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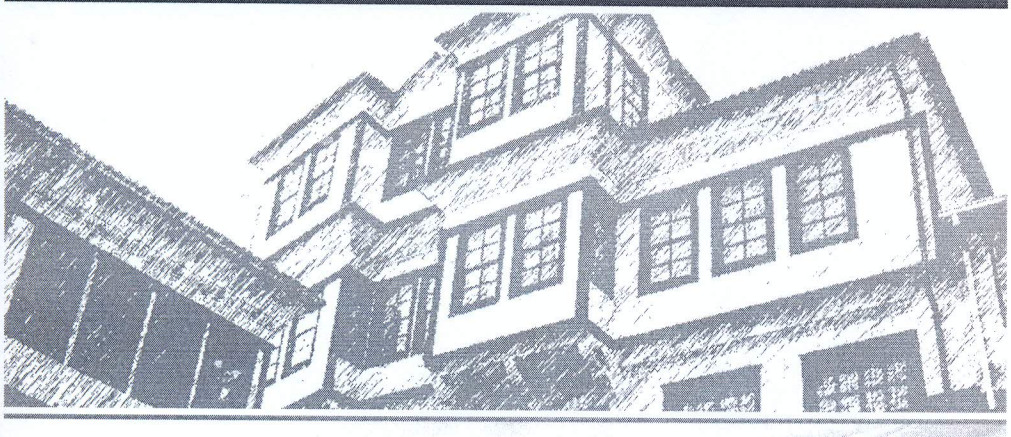

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Address
Macedonian Veterinary Review, Lazar Pop Trajkov 5/7, 1000 Skopje, Republic of Macedonia
Tel: ++389 2 3240 700; Fax: ++ 389 2 3114 619; e-mail: macvetrev@fvm.ukim.edu.mk; URL: www.macvetrev.mk

monitoring of not only the AFM_1 level in milk, but also the AFB_1 level in feed, will be required to protect the public, especially infants and young children, against AFM_1 toxicity.

P71

Incidence of ohratoxin A: Current situation in some food products

Biljana Stojanovska-Dimzoska*, Katerina Davceva, Zehra Hajrulai-Musliu, Elizabeta Dimitrieska-Stojkovic, Risto Uzunov, Aleksandra Angeleska

Food Institute, Faculty of Veterinary Medicine, Ss Cyril and Methodius University, Lazar Pop Trajkov 5-7, Skopje, Macedonia

Introduction: Ochratoxin A, a nephrotoxic mycotoxin mainly produced by *Asperillus ochraceus* and *Penicillium verrucosum*, has been shown to contaminate a wide variety of commodities (cereals and their products, grapes, wine, dried wine fruits-figs, coffee, nuts). There is growing evidence that this mycotoxin has poor effects not only on body weight, feed intake and feed conversion in animals after consumption of contaminated feed, but it is also involved in the etiology of Balkan endemic nephropathy. OTA exerts nephrotoxic, immunotoxic, teratogenic, genotoxic, mutagenic and carcinogenic effects. For this reason the International Agency for Research on Cancer evaluated OTA as a possible carcinogen in humans (group 2B). The MRL for OTA content in food has been regulated by legislation worldwide and it is in the range from 0,5 to 10 μg/kg for different commodities.

Material and methods: Total of 40 corn flour, 11 polenta, 38 wheat flour, 63 grits, 63 bread, 15 breakfast cereals, 13 green coffee, 18 frozen corn, 3 pasta (dry) and 33 strudel samples were brought to our laboratory by inspectors or from the food operators themselves during 2013-2014. The HPLC-FLD and fluorometry with immunoaffinity column clean-up were the methods used for determination of OTA. The extraction and purification of samples was done according to AOAC Official method 2000.03 (for HPLC-FLD) and according to Instruction Manual (for fluorometry).

Results: Total of 273 samples were analyzed for OTA content. Most of them (218 samples) were with OTA concentration level below LOD (79,8%). Eighteen (18) samples were positive in accordance with legislation. Among them, 10 strudel samples (30,3%) show OTA content over the MRL in the range of 3,3-9,1 μg/kg, 6 corn flour samples (15%) were with OTA concentration level in the range of 3,2-5,0 μg/kg and 2 grits samples (5,1%) were with OTA content over the MRL in the concentration range of 3.9-5,7 μg/kg. None of the following samples: polenta, wheat flour, bread, breakfast cereals, pasta, frozen corn and green coffee, surpassed the legislation limits suggested by the official agencies.

Conclusions: OTA was found in 55 samples (20,1%) tested with levels ranging from 0,14-9,1 μg/kg for different commodities. Although 79,8 % of samples were with an OTA concentration level below LOD, the number of positive samples (6,6%) should not be neglected. The strategies for ensuring food safety should be directed to the current human exposure to OTA in relation to the safety guidelines for OTA, taking into account what can be reasonably achieved following good practices at all stages of production.

P72

Occurence of ochratoxin A in Macedonian wines

Katerina Davcheva*, Biljana Stojanovska-Dimzoska, Zehra Hajrulai-Musliu, Elizabeta Dimitrieska-Stojkovic, Risto Uzunov, Aleksandra Angeleska, Basak Kucukcakan

Food Institute, Faculty of Veterinary Medicine, Ss. Cyril and Methodius University, Skopje, Macedonia

Introduction: Ochratoxin A (OTA) is a mycotoxin produced by the fungi *Penicillium verrucosum*, *Aspergillus ochraceus* and *Aspergillus carbonarius*. It possesses carcinogenic, nephrotoxic, teratogenic, immunotoxic and possibly neurotoxic properties. The international Agency for Cancer Research (IACR) has placed OTA into the B2 group i.e. among substances potentially carcinogenic for humans. The total intake of OTA due to wine has been provisionally estimated by the Codex Alimentarius Commission to 15%. In accordance to EU Regulations Commission (EC 123/2005) wine and other wine and/or grape must based beverages should comprise maximum concentration of 2.0 ng/ml of OTA.

Material and methods: Quantitative determination of OTA in wines and grape musts after their clean-up on immunoaffinity columns was investigated using HPLC method with fluorescence detection according to AOAC method (2001.01). In duration of 4 consecutive years (2011-2014), 189 samples of variety bottled wines and grape musts (86 red wines, 90 white wines, 11 rose wines and 2 grape musts), which originated from different parts of Macedonia, were analysed.

Results: OTA was detected in 30% of samples, in a concentration level up to: 0.349 ng/ml, 0.716 ng/ml and 0.163 ng/ml in red wines in 2012, 2013 and 2014 respectively; 0.079 ng/ml, 0.238 ng/ml in white wines in 2012 and 2013 respectively; 0.315 ng/ml in rose wines in 2013;0.137 ng/ml in grape must in 2013.Overall OTA concentration detected in samples in 2011and 2012 (in both red and white wines) was below LOD (0.043 ng/ml). In 2013 the mean concentration level was 0.076 ng/ml in rose wines and 0.137 ng/ml in grape must. In 2014, only in red wines the overall OTA concentration was over the LOD (0.059 ng/ml). None of the samples exceeded the maximum limit of OTA concentration.

Conclusion: In general, levels of OTA were higher in red wines than in white ones, corresponding to the comprehensive published findings. It is interpreted as a consequence of the differences in the winemaking procedures for both types. The overall OTA concentrations