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Personal information

Dr. Frederic Béen is an Assistant Professor in the Chemistry for Environment & Health research group at the Amsterdam Institute for Environment and Health (A-LIFE) of Vrije Universiteit Amsterdam. He also serves as a Senior Scientist at KWR Water Research Institute in the Water Quality and Health research group. Frederic's work lies at the intersection of environmental analytical chemistry and data science, focusing on developing and enhancing suspect and non-target screening applications using high-resolution mass spectrometry (HRMS) to monitor a wide range of environmental contaminants.

His research explores how chromatography (LC and GC) and HRMS, along with data analysis pipelines, can be optimized to better understand the source, fate, and impact of contaminants on humans and the environment. This involves the development and implementation of cheminformatics and data analysis tools, such as chemometrics and machine learning, to analyse large sets of chemical and mass spectrometric data. Additionally, Frederic's research includes applying these techniques to human biomonitoring, effect-directed (EDA) and micro- and nanoplastic analysis. He is also involved in wastewater-based epidemiology (WBE), examining the potential of wastewater analysis as a proxy for monitoring and assessing the health status of communities.