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HEALTH RISK ASSESSMENT OF THE MYCOTOXIN OCHRATOXIN A TO HUMANS: CZECH REPUBLIC – BRNO – 1991/92

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SUMMARY

In the course of year 1991 and 1992 about 594 blood donors of the Brno agglomeration in the Czech Republic were examined for the ochratoxin A content (OA) in blood serum. When higher concentrations of OA were found the blood donors were examined repeatedly (differentiation of acute or chronic exposure). A mean concentration of 0,63 µg OA/l blood serum (0.30 µg = geom. mean) was recorded. The assessed continuous mean daily dietary intake of OA was about 0.74 ng (0.35 ng = geom. mean) OA/kg b.w./day. The assessed continuous mean contamination of food groups (cereal and meat products) was about 0.65 µg (0.31 µg = geom. mean) OA/kg. In persons with elevated OA concentrations in blood serum the decrease was at the latest confirmed within 2 months after the test result. An accidental acute exposure was probably involved. Tolerable daily intake of OA (TDI) was determined with regard to the nephrotoxic, teratogenic, immunosuppressive and carcinogenic effect at the level of: 16, 500, 250 and 5 ng OA/kg b.w./day. As a legislative limit TDI = 5 ng OA/kg b.w./day was suggested. The group of persons studied was probably not threatened by any of the health risks given.

Key words: risk assessment, mycotoxin, ochratoxin A, human blood, food intake, regulations

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