

Larry J. Heinis
Chemist
218-529-5206
heinis.larry@epa.gov

Education:

BA Chemistry, Southwest Minnesota State University, Marshall, MN 1975
MS Organic Chemistry, University of Minnesota, Duluth, MN 1978

Employment:

1998 - Present U.S. EPA, Duluth, MN
1996 - 1998 University of Minnesota, Duluth, MN
1996 - 1998 Lake Superior Laboratories, Duluth, MN
1985 - 1996 University of Wisconsin, Superior, WI
1984 - 1985 Computer Sciences Corporation, Falls Church, VA
1978 - 1984 University of Minnesota, Duluth, MN

Research / Administrative Interests and Skills:

Trace organic chemical extraction and analytical methodology. Contaminated sediment toxicity identification and evaluation (TIE). Photoactivated toxicity of organic chemicals to aquatic and benthic invertebrates, and early life-stage fishes. Research and development of methodology to characterize the partitioning of organic chemicals in sediment and biota. Development of the semi-permeable membrane device (SPMD) as a chemostat allowing organic contaminants to be extracted from sediments and evaluated for toxicity utilizing standard laboratory bioassay systems and organisms while maintaining the organic carbon partitioning inherent to natural sediments. Development and deployment of a field exposure platform to perform bioassays at various sites contaminated with organic chemicals.

Professional Societies:

American Chemical Society

Selected Appointments/Honors/Major Awards:

Superior Accomplishment Recognition, U.S. EPA, (6 awards, 2000 - present)
U.S. EPA Scientific and Technical Achievement Award, 1990

Selected Publications:

Diamond, S.A., D.R. Mount, V.R. Mattson, L.J. Heinis, T.L. Highland, A.D. Adams, and M.F. Simcik. 2006. Photoactivated polycyclic aromatic hydrocarbon toxicity in medaka (*Oryzias latipes*) embryos: relevance to environmental risk in contaminated sites. *Environmental Toxicology and Chemistry*: 25:3015-3023.

Heinis, L.J., T.L. Highland, and D.R. Mount. 2004. A method for testing the aquatic toxicity of sediment extracts for use in identifying organic toxicants in sediments. *Environ. Sci. Technol.* 38:6256 - 6262.

Diamond, S.A., N.J. Milroy, V.R. Mattson, L.J. Heinis, and D.R. Mount. 2003. Photoactivated toxicity in amphipods collected from PAH contaminated sites. *Environ. Toxicol. Chem.* 22:2752-2760.

Knuth, M.L., L.J. Heinis, and L.E. Anderson. 2000. Persistence and distribution of azinphos-methyl following application to littoral enclosure mesocosms. *Ecotoxocl. and Environ. Safety.* 47:167-177.

Heinis, L.J., M.L. Knuth, K.L. Liber, B.R. Sheedy, R. Tunell, and G.t. Ankley. 1999. Persistence and distribution of 4-nonylphenol following repeated application to littoral enclosures. *Environ Toxicol Chem.* 18(3):363-375.

Liber, K.L., S.L. O'Halloran, J. Gangl, and L.J. Heinis. 1999. Effects of 4-nonylphenol on bluegill sunfish in mesocosms. *Environ Toxicol Chem.* 18(3):394-400.

Knuth, M.L. and L.J. Heinis. 1995. Dissipation and persistence of diflubenzuron within littoral enclosure mesocosms. *J Agric Food Chem* 43:1087-1097.

Knuth, M.L. and L.J. Heinis. 1992. Dissipation and persistence of chlorpyrifos within littoral enclosures. *J Agric Food Chem* 40:1257-1261.

Heinis, L.J. and M.L. Knuth. 1992. The mixing, distribution and persistence of esfenvalerate within littoral enclosures. *Environ Toxicol Chem* 11:11-25.

Brazner, J.C., L.J. Heinis, and D.A. Jensen. 1989. A littoral enclosure for replicated field experiments. *Environ Toxicol Chem* 8:1209-1216.

Carlson, R.M. and L.J. Heinis. 1979. Intermolecular rearrangements of tertiary amine-oxides. *J Org Chem* 44:1430-1433.