

## Abstract

# Nutritional Composition, Biologically Active Substances and Antioxidant Activity of Selected Edible Wild Plants from Montenegro †

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**Abstract:** The aim of this study was to determine the nutritional composition and biologically active substances (BAS) of wild edible plants from Montenegro. Nettle (*Urtica dioica* L.) leaves, rosehips (*Rosa canina* L.), and the fruit of the strawberry tree (*Arbutus unedo* L.) were investigated regarding several nutrients, major and trace elements, fatty acid composition, amounts of pigments, and total phenols and flavonoids. Antioxidant activity was also determined using three methods (DPPH, FRAP, and ABTS), and the results obtained from all the tests were used to calculate the antioxidant potency composite index (ACI). The results of this study indicate that these plant parts are potential sources of useful nutrients such as macro and micro elements. The majority of fats in all the plant parts consist of unsaturated fatty acids, while saturated fatty acids were represented mainly by palmitic acid. Chlorophyll a and b, zeaxanthin, lutein, and  $\beta$ -carotene were the main pigments in nettle leaves. The pigment profiles of the fruit samples were characterized by the presence of  $\beta$ -carotene, zeaxanthin, and lutein, in addition to pheophytin only in the strawberry tree fruit. The ACI index had a good correlation with the total phenolic and total flavonoid content. All these features reinforce the interest in including these wild edible plants in modern diets as a healthy alternative.

**Keywords:** nutritional composition; biologically active substances; antioxidant activity



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