

Enzyme Linked Immuno Sorbent Assay Based Detection of Aflatoxin M1 and Ochratoxin A in Raw Milk in Punjab, India

Authors : Pallavi Moudgil, J. S. Bedi, R. S. Aulakh, J. P. S. Gill

Abstract : Mycotoxins in milk are of major public health concern. The present study was envisaged with an aim to monitor the occurrence of aflatoxin M1 and ochratoxin A in raw milk samples collected from individual animals from dairy farms located in Punjab (India). A total of 168 raw milk samples were collected and analysed using competitive ELISA kits. Out of these, 9 (5.4%) samples were found positive for aflatoxin M1 with the mean concentration of 0.006-0.13 ng/ml and 2 (1.2%) samples exceeded the established maximum residue limit of 0.05 ng/ml established by the European Union. For ochratoxin A, 2 (0.1%) samples were found positive with the mean concentration of 0.61-0.83 ng/ml with both the samples below the established maximum residue limit of 2 ng/ml. The results showed that the milk of dairy cattle is safe with respect to ochratoxin A contamination but occurrence of aflatoxin M1 above maximum residue limit suggested that feed contaminated with mycotoxins might have been offered to dairy cattle that can pose serious health risks to consumers.

Keywords : Aflatoxin M1, health risks, maximum residue limit, milk, Ochratoxin A

Conference Title : ICMPT 2017 : International Conference on Mycotoxins, Phycotoxins and Toxicology

Conference Location : Paris, France

Conference Dates : April 18-19, 2017