



PFAS – Closing the Data Gap

The complexity and diversity of per- and polyfluoroalkyl substances (PFAS) continue to challenge environmental scientists, regulators, and public health professionals. With thousands of known and unknown PFAS compounds in circulation, the question remains: are we closer to closing the data gap?

This presentation explores the evolving analytical landscape of PFAS detection and quantitation, highlighting how integrated approaches are expanding our understanding of PFAS occurrence and behavior. Targeted LC/MS/MS analysis, the cornerstone of PFAS monitoring, offer high sensitivity for a defined list of legacy and emerging compounds. The Total Oxidizable Precursor (TOP) Assay reveals hidden precursor burdens by transforming them into measurable terminal PFAS.

To address the limitations of targeted or compound-specific methods, techniques have been developed and promulgated that provide a bulk measure of organic fluorine as a proxy for PFAS impact and help quantify the “dark matter” of PFAS. Special attention will be given to the analysis of ultra-short chain PFAS, such as trifluoroacetic acid (TFA), which evade conventional methods, yet pose unique mobility and toxicity concerns. Finally, non-targeted high-resolution mass spectrometry (HRMS), a powerful tool for discovering novel PFAS structures and transformation products in complex environmental matrices will be explored.

By comparing these complementary techniques and showcasing recent applications, this session will present how far we’ve come and perhaps, how far we still need to go to fully characterize PFAS in the environment. The presentation will afford a clearer picture of the analytical toolbox available today and the strategic pathways to bridge remaining data gaps.

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Dr. Terry Obal is the Specialty Testing Practice Leader for SGS North America. Terry’s mission is to drive business growth and scientific leadership within the Specialty and PFAS testing markets among others, positioning SGS as a leading authority in specialty testing solutions. Terry liaises with SGS clients, solving technical challenges, driving continuous improvement in SGS’s analytical capabilities and service offerings, and contributing to the development of innovative solutions that address critical environmental challenges. He has a long history of providing technical representation, consultative support, and expert opinions for SGS clients and key environmental stakeholders.

Prior to joining SGS, Terry led the development and commercialization of robust, reliable, and defensible methods for the determination of per- and polyfluoroalkyl substances (PFAS) in a diverse range of environmental matrices. He continues to be active and recognized in the science and measurement of PFAS.

Terry has almost 40 years of experience in analytical chemistry, laboratory management and environmental chemical consulting. He holds B.Sc., M.Sc., and Ph.D. degrees in chemistry, and is a Chartered Chemist (C.Chem.) through the Association of the Chemical Profession of Ontario (ACPO).