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# CODE OF PRACTICE CONCERNING SOURCE DIRECTED MEASURES TO REDUCE CONTAMINATION OF FOOD WITH CHEMICALS

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**CAC/RCP 49-2001**

1. This document deals with the major sources of environmental chemicals which may contaminate foods and constitute a hazard to human health and therefore, have been considered for regulation by CCFAC/CAC. Apart from environmental contaminants, foods may contain chemicals used as pesticides, veterinary drugs, food additives or processing aids. However, since such substances are dealt with elsewhere in the Codex system, they are not included here, neither are mycotoxins or natural toxins.
2. The main objective of this document is to increase awareness of sources of chemical contamination of food and feed, and of source-directed measures to prevent such contamination. This means that measures recommended in the document may lie outside the direct responsibility of the food control authorities and Codex.
3. National food control authorities should inform relevant national authorities and international organizations of potential or actual food contamination problems and encourage them to take appropriate preventive action. This should result in decreased levels of chemical contamination and, in the long term, could result in a decreasing need to establish and maintain Codex Maximum Levels for chemicals in food.
4. Different approaches may be used to try and ensure that the levels of chemical contaminants in foodstuffs are as low as reasonably achievable and never above the maximum levels considered acceptable/tolerable from the health point of view. Essentially, these approaches consist of a) measures to eliminate or control the source of contamination, b) processing to reduce contaminant levels and, c) measures to identify and separate contaminated food from food fit for human consumption. The contaminated food is then rejected for food use, unless it can be reconditioned and made fit for human consumption. In some cases, a combination of the above approaches must be used, for example, if emissions from a previously uncontrolled source have resulted in environmental pollution with a persistent substance, such as PCBs or mercury. When fishing waters or agricultural land become heavily polluted due to local emissions, it may be necessary to blacklist the

areas concerned, i.e. to prohibit the sale of foods derived from these polluted areas and to advise against the consumption of such foods.

5. Control of final products can never be extensive enough to guarantee contaminant levels below established Maximum Levels. In most cases, chemical contaminants cannot be removed from foodstuffs and there is no feasible way in which a contaminated batch can be made fit for human consumption. The advantages of eliminating or controlling food contamination at source, i.e. the preventive approach, are that this approach is usually more effective in reducing or eliminating the risk of untoward health effects, requires smaller resources for food control and avoids the rejection of foodstuffs.
6. Food production, processing and preparation operations should be analysed with a view to identifying hazards and assessing the associated risks. This should lead to a determination of critical control points and the establishment of a system to monitor production at these points (i.e. the Hazard Analysis Critical Control Point or "HACCP" approach). It is important that care is exercised throughout the whole production-processing and distribution chain, since food safety and quality in other respects cannot be "inspected into" the product at the end of the chain.
7. Pollution of air, water and arable land can result in the contamination of crops grown for food or animal feed, food producing-animals and surface and ground waters used as sources of water for drinking and food production and processing. The relevant national authorities and international organisations should be informed about actual and potential food contamination problems and encouraged to take measures to:
  - control emissions of pollutants from industry, e.g. the chemical, mining, metal and paper industries, and also from weapons testing;
  - control emissions from energy generation (including nuclear plants) and means of transportation;
  - control the disposal of solid and liquid domestic and industrial waste, including its deposition on land, disposal of sewage sludge and incineration of municipal waste;
  - control the production, sale, use and disposal of certain toxic, environmentally-persistent substances, e.g. organohalogen compounds (PCBs, brominated flame retardants, etc.), lead, cadmium and mercury compounds;

- ensure that before new chemicals are introduced onto the market, and especially if they may eventually be released into the environment in significant amounts, they have undergone appropriate testing to show their acceptability from the health and environmental points of view;
- replace toxic environmentally-persistent substances by products which are more acceptable from the health and environmental points of view.