

Exponent®
Engineering & Scientific Consulting

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Professional Profile

Alessandro Manfrin, Ph.D., is a chemist at Exponent with several years of experience in analytical and environmental organic chemistry. He specializes in analytical method development and validation and physico-chemical studies supporting agrochemicals, biocides and industrial chemicals.

Before joining Exponent, Dr. Manfrin served as Study Director for Analytical Chemistry at IES Ltd. in Basel, Switzerland, where he managed analytical and physico-chemical studies within the ecotoxicology department, developed and validated GLP analytical methods for soil and water matrices and prepared GLP analytical reports.

Dr. Manfrin earned his Ph.D. in Environmental Sciences from ETH Zürich, where he subsequently completed a postdoctoral research fellowship. His research focused on the synthesis and photodegradation of organic contaminants and on the biodegradation and analytical quantification of polymers in soil.

Academic Credentials & Professional Honors

Doctorate, Natural Sciences, ETH Zurich, Switzerland, 2020

Prior Experience

Study Director, Analytical Chemistry, IES Ltd., Basel, Switzerland, 2023–2026

Publications

Manfrin A, et al. An analytical workflow to quantify biodegradable polyesters in soils and its application to incubation experiments. Environmental Science & Technology 2025; 59:8108–8118.

Manfrin A, et al. Substituent effect on the direct photochemistry of benzotrifluoride derivatives. Environmental Science & Technology 2020; 54:11109–11117.

Manfrin A, et al. Reactive oxygen species production from secondary organic aerosols: the importance of singlet oxygen. Environmental Science & Technology 2019; 53:8553–8562.

Manfrin A, et al.

Project Experience

Analytical Chemistry & Method Development

- Developed and validated analytical methods in accordance with SANTE/2020/12830 for ecotoxicological studies involving soil and water matrices, applying GC-MS/FID, HPLC-MS/DAD/ELSD, and LC-MS/MS to quantify target chemicals and support regulated study objectives.
- Supervised physico-chemical studies in compliance with established scientific guidelines and GLP principles.
- Prepared GLP reports for physico-chemical studies, method validations and analytical phases of ecotoxicological studies.