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ORAL PRESENTATION

METALS ACCUMULATION AND TRANSFER IN *Portulaca oleracea L.* SAMPLES AS EDIBLE WILD PLANTS IN AEGEAN REGION OF MEDITERRANEAN AREA

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Purslane, with the botanic name *Portulaca oleracea L.*, is known to be a common wild edible plant with highly rich nutritional and medicanal characteristics. It is the vegetable richest in Omega-3 fatty acids. Fresh purslane has high nutritional values, in terms of vitamins (A, B1 (thiamin), B2, B6, C, E, niacin, nicotinic acid, beta-carotene, riboflavin, folate etc.) and minerals (especially K, Ca, Fe, Mg, Na, P, Cu and Mn) which are beneficial for human health [1]. In the Middle East, the plant is used in asthma, ulcer, diarrhea, dysentery and hemorrhoids, while it is used for antipyretic, muscle relaxant, antiseptic, antispasmodic, and diuretic purposes. Some studies have shown that purslane consumption helps reduce the occurrence of cancer and heart disease [2,3]. *Portulaca oleracea L.* is widely consumed in Mediterranean countries. The current study aims to determine the properties and heavy metal contents of the purslane plant samples and the surrounding soils taken from 18 points in the Büyük Menderes and Küçük Menderes basins located in Agean Region of the Mediterranean Area. For most of the soil samples, As, Cd, Ni, Zn and Pb elements are above the crustal averages. Strong correlations between Al, Cd, Co, Cu, Li, Mn and Zn elements were determined, which means that the correlated elements are considered to be related to similar sources. The translocation factors (TF) determined between root-leaf indicate that B, Cd, Co, Pb, Li, Ni, Sr, and Zn elements are transferred from the root part to the leaf region. The TF values also point that purslane plant has the ability to accumulate most of the elements examined according to the stem part of its leaves, however the plants are under stress due to the levels of Al, As, Ba, Cr, Cu, Fe, Mn elements.

Key words: Purslane, heavy metals, soil, Mediterrenean
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