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IN VITRO ANTIOXIDATIVE ACTIVITY OF ONIONS GROWING IN SERBIA

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The aim of this study was to examine onions from Serbia for their potential antioxidant activity. Therefore, antioxidant activity assays were carried out, including: total antioxidant capacity, DPPH free radical scavenging, the inhibitory activity toward lipid peroxidation, Fe³⁺-reducing power, Fe²⁺-chelating ability and hydroxyl radical scavenging activity. The highest proportion of flavonoids was found in the Jasenicki rouge ethanol extract (105.10 mg RU/g). Jasenicki jaune and Nid dore ethanol extracts showed the highest total antioxidant capacity (312.7 and 231.03 mg AA/g dry extract), DPPH free radical scavenging (IC₅₀=9.23 and 99.05 µg/mL), as well as inhibitory activity toward lipid peroxidation (IC₅₀=2.72 and 17.32 µg/mL) and reducing power. Whereas, the greatest hydroxyl radical scavenging activity, as well as ferrous ion chelating ability showed all three types onions, Jasenicki rouge, Jasenicki jaune and Nid dore.

Key words: antioxidant, flavonoids, phenolics.