

Material and methods: The study presents the results obtained in 2006.

Lead and cadmium were monitored in potato, carrot, spanish, lettuce, apple, wheat flour, maize flour, juice and daily diets.

Nitrates were monitored in spanish and lettuce.

Pesticide residues (DDT, HCH, lindane) were monitored in daily diets.

Aflatoxin total (B1, B2, G1, G2) were monitored in wheat flour, rye flour, nuts and peanuts.

Results: Three thousand and eighty-eight foodstuff samples were analysed during the 2006 period. In 3% of samples analysed the contaminants were nonconformity EU limits.

There were no statistically reliable changes found in *nitrate* content in vegetables, the mean contents of nitrates were 308.3 mg/kg.

Lead and cadmium presence are observed in some foodstuffs but in the EU limits.

Residues of pesticide were detected in solitary cases. The detected levels of lindane have no exceeding of official limits.

Aflatoxin total were detected in nuts and maize flour.

Analysed contaminants consumption data (by 24 h food consumption recall method) showed that none of the consumed contaminants exceeded ADI-value.

Conclusion: Determinations of these chemical contaminants in food are important in environmental monitoring for the prevention, control and reduction of pollution as well as for occupational health and epidemiological studies.

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F07

Effects of gestational and lactational exposure to PCB126 and methylmercury on circulating steroid hormone levels at weaning and puberty in the rat

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PCBs have been reported to possess estrogenic or anti-estrogenic properties depending on the congener type and the experimental system used. In vivo methylmercury (MeHg), which often occurs in food together with PCBs, can also disrupt endocrine function.

This study assessed whether maternal consumption of the dioxin-like PCB126 congener (100 ng/kg b.w./day), alone or combined with MeHg (0.5 mg/kg b.w./day), throughout gestation and lactation (GD7-PND21) affected the serum concentrations of 17 beta-estradiol (E2) and testosterone (T) in male and female rat offspring at weaning (PND21) and puberty (PND36). Sex hormones were measured by radioimmunoassay kits.

Concerning *E2 levels*, PCB126 and/or MeHg were devoid of any effect in weanling rats of either gender (controls: 8.68 ± 2.90 pg/ml in males; 9.94 ± 2.63 pg/ml in females). At puberty, males (but not females) treated with PCB126 alone showed a 60% reduction in the hormone circulating levels. Such decrease persisted in the co-presence of MeHg.

Concerning *T levels*, a 25% decrease (as compared to controls) was detected in PND21 males exposed to PCB126 alone, which was still evident at puberty. By contrast, in PND21 females only the combined PCB126-MeHg exposure resulted in a significant (66%) reduction of T concentrations (control: 1.09 ± 1.06 ng/ml).

Developmental exposure to PCB126 alone or combined with MeHg alters circulating steroid hormone levels in a different manner according to gender, age and hormone considered. MeHg, by itself, does not seem to act as an endocrine disruptor, at least on these end-points, during development.

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F08

Formaldehyde endogenous synthesis as the possible health risk of some dietary supplements, foods and medicines

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Creatine, dimethylglycine (DMG), glycerol, aspartame, pectin, caffeine, erythromycin, urotropin are widely utilized dietary supplements and medicaments. These substances can be substrates for the fermentative synthesis of formaldehyde and can lead to considerable increasing of the formaldehyde production, although the catabolism pathway of these substances are different. For example, creatine and dimethylamine are a source