



Publication

Application of high-resolution mass spectrometry to evaluate UV-sulfite-induced transformations of per- and polyfluoroalkyl substances (PFAS) in aqueous film-forming foam (AFFF)

In the October 18, 2022 issue of ACS Publications' *Environmental Science & Technology*, Raul Tenorio, a project professional at Haley & Aldrich, copublished (as first author) the results of a study that evaluated UV-sulfite treatment of [per- and polyfluoroalkyl substances](#) (PFAS) in aqueous film-forming foam (AFFF) by applying high-resolution liquid chromatography quadrupole time-of-flight mass spectrometry (LC-QTOF-MS). The coauthors note that the results highlight the importance of monitoring PFAS using methods outside conventional targeted analytical protocols to evaluate treatment.

In this publication, the researchers expand on their work in a previous study, in which they reported UV-sulfite treatment of 15 PFAS in AFFF using LC-QTOF-MS targeted analysis. In their new investigation, the team deepened their analysis of the original reaction solutions by using recently established LC-QTOF-MS suspect screening and semiquantitative analysis protocols. This approach allowed them to evaluate the reactivity of 68 additional PFAS, including compounds for which reactivity is largely unknown. Their analysis also revealed trends in the reactivity of certain chemical structures, which have implications for effective approaches to degrading PFAS in AFFF.

To access the article and review payment options, [visit the ACS Publications website](#).