

## Lead Concentration in Brassicas from Zagreb Home Gardens

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**Aim.** To measure the concentration of lead in brassicas grown in Zagreb home gardens, and thus assess lead exposure in the city.

**Methods.** During November-December 1995, and January-February 1996, 81 samples of brassicas (savoy cabbage, Swiss chard, lambs'-lettuce, cabbage, leeks, parsley, dandelion, lettuce, spinach, Brussels sprout, kohlrabi, and celeriac) were collected. The gardens from which the samples were obtained, were at a distance of 50-200 m from the roads. After rinsing the vegetables under running tap water, the lead content was determined by atom absorption spectrophotometry.

**Results.** The mean lead concentration measured in the brassicas was  $541 \pm 350$   $\mu\text{g}/\text{kg}$  (median 454  $\mu\text{g}/\text{kg}$ , range 19-1,871  $\mu\text{g}/\text{kg}$ ). In 12 out of 81 samples (14.8%), lead concentration exceeded the allowed concentration of 1,000  $\mu\text{g}/\text{kg}$ . The highest mean lead concentration ( $834 \pm 210$   $\mu\text{g}/\text{kg}$ ) was found in the vegetables from the southern part of the city, whereas the highest proportion (5 out of 12, 41.7%) of the samples with high lead concentration was recorded in the south-western part of the city.

**Conclusion.** The results confirmed that southern and south-western parts of the city have higher lead exposure, which is consistent with the routinely measured air lead concentration. The concentration of lead was influenced by manufacturing plants, heavy traffic, and meteorologic conditions, mainly the prevailing wind.

**Key words:** *air pollution; brassicas; lead; vegetables; Zagreb, Croatia*

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