

PFAS in fish and crustaceans

PFAS (per- and polyfluorinated alkyl substances) is a large class of chemicals that may include more than 9000 compounds. The perfluorinated compounds do hardly degrade at all and the class is therefore often referred to as “forever chemicals”. Fish and shellfish is among the food categories that has drawn most attention given that uptake directly mirrors PFAS polluted waters. Also bioaccumulation of longer PFAS may be of concern, even in bigger lakes and in the oceans. More and more regulation has come into place over the years and acceptable exposure has decreased.

Regulation

Limit values for PFAS levels in food have been decided by the EU Commission and apply to animal foods such as meat, fish, crustaceans and eggs Regulation (EU) 2023/915. Limit values came into force on 1 Jan 2023 implying that food containing more PFAS than the limit value may not be sold.

The companies are responsible for ensuring that the limit values are not exceeded in their food. Authorities that inspect companies can decide that food must be removed from the market if it contains more PFAS than the limit value allows. The regulation contains limits for four individual PFAS and the sum of these. The substances are the same as the ones EFSA has established an intake value for (TWI).

Occurrence of PFAS

In the light of the presence of PFAS both in polluted waters and in those without a known point source, the chemicals are very frequently found in fish. Sometimes showing concentrations so high that local fishing restrictions have been enforced e.g. in the US and Scandinavia. The measured levels may exceed the EU limit which has been seen in studies performed by Eurofins for Swedish crayfish (on behalf of the institute Testfakta) and for baby food production in the case of wild-caught salmon. Moreover, there might be a need to test feed such as fishmeal in the case of fish farming.

PFAS in Food and Feed – Analytical Packages

Eurofins can analyse more than 40 PFAS in food and feed. This includes a large number of “regular” PFAS (PFOS, PFOA etc), so-called PreFOS (PFOS precursors) and “novel” PFAS such as GenX, (A)DONA, F-53B and PFECHS. Accreditation covers nearly 40 PFAS. The three main analytical packs offered covers a wide range of analytes. PFAS4 (PLW8F) can be used for direct comparison to limit values. PLW7X includes the 22 PFAS which are regulated in Denmark e.g. for drinking water while our large screening pack (PLW8H) comprises 40+ compounds. The delivery time (TAT) is 14 cal days and express options are available.

All about PFAS: www.eurofins.se/about-pfas



Eurofins Food & Feed Testing's pesticide laboratory in Sweden has by Eurofins been appointed as Competence Center for PFAS testing for food in Europe. Eurofins in Lidköping (SE) started analyzing PFAS already at the beginning of the 2000s. After a break, the analysis was set up again in 2015 and since 2016 a large leading PFAS lab has been established.