Scientific approach for recall measures for foods contaminated with nitrate, lead, cadmium, mercury, methyl mercury, arsenic and/or inorganic arsenic

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Abstract

The Scientific Committee of the Belgian Federal Agency for the Safety of the Food Chain (FASFC) was mandated to develop a scientific approach which should help decision makers to take the appropriate recall measures for foods contaminated with nitrate, lead, cadmium, mercury, methyl mercury, arsenic and/or inorganic arsenic. The recall of a product is defined as the measure aimed at preventing consumption or use of the product after distribution or aimed at informing the consumer about the potential risk of the consumption of the concerned product. Concerned contaminants are known to have long term toxic effects.

A workgroup was composed to prepare the opinion of the Scientific Committee. Exposure scenarios were first carried out in order to develop a scientific approach. The proposed approach is based on an acute risk assessment and compares acute exposure to a toxicological reference value for acute effects. The following steps are proposed:

- 1. If, for the concerned contaminant / foodstuff, a maximum limit or action limit exists, it should be checked whether this limit is exceeded or not, taking into account the measurement uncertainty. Where appropriate, for arsenic and mercury the analyzed form should be taken into account and a conversion factor should eventually be applied.
- 2. If the concerned contaminant exceeds the maximum limit or action limit or in case no maximum limit or action limit exists, the acute exposure should be calculated.
- 3. The exposure should be compared to a toxicological reference value for acute effects.
- 4. If the exposure is higher than the toxicological reference value for acute effects, there is a risk.

Finally, the decision to proceed to take recall measures returns to the risk manager.

The proposed approach is still under debate in the Scientific Committee, but adoption of the opinion is expected soon.