

FOOD SAFETY & REGULATORY MEASURES

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Mycotoxin contamination of baby foods in tropical climes, implications and way forward

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Mycotoxins in foods are of great food safety, health and economic concern, because of the potential of these toxins to cause serious health problems especially in infants. Various methodologies are employed for their detection in food items, ranging from rapid screening method such as the lateral flow devices and more elaborate confirmatory methods such as liquid chromatography coupled to various detection systems for the quantification of mycotoxins present. Mycotoxin contamination of food products manifests more in tropical regions with high temperatures and humidity which presents ideal conditions for growth of moulds. Also the feeding of infants with locally formulated foodstuff which are not regulated is of great concern regarding their microbiological safety. Studies are focusing on standardizing local infant formulas so that they are not only nutritious, but also microbiologically safe. Local fermented foodstuff such as soy-ogi in Nigeria has proven to be very nutritious; the challenge now is to assure its microbiological safety. In tropical laboratories, mycotoxin tests are usually employed using screening methods such as lateral flow devices and ELISA systems which are qualitative or at best semi-quantitative. These screening methods are usually specific for one mycotoxin or group of structurally related toxins and are known to sometimes underestimate or overestimate toxins present because of lack of specificity of the antibodies employed. Because of paucity of funds, the confirmatory methods of HPLC-MS most times are not employed in testing for mycotoxins in these foods. Trend is shifting towards culture dependent and immunological methods for their detection in foodstuffs.

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