

Risk Assessment of Food Contaminants: Dioxins, PCBs, Mycotoxins

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The EU legislation on contaminants in food fulfils two essential objectives: the protection of animal and public health and removal of internal barriers to trade within the EU.

Following the principles and objectives of the General Food Law, feed and food safety legislation shall pursue a high level of animal and human health protection. To achieve this objective legislation shall be based upon risk analysis. Risk assessment shall be based on the available scientific evidence and undertaken in an independent, objective and transparent manner. Risk management shall take into account the results of risk assessment, other factors legitimate to the matter under consideration and the precautionary principle where appropriate.

When international standards exist or their completion is imminent, they shall be taken into consideration in the development of any standard at EU level

In the framework Regulations on contaminants in food it is foreseen that

- contaminant levels shall be kept as low as can reasonably be achieved by following good practices at all stages of the production chain
- in order to protect animal and public health, maximum levels for specific contaminants shall be established where necessary;
- the consultation of a scientific body (EFSA) for all provisions which may have an effect upon animal and public health is mandatory.

A scientific risk assessment comprises a hazard identification, toxicological evaluation and risk characterisation. A tolerable intake is the level of intake at which no harmful effects are expected to occur. In cases of genotoxic compounds, no safe level can be identified and therefore no tolerable intake can be set.

New approaches in risk assessment include health risk/benefit assessment, estimation of Margin of Exposure (MOE) for genotoxic compounds, threshold of toxicological concern (TTC), , ...

To reduce the presence of contamination in the food supply, "prevention is better than cure". Therefore it is important to encourage preventive actions such as good agricultural practice, good manufacturing practices, good storage conditions, use of improved sorting procedures etc...

Maximum levels are established at a reasonably achievable level, stimulating food business operators to apply preventive actions all along the food chain in order to avoid the contamination of the food chain.

Besides the setting of maximum levels, several other risk management regulatory tools are applied at EU level to prevent and/or reduce the contaminant levels in food.

Legislation on contaminants needs continuously be updated to ensure a continuous high level of human protection and to address the challenges with which the risk managers are faced. However there are changing trends in the EU policy on contaminants in food.

In the presentation attention will be paid on how the abovementioned principles and objectives and new approaches in risk assessment have resulted in changes in EU legislation with focus on dioxins, PCBs and mycotoxins