

# Turkish Journal of Botany

Turkish Journal

of

Botany

Determination of Airborne Lead Contamination in *Cichorium intybus* L. in an Urban Environment

Dilmaç YAKUPOĞLU<sup>1</sup>, Tülin GÜRAY<sup>1</sup>, Deniz YURTSEVER SARICA<sup>2</sup>, Zeki KAYA<sup>1</sup>

<sup>1</sup>Department of Biological Sciences, Middle East Technical University,  
06531 Ankara - TURKEY

<sup>2</sup>Ankara Test and Analysis Laboratory,

The Scientific and Technical Research Council of Turkey (TÜBİTAK),  
Konya Yolu No: 67, 06100 Beşevler, Ankara - TURKEY

 [Keywords](#)  
[Authors](#)



[bot@tubitak.gov.tr](mailto:bot@tubitak.gov.tr)

[Scientific Journals Home](#)  
[Page](#)

**Abstract:** The major source of environmental lead (Pb) is the combustion of leaded gasoline. After emission as exhaust, lead in the air falls to earth and contaminates soil and plants. Seventeen wild chicory (*Cichorium intybus* L.) plant samples were collected from each of 2 urban sites in Ankara, one is located at the road side of major intercity road (heavy traffic) and the other one is located in relatively less traffic area that is about 1 km away from the first location. Lead content of chicory plants were analyzed by a flame atomic absorption spectrophotometer. The mean lead concentrations in the heavy traffic site was  $8.3 \pm 2.8$  mg/L with the range of  $3.88 \pm 1.8 - 14.18 \pm 1.76$  mg/L. For the low traffic site, the mean was  $9.76 \pm 6.01$  mg/L and the range was from  $4.39 \pm 1.5$  to  $19.19 \pm 7.8$  mg/L. From the statistical analysis, significant differences were not found between the low and heavy traffic influenced sites, indicating that plants from areas away from roads and motor traffic were not free of lead so the consumption of these plants could bring high amounts of lead into food chain.

**Key Words:** Lead exposure, *Cichorium intybus*, urban environment, edible wild plants

---

Turk. J. Bot., **32**, (2008), 319-324.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Bot., vol.32, iss.4.](#)