

Presentation Type:  
Platform Preferred

Track:  
Aquatic Toxicology and Ecology

Session:  
BSAG: Relating laboratory and field bioaccumulation; importance of abiotic and biotic parameters, and use of trophic magnification factors

Abstract Title:  
Comparison of Laboratory Measured BCFs, BMFs, and BSAFs to Field Measured BAFs, BMFs, and BSAFs

Authors:  
L. Burkhard – US-EPA, Mid-Continent Ecology Division, Duluth, MN  
R. Hoke – E.I. duPont de Nemours Company, Haskell Laboratory, Newark, DE  
J. Arnot – Centre for Environmental Modelling and Chemistry, Trent University, Peterborough, Ontario, Canada  
G. Lotufo – Environmental Laboratory, US Army Engineer Research and Development Center, Vicksburg, MS  
T. Parkerton – Environmental Sciences, Exxon Biomedical Sciences, East Millstone, NJ  
K. Sappington – US-EPA, Environmental Fate and Effects Division, Washington, DC

Abstract:

A series of workshops on bioaccumulation science and issues have been held since 2005, and the foci of these past workshops were 1) Bioaccumulation Data Sources, 2) In Vitro/ADME (absorption, distribution, metabolism, and excretion) in Bioaccumulation Assessments, and 3) Bioaccumulation Assessments for European Union. The fourth workshop in this series, held immediately prior to this meeting, was on lab-field bioaccumulation measurement and interpretation issues. The series of workshops was organized in response to the need for better tools for assessing bioaccumulation potential of chemical in commerce. One of the objectives of the recent workshop (sponsored by ILSI-HESI, EPA, and SETAC) was to examine how laboratory measurements (BCF, BSAF, BMF) compare to field measurements (BSAF, BAF, BMF) of bioaccumulation for organic chemicals. This presentation will present the comparison materials discussed and evaluated at the workshop, and document the extent of differences, if any, between the laboratory and field measurements.