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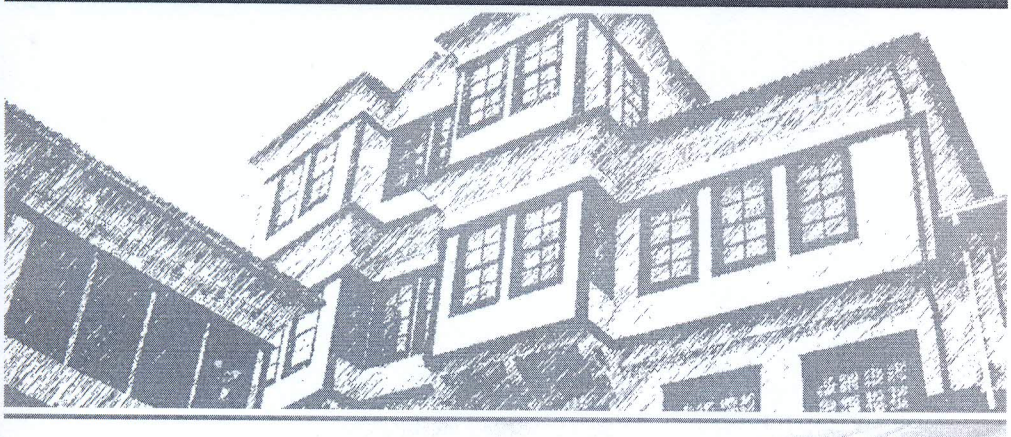

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Amd1:2007 method, for the detection of *Salmonella* in animal and environmental samples from primary production. Serotyping of *Salmonella*-isolates was done according to the Kauffmann-White scheme.

Results: All the samples taken from the farm (faeces, dust and cloacal swabs) were found to be negative for *Salmonella spp.* As for the slaughterhouse, 4 (8%) of the cloacal swabs, and 8 (16%) of caeca samples were found to be positive for *Salmonella* spp. All of the isolates were confirmed as *Salmonella Enteritidis*.

Conclusion: Our results lead to suspicion that if the flock is a carrier of *Salmonella* it doesn't necessary shed *Salmonella* in the environment. The official monitoring method, with pool samples of faeces and dust from the farm is not always able to detect the *Salmonella* within the flock unless the hens are shading it. The occurrence of *Salmonella* positive cloacal swabs samples from the slaughterhouse indicates that the introduction of transport stress can provoke *Salmonella* shedding in some of the laying hens that were *Salmonella* carriers. However this study was conducted to only one flock of laying hens, and more flocks should be examined in order to get to a definite conclusion.

SS4

Study of aflatoxin contamination in corn and bread in R. Macedonia

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Introduction: Aflatoxins (AFT) are poisonous substances which are classified in Group 1 carcinogenic agents to humans by IARC. AFT can occur naturally in food commodities (maize, corn, rice, cottonseed, spices) as a result of fungal contamination in hot and humid environments. In the food, toxin contamination can remain during manufacturing and long after fungi have stopped being biologically active. AFB1, AFB2, AFG1 and AFG2 are the major AFTs of which, AFB1 is the most dominant and potent. In respect of EU legislations, maximum residue level (MRL) for corn and cereals is 5 µg/kg and 4 µg/kg, respectively. In this study our aim was to investigate presence of AFT and searching for correlation between AFTs concentration in corn and commercial bread.

Material and methods: The data of food analysis were collected from the laboratory records which declared samples of corn and bread brought from different regions of Macedonia. Corn (n=34) and bread (n=53) results, were appointed in Group 1 and Group 2, respectively. The second group was separated in two subgroups: Group 2-1 (n=32) consisting of white and Group 2-2 (n=21) consisting of bran cornbread results. The extraction and purification procedures were performed according to AOAC Official method (991.31) with limit of detection (LOD) of 0,005 µg/kg. For statistical analysis, we used Fisher's analysis of variance test, whereas Tukey post-hock test was used for detection of significance in the differences between the groups.

Results: According to the LOD threshold, twenty samples from Group 1, 2-1 and 2-2 were detected in the range of 0,15-109,79 µg/kg (n=17; 50%; n=1; 3,12% and n=2; 9,5%, respectively). Only Group 1 samples had AFT concentrations above MRL (n=7; 20,5%) in the range of 15,95-109,79 µg/kg. None of the samples in Group 2 were marked as positive. The analysis of variance between the means of Groups 1, 2-1 and 2-2 (10,8 µg/kg ±25,18; 0,004 µg/kg ±0,0265 and 0,064 µg/kg ±0,026) showed statistically significant difference (F=4,81; P= 0,01). The Tukey post-hock test revealed that the relations of Group 1 vs. Group 2-1 and Group 1 vs. Group 2-2 were statistically significant (P =0,01 and P= 0,04).

Conclusion: We found that corn, bran cornbread and white bread had presence of AFT, with levels above MRL for the corn samples only. Nevertheless, we could not find levels of AFT above MRL in the bran cornbread which is produced by this grain. We suggest that the absence of dangerous AFT levels in bran cornbread could be explained with use of corn with another geographic origin or corn from import.

SS5

Importance of personnel hygiene in food production facilities

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The ready-to-eat food industry has an important role in the cities and towns of many developing countries. It feeds millions of people daily with a wide variety of foods that are relatively cheap and easily accessible. Poor personnel hygiene is a leading cause of foodborne poisoning and illness. Since the hands touch all parts of the body, a vast array of miscellaneous objects, other people, domestic animals and food, it follows that a diverse microbial flora can exist on the hands. Hand transfer has been identified as a significant mode of transmission for bacteria from person to person, from person to surface and from surface to person (zigzag fashion) and from person to food. Therefore, the hygienic status of personnel hygiene should be routinely controlled in food production facilities. Especially, the number of total mesophilic bacteria, *Esherichia coli* and *Staphylococcus aureus* are very important in the samples taken from personnel hands, regarding food poisoning risk and public health. As a