Mark J. Strynar, Physical Scientist, in EPA's National Exposure Research Laboratory

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Area of Expertise: Mark's expertise is the development of methods for the detection of xenobiotic compounds, in particular perfluorinated compounds (PFCs) in complex environmental and biological matrices. Emphasis has been placed on providing EPA and collaborating researchers with methods for the detection and analysis of PFCs in samples for use in health effects studies to support risk assessment (NIEHS/NHEERL) and for determination of environmental PFC contamination to meet agency needs (OPPT/Region 4).

With proper validated methods in place an assessment of dosed animal models has been possible for PFOS and PFOA. In part, provisional health advisories for PFOS and PFOA in drinking water (OW) and fish consumption advisories (State of MN) have been possible due to methods and data Mark has generated. Developed methods have and will continue to be applied to assess potential routes of human exposure to PFCs to reduce uncertainty associated with these exposures. Recent investigations include development of TOFMS methods for the discovery of biomarkers of exposure to xenobiotic compounds in dosed rodent tissues, and exploration of unique biomarkers in matched human serum/urine.

Select Publications:

Application of a method for the analysis of perfluorinated compounds in surface soils. Mark J. Strynar, Andrew B. Lindstrom, Shoji F. Nakayama, Peter Egeghy, and Laurence Helfant. Chemosphere 86 (2012) 252–257.

Perfluorooctanoic acid effects on ovaries mediate its inhibition of peripubertal mammary gland development in Balb/c and C57Bl/6 mice.Zhao Y, Tan YS, Strynar MJ, Perez G, Haslam SZ, Yang C. Reprod Toxicol. 2012 Jul;33(4):563-76. Epub 2012 Mar 5.

View more research publications by Mark Strynar.

Education:

- Ph.D., Soil Science, The Pennsylvania State University, 2003
- M.S., Soil Science, Texas A&M University, 1997
- B.S., Soil and Water Resource with High Distinction, The University of Rhode Island, 1993

Professional Experience:

- Physical Scientist, USEPA, ORD, NERL-HEASD-MDAB, 2005-present
- Postdoctoral Researcher, USEPA, ORD, NERL-HEASD-MDAB, 2002-2005