



Dioxins & Furans

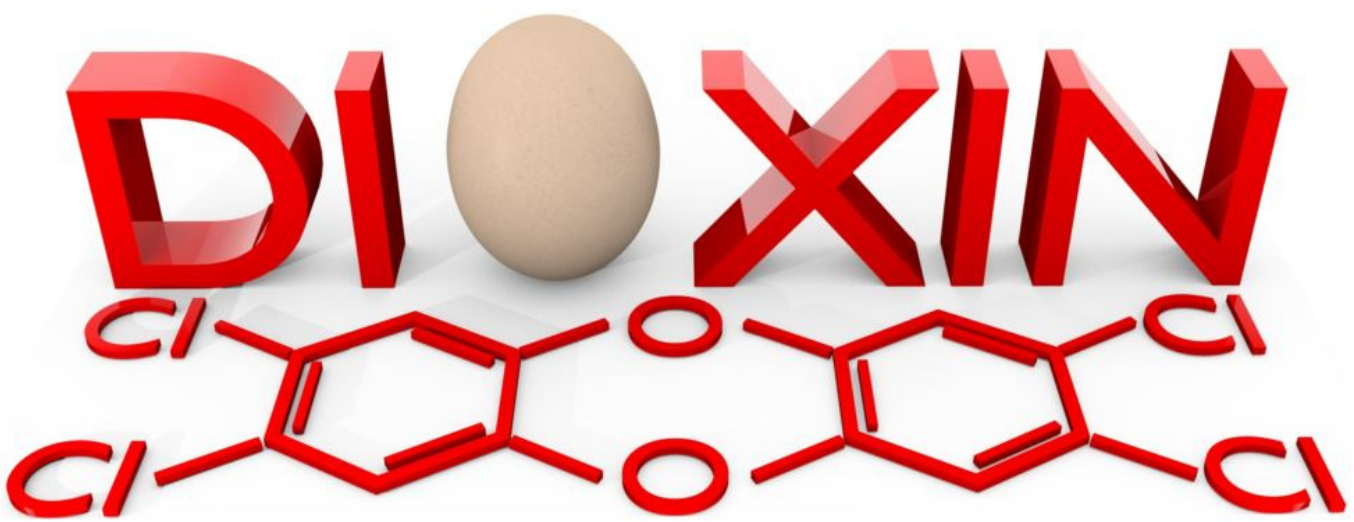
Dioxins and dioxin-like compounds (DLCs) are a group of chemical compounds that are persistent environmental pollutants (POPs). Some of them are highly toxic, but the toxicity varies widely. Dioxins are found in the environment and they accumulate in the food chain, mainly in the fatty tissue of animals. More than 90% of human exposure is through food, mainly **meat and dairy products, fish and shellfish**. Many national authorities have programmes in place to monitor the food supply.

The chemical name for dioxin is: **2,3,7,8- tetrachlorodibenzo para dioxin (TCDD)**. The name "dioxins" is often used for the family of structurally and chemically related **polychlorinated dibenzo para dioxins (PCDDs)** and **polychlorinated dibenzofurans (PCDFs)**. Certain dioxin-like **polychlorinated biphenyls (PCBs)** with similar toxic properties are also included under the term "dioxins". Some 419 types of dioxin-related compounds have been identified but only about 30 of these are considered to have significant toxicity, with TCDD being the most toxic.

Furan is a **heterocyclic organic compound**. Chemical compounds containing such aromatic rings are also referred to as furans. Furan is a **colorless, flammable, highly volatile liquid with a boiling point close to room temperature**.

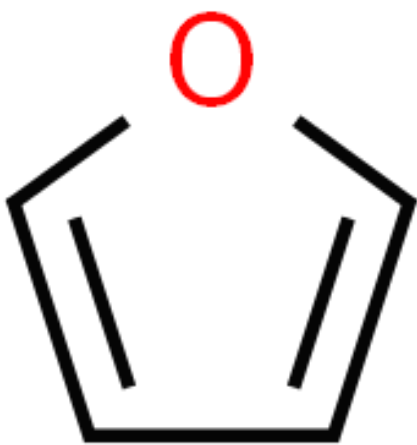
Effects of dioxins & furans on human health

Duration of exposure	
Short Term	Long Term
Causes: Skin lesions <ul style="list-style-type: none">• Chloracne• Dark patches on skin Altered liver function	Impacts: Immune system Developing nervous system Endocrine system Reproductive system



TCDD was evaluated by the WHO's International Agency for Research on Cancer (IARC) in 1997 and 2012. Based on animal and human epidemiology data, TCDD was classified by IARC as a **"known human carcinogen"**.

Consumer exposure to furan and methylfurans in food could lead to possible long-term liver damage. The most exposed group of people are infants, mainly through consumption of ready-to-eat jarred or canned foods. Exposure in other population groups is mainly from consumption of grain-based foods and coffee, depending on age and consumer habits.



As always, **Eureka** is here to support you not only with our **sampling, testing and inspection services**, but also with **expert advice** on related topics. Please email us for all your upcoming requirements.