



## The Determination of Phytoremediation Levels of Ornamental Plants Used in Landscape<sup>#</sup>

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Received June 11, 2011; Accepted December 15, 2011

**Abstract:** Nowadays, environmental pollution related in industrial development is one of the most important problems. The researches in this field are generally conducted using hyper accumulator plants. The phytoremediation properties of some ornamental plants used in landscape have been also investigated. The objective of this study was to determine accumulation of heavy metals in leaves of some ornamental plants used in the landscape of Yüzüncü Yıl University campus area near Lake Van. Leaf samples of the plant species belong to leafy, coniferous and shrub were taken from the refuge of main road in the campus area affected heavy metal pollution due to intensive motorized traffic, and from the coastal areas far away from the intensive traffic. Nickel, lead, cadmium, iron, zinc and copper concentrations were determined in leaf samples. There were significant differences among the plant species ( $P<0.01$ ) according to Fe, Zn, Cu, Ni, Pb and Cd contents of leaves. There were also significant differences among the locations ( $P<0.01$ ) for Fe, Zn, and Cd contents of leaves. Interactions between locations and plant species were significant ( $P<0.01$ ) for the heavy metals, except Pb. The highest Fe, Zn, Cu, and Cd concentrations were obtained in species of *Cedrus libani* A.Rich (618 ppm), *Betula alba* Linn. (106.30 ppm), *Salix alba* L. (24.54 ppm) and *Eleagnus angustifolia* L. (0.28 ppm), respectively. The highest Ni (6.36 ppm) and Pb (3.76 ppm) contents were determined in *Pyracantha coccinea* M. Roem.

**Key words;** Accumulation heavy metals, ornamental plants, phytoremediation

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<sup>#</sup>This paper has been presented at ICE-2011 Tiran, Albania