

Comparison of Content of Selected Minerals and Cadmium in Olive, Oilseed Rape and Avocado Samples

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The aim of this study was to compare the content of selected metals in olive, oilseed rape and avocado samples. The study was carried out on olive (*Olea europaea* cv. Picual) samples at different ripeness grade grown in Granada (Spain), two oilseed rape (*Brassica napus*) varieties (cv. Digger and Nelson F1) obtained from Experimental Station Department of Crop Production in Prusy, University of Agriculture in Krakow (Poland), and three avocado (*Persea americana*) varieties (cv. Fuerte, Reed and Hass) grown in Almuñecar (Tropical Coast, Granada, Spain). Determination of Ca, Mg, Na, K, Mn and Zn levels was performed by atomic absorption spectrometry using AA240FS spectrometer (Varian, Australia) and the content of Cd and Cu was detected by atomic absorption spectrometry using Varian AA240Z spectrometer (Varian, Australia), after microwave digestion (MARS Xpress, CEM, USA). The results for Ca content in the investigated samples ranged from 63.48 mg kg⁻¹ (Reed avocado) to 4693.89 mg kg⁻¹ (Digger oilseed rape), Mg concentration ranged between 142.49 mg kg⁻¹ (black olive) and 3046.08 mg kg⁻¹ (Digger oilseed rape), Na content ranged from 1.52 mg kg⁻¹ (green olive) to 144.66 mg kg⁻¹ (Reed avocado), K content ranged from 2983.73 mg kg⁻¹ (Fuerte avocado) to 8035.28 mg kg⁻¹ (Hass avocado), Mn concentration ranged between 1.63 mg kg⁻¹ (black olive) to 33.38 mg kg⁻¹ (Nelson F1 oilseed rape), the content of Zn ranged from 3.19 mg kg⁻¹ (black olive) to 48.29 mg kg⁻¹ (Digger oilseed rape), Cu concentration ranged from 1.78 mg kg⁻¹ (Fuerte avocado) to 3.21 mg kg⁻¹ (green olive) and the content of Cd ranged from 0.002 mg kg⁻¹ (Fuerte avocado) to 0.093 mg kg⁻¹ (Digger oilseed rape).

Keywords: minerals, cadmium, olive, oilseed rape, avocado

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