Publication

New applications of CSIA for quantifying 1,4-dioxane biodegradation

Peter Bennett, Technical Expert at Haley & Aldrich, was the lead author on a recent publication in Environmental Science & Technology Letters that used a newly developed method for compound-specific isotope analysis (CSIA) to characterize biodegradation of 1,4-dioxane. The article, Enrichment with Carbon-13 and Deuterium during Monooxygenase-Mediated Biodegradation of 1,4-Dioxane (free to download for American Chemical Society members), was co-authored with Min-Ying Jacob Chu (also of Haley & Aldrich), Michael Nickelsen of ECT, Michael Hyman and Christy Smith of North Carolina State University, and Humam El Mugammar and Ramon Aravena of the University of Waterloo.

The work was a result of Bennett's multi-year research project funded by the Department of Defense Strategic Environmental Research and Development Program (SERDP), entitled "Extending the Applicability of Compound-Specific Isotope Analysis to Low Concentrations of 1,4-Dioxane." -The final report of this research is available on the SERDP website.