



# Fast screening for adsorbable organically bound halogens

All-in-one solution for reliable determination of AOF, AOCl, AOB<sub>r</sub>, AOI, and AOX by CIC according to DIN 38409-59

## HIGHLIGHTS

- Selective determination of AOF, AOCl, AOB<sub>r</sub>, and AOI in waters
- AOF as fast non-targeted screening for PFASs
- Efficient and low-maintenance AOX determination
- Easy-to-use, robust, and efficient
- All-in-one solution from one supplier (software, hardware, and support)

# Metrohm Combustion IC – a validated all-in-one solution for comprehensive AOX determination (AOF, AOCl, AOBr, AOI) according to DIN 38409-59

Organohalogen compounds are widespread, persistent, and potentially toxic for humans and the environment. However, the techniques commonly used to monitor adsorbable organic halogens (AOX) can only determine the sum of organically bound chlorine, bromine, and iodine. These techniques do not provide individual results for AOCl, AOBr, and AOI, respectively, nor on the organofluorine (AOF) content. The new DIN 38409-59 describes a validated method for comprehensive AOX analysis including AOF by combustion ion chromatography (CIC). Analysis by CIC allows the determination of the sum parameter as well as the individual concentrations of adsorbable organically bound fluorine, chlorine, bromine, and iodine in different waters. Organic fluorinated compounds, such as PFASs (per- and polyfluoroalkyl substances) in particular, can be easily monitored using non-target AOF analysis by CIC.



## DIN 38409-59 – fast screening for organohalogen compounds in waters

AOX and AOF analysis according to the new standard is performed in two steps, preconcentration of the adsorbable organic halogens on activated carbon, followed by direct combustion and subsequent ion chromatographic (CIC) analysis. This procedure enables selective determination of adsorbable organic halogens (AOF, AOCl, AOBr, and AOI) besides the sum parameter AOX. In particular, the new standard to determine **AOF** provides a fast and economical solution for non-targeted PFASs screening.

## Metrohm CIC – a cost-effective solution for AOX analysis

The fully automated CIC from Metrohm provides a robust, reliable, and fast solution for high throughput routine analysis of AOX and AOF. Sample combustion and IC analysis are controlled by the same software guaranteeing ease-of-use. Our experienced application specialists support you in your transition to this new method.

Learn more about the application:

**Application Note AN-CIC-033** – Monitoring PFASs in water sources: Non-targeted adsorbable organic fluorine (AOF) analysis by CIC