

# STUDY OF HUMAN EXPOSURE TO OCHRATOXIN A AND ASSESSMENT OF POSSIBLE SOURCES

J. Ruprich, V. Ostrý

National Institute of Public Health, Centrum of Food Chain Hygiene, Brno, Czech Republic

## SUMMARY

The first study carried out in the CSFR covered 644 samples of blood sera from the district of Uherské Hradiště (about 1 000 km<sup>2</sup> and 150 000 population) during March–May 1990. The samples from the selected persons (over 18 years of age) were collected within 4 sampling weeks. Ochratoxin A (OA) was established densitometrically after the minicolumn separation with HPTLC. The detection limit was about 0.5 µg OA/l, recovery about 95 %. The maximum established value was 12 µg OA/l. The value 1 µg OA/l was exceeded by 12.4 % of samples. Seventy-eight per cent of samples were under the detection limit. After stratification of the experimental group (according to sex and age) higher numbers of findings above 1 µg OA/l were found in the stratum of 30–40 years (males and females) and in the age group over 60 (females). The differences were statistically insignificant (contingency table analysis,  $\alpha > 0.10$ ). The high statistical significance (contingency table analysis) of difference ( $\alpha < 0.01$ ) showed the findings over 1 µg OA/l, and the date of the sampling week. The graphic analysis (localisation of the results in the map of the area) did not support the hypothesis of the dependence of the results over 1 µg OA/l on the place of residence. The results do not support the hypothesis on the sites with a higher level of OA contamination in the studied district. We assume the OA hazard sources originating from both the individual and communal food supply.

*Key words:* mycotoxins, ochratoxin A, human, blood, residues

Address for correspondence: J. Ruprich, National Institute of Public Health, Palackého 1–3, 612 42 Brno, Czech Republic