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Comment on “Measurement of Low Air–Water Partition Coefficients of Organic Acids by Evaporation from a Water Surface”

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In their article, Li et al.¹ report on experimental determinations of the air–water partitioning coefficient (K_{AW}) for *n*-perfluorooctanoic acid (*n*-PFOA). The authors use an aqueous phase pH of 0.6 to determine the K_{AW} for *n*-PFOA and state “that the pH of 0.6 used to necessitate complete protonation of PFOA in solution may have an impact on the measured K_{AW} . Further work is being conducted at higher pHs where partial ionization occurs and allowance of this effect must be included.” The monomeric aqueous pK_a of *n*-PFOA is now established at about zero.^{2–4} Thus, Li et al.¹ determined the K_{AW} of this compound at a pH value (0.6) for which a significant portion of *n*-PFOA would apparently have been dissociated (in contrast to the authors’ claims of achieving “complete protonation of PFOA in solution”). This calls into question the accuracy of the experimental data for *n*-PFOA reported in Li et al.¹ as the authors do not appear to have accounted for analyte dissociation in their calculations.

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Notes

The authors declare no competing financial interest.

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