

Karen D. Bradham, Research Physical Scientist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

[Mailing Address](#)

bradham.karen@epa.gov

Area of Expertise: Karen's expertise is in the development and application of bioavailability methods for improved human exposure and risk assessments. Her research is focused on developing new, cost-effective tools to measure the bioavailability of arsenic and lead in soil and innovative chemical methods and techniques to evaluate soil chemical processes and soil components that control bioavailability. Karen's research includes development of in vivo and in vitro methods designed for use in reducing clean-up costs and she is also applying these methods to nanomaterials. Her research also includes investigating housing related health hazards and human exposures to indoor environments by conducting methods development, measurements, and relating this information to questionnaire data. Karen is a member of EPA's Technical Review Workgroup, Bioavailability Committee.

Select Publications:

Karen D. Bradham, Clay Nelson, Albert L. Juhasz, Euan Smith, Kirk Scheckel, Daniel R. Obenour, Bradley W. Miller, David J. Thomas. 2015. Independent data validation of an in vitro method for prediction of relative bioavailability of arsenic in contaminated soils. *Environ Sci Technol* 49: 6312-6318.

William E. Platten, III, Nicholas Sylvest, Casey Warren, Mahendranath Arambewela, Steve Harmon, Karen Bradham, Kim Rogers, Treye Thomas, and Todd P. Luxton. 2016. Estimating Dermal Transfer of Copper Nanoparticles from the Surfaces of Pressure-Treated Lumber and Implications for Toxicity. *Science of the Total Environment*, 548–549, 441–449.

Lenibel Santiago-Rodríguez, Jennifer L. Griggs, Karen D. Bradham, Clay Nelson, Todd Luxton, William E. Platten III, Kim R. Rogers. 2015. Assessment of the Bioaccessibility of Micronized Copper Wood in Synthetic Stomach Fluid. *Environmental Nanotechnology, Monitoring & Management*, (4) 85-92.

Ling-Chu Chien, Ming-Chien Tsou, Hsing-Cheng Hsi, Paloma Beamer, Karen Bradham, Zeng-Yei Hseu, Winston Dang, Haluk Ozkaynak. 2015. Soil Ingestion for Children Aged Under 3 Years Old in Taiwan. *Journal of Exposure Science and Environmental Epidemiology*, 1-8.

Danielle Carlin, Marisa F. Naujokas, Karen Bradham, John Cowden, Michelle Heacock, Heather Henry, Janice S. Lee, David J. Thomas, Claudia Thompson, Erik J. Tokar, Mike Waalkes, Linda S. Birnbaum, and William A. Suk. 2015. Arsenic and Environmental Health: State of the Science and Future Research Opportunities. *Environmental Health Perspectives* DOI:10.1289/ehp.1510209.

Juhasz AL, Smith E, Nelson C, Thomas D, Karen Bradham. 2014. Variability Associated with As in Vivo-in Vitro Correlations When using Different Bioaccessibility Methodologies. Environ Sci Technol 48: 11646-11653.

View more research publications by [Karen Bradham](#).

Education:

- Ph.D., Environmental Toxicology, Oklahoma State University, 2002
- M.S., Chemistry, Western Carolina University, 1999
- B.S., Chemistry, St. Andrews College, 1997

Professional Experience:

- Research Physical Scientist, USEPA, ORD, NERL-HEASD, RTP, NC 2005-present
- Physical Scientist, USEPA, ORD, NERL-HEASD, RTP, NC 2002-2005
- Research Assistant, Oklahoma State University, Stillwater, OK 1999-2002