

# Chemical contaminants

We are responsible for making sure that chemicals are not present in food at levels that would be of concern. We carry out research and surveillance and using that information, we can enforce controls to prevent chemical contaminants entering the food chain.

Chemical contaminants presence in food is unintentional and undesirable.

Examples of chemical contaminants include the following:

- [mycotoxins](#)
- heavy metals - lead and mercury
- [organic pollutants](#) - dioxins
- [acrylamide](#) which may result from food being processed

Chemical contaminants can enter the food chain from multiple sources. Contamination can occur during primary production from various environmental sources including:

- pollution
- waste from factories
- landfills
- incinerators
- fires
- contaminated land, including from natural occurrence
- contaminated water, for example, dioxins, halogenated organic compounds or heavy metals
- plant diseases - mycotoxins
- contamination from weeds, for example, plant toxins
- carry over of certain substances from animal feed
- climatic conditions, for example, wet conditions at key stages during growing and harvest can increase production of mycotoxins

Chemical contaminants can also enter the food chain at the secondary production stage

- during cooking and processing, for example, acrylamide, polycyclic aromatic hydrocarbons
- storage, for example, mycotoxins
- transportation and handling

Chemical contaminants may be harmful to health at certain levels. It is necessary to manage their levels in food and reduce dietary exposure of consumers. Several measures are in place to manage the risk from these contaminants and reduce the levels at which they are present in food - including good practices and regulatory controls.

## Regulatory measures

Among risk management measures, regulatory controls play a key role. Overarching food legislation lays down the general principles and requirements of food law as well as procedures in matters of food safety.

These food safety requirements stipulate that food shall not be placed on the market if it is unsafe and food shall be deemed unsafe if it is considered to be the following:

- injurious to health
- unfit for human consumption

The basic principles of regulatory control of chemical contaminants in food covering procedures for contaminants in food and procedures for hygiene of foodstuffs are laid down in separate legislation.

## England and Wales

In England and Wales the relevant regulations are:

- [assimilated Regulation \(EEC\) 315/93](#) for contaminants
- [assimilated Regulation \(EC\) 852/2004](#) for hygiene procedures

## Northern Ireland

In Northern Ireland the relevant regulations are:

- [Regulation \(EEC\) 315/93](#) for contaminants
- [Regulation \(EC\) 852/2004](#) for hygiene procedures

The principles can be summarised into three points:

- food containing an amount of contaminant unacceptable from the public health viewpoint, shall not be placed on the market
- contaminant levels shall be kept as low as can reasonably be achieved following recommended good working practices
- maximum levels can be set for certain contaminants to protect public health. It is the responsibility of Food Business Operators (FBOs) to ensure due diligence measures are in place and documented in Hazard Analysis and Critical Control Point (HACCP) or food safety management systems. This is done to manage the risk from chemical contaminants in food.

Specific maximum levels (MLs) for certain contaminants in food are laid down in:

- [assimilated Commission Regulation \(EC\) No 1881/2006](#) for England and Wales
- [Commission Regulation \(EC\) 1881/2006](#) for Northern Ireland

Additional regulatory measures or related measures have been established. This includes:

- codes of good practice to be followed in agriculture and food manufacture
- guidance levels for trade purposes

## Responsibility of food business operators

It is the responsibility of the FBO to ensure food is safe and compliant with food legislation.

To do this the FBO must have suitable food safety management processes and HACCP in place to manage the risk from chemical contaminants in food. It is also the FBO's responsibility to ensure due diligence measures are in place and documented in their food safety management systems/HACCP proportionate to risk and means.