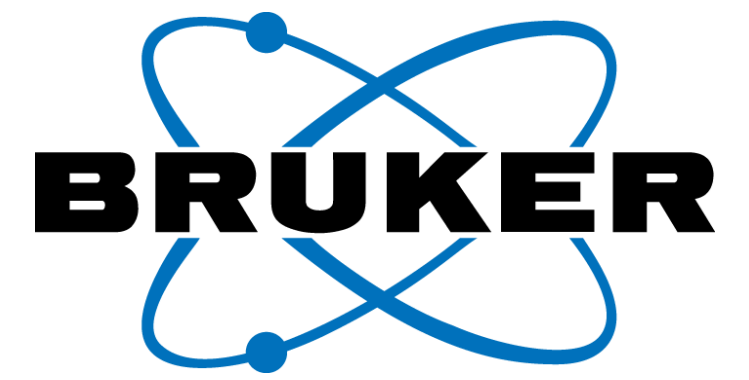


In-depth investigation of PFAS occurrence in environmental samples combining LC-VIP HESI-TIMS-MS with PASEF and untargeted data processing.

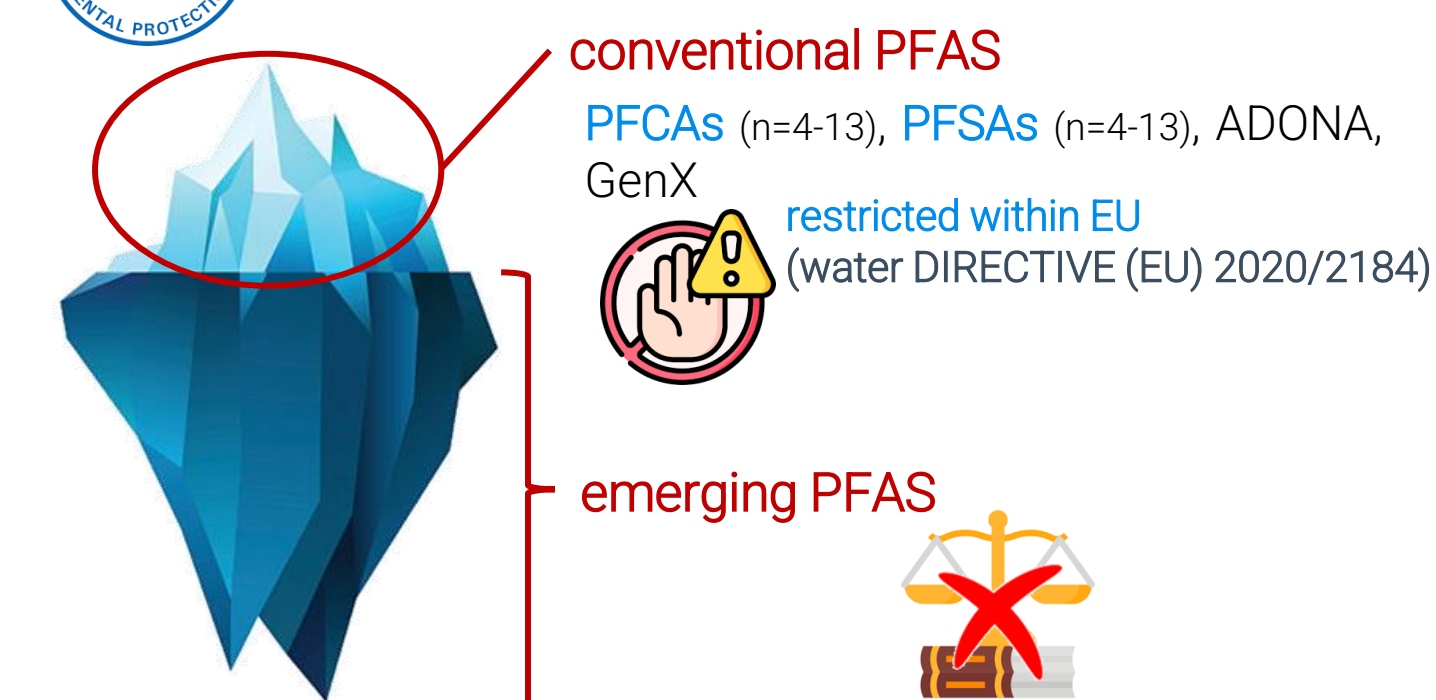


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Introduction

> 9,000 Per- and Polyfluoroalkyl Substances (PFAS) including transformation products and metabolites



Comprehensive HRMS-based screening for the identification of the PFAS fingerprint in the environmental compartments.

Analytical challenges

- ❑ Lack of reference standards, molecular databases or spectral libraries
- ❑ Low concentration levels of PFAS in environmental matrices
- ❑ Isomeric/isobaric co-eluting PFAS and matrix interferences
- ❑ MS/MS spectra inefficiency in complex matrices
 - ❑ complex MS/MS spectra through DIA modes
 - ❑ lack of experimental DDA MS/MS spectra

Methods

generic sample preparation protocols

Simultaneous extraction of PFAS from different sub-classes (different physicochemical properties)

RPLC – VIP HESI (-) – TIMS – QTOF MS

TargetScener 4D

acquisition modes:

- ✓ bbCID
- ✓ PASEF

MetaboScape 2024b

