THE INCIDENCE OF CONTAMINATION WITH OCHRATOXIN A OF SOME VEGETAL PRODUCTS IN OLTENIA REGION IN JANUARY 2006-JUNE 2007

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SUMMARY

The mycotoxin ochratoxin A is formed of the species *Aspergillus* and *Penicillium* (1). Apart form a marked nephrotoxic, teratogenic, carcinogenic and immunosuppressive properties. There is a risk to human health not only through the intake of contaminated foods of vegetable origin. A was detected in human blood and mother’s milk. Ochratoxin A (OTA) commonly occurs in foods and beverages, including cereals, beans, nuts, spices, coffee, wine (2). The European Commission has fixed maximum limits for OTA Regulation (EC) no.123/2005 in vegetable foods, coffee and wine. Recent studies have identified the environmental regions, especially of temperature and humidity, which are conductive to growth and OTA production by these species pre- and post-harvest and during transport. The ecological conditions for optimum growth and OTA production have been shown to differ with the optima being 30-35°C and 15-20°C and 0.98-0.99 and 0.63-0.95 water activity, respectively (3). The basis of the test is the antigen-antibody reaction. The wells in the microtiter strips are coated with specific antibodies to ochratoxin A. OTA standards or the sample solutions and enzyme conjugate are added. Free and enzyme conjugated OTA compete for the OTA antibody binding sites. Any unbound enzyme conjugates in then removed in a washing step. Substrate/chrmogen is added to the wells and incubate. Bound enzyme conjugate converts the chromogen into a blue product. The addition of the stop solutions leads to a color change from blue to yellow. The adsorption is inversely proportional to the OTA A concentration in the sample. In the national program of self-control of the non-animal products, it has been analyzed 77 vegetal samples in the regions in Oltenia, based on the following moulds: wheat, corn, coffee, wine, barley, rice and whither fruits. The prelucrated samples, in order to determine the content of OTA, and were take basing on MAPDR no.168/2006 order. In order to determine method, using a full Tecan ELISA line. From the 77 samples, in 34 of there, OTA wasn’t found. At one sample of corn a high concentration of OTA was detected, that was close to the superior admitted limit of maximum concentration the highest limit. However, it shouldn’t be ignored the number of samples that doesn’t fit in the legally limit, but, that can have an accumulator effect in time.

BIBLIOGRAPHY