are a good source for bioactive components which may be used in foods, nutraceuticals agrimony (*Agrimonia eupatoria* L.) and fragrant agrimony (*Agrimonia procera* L.) are Rosaceae family plants growing wild in Europe. They have been used in folk medicine for blood, cardiovascular, gastrointestinal, genitourinary, inflammatory, liver, respiratory tract, skin and some other conditions. However, scientific information on their composition and properties is rather scarce. The aim of this study was to assess radical scavenging properties and composition of extracts and their fractions isolated from two *Agrimonia* species by different polarity solvents.

Materials and Methods

The plants were grounded before extraction and extracted with acetone or methanol in automatic extractor. The solvents were removed in a rotary vacuum evaporator. Aqueous extracts were obtained by shaking ground material with water and concentrating obtained extracts in a freeze drier. Crude acetone extracts were further fractionated by using two immiscible solvent systems in a separation funnel. The separation was based on different solvent polarity (hexane, *t*-buthylmethylether, butanol and water). Radical scavenging capacity (RSC) of extracts was measured in DPPH[•] and ABTS^{•+} radical reactions; their composition was determined by HPLC/UV/MS.

Results and Discussion

The RSC of *A. eupatoria* and *A. procera* extracts varied in a very wide range: 9.1–97.5% in DPPH[•] reaction and 6.7–79.5% in ABTS^{•+} reaction, depending on the solvent polarity. The extracts isolated with hexane were not effective, due to a low solubility of polar antioxidants. HPLC/UV/MS analysis of extracts resulted in several quantitatively important peaks; three of them were identified as luteolin-7-*O*-glycoside, hyperoside and apigenin-glycoside. It can be concluded that the results obtained encourage further more comprehensive studies of *Agrimonia* species, which may find applications in the preparation of health promoting functional ingredients.