



ITRC Bioavailability in Contaminated Soil

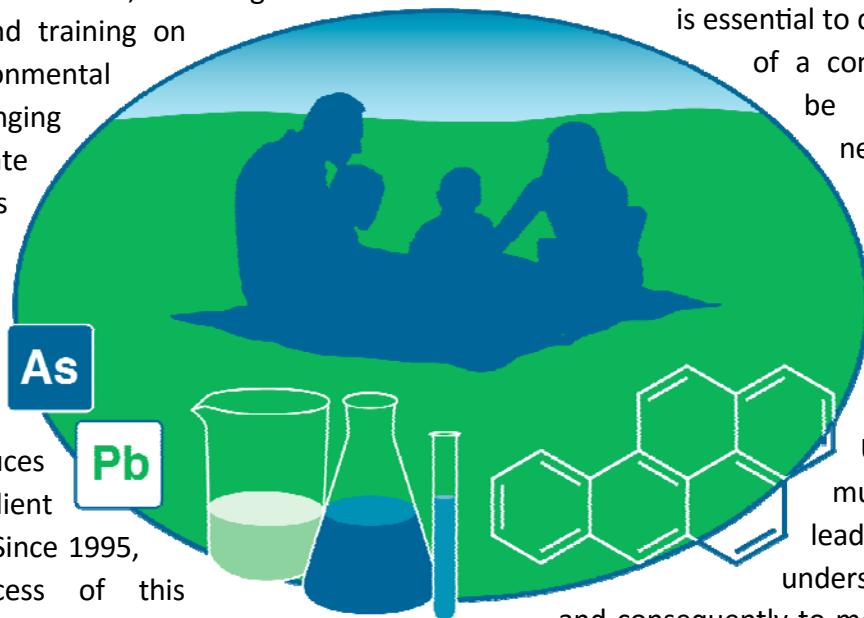
WHAT IS ITRC?

The Interstate Technology Regulatory Council (ITRC) is a state-led, public-private coalition dedicated to reducing barriers to the use of innovative environmental technologies. ITRC represents over 700 individuals, across 50 states, working to produce guidance and training on innovative environmental solutions. Bringing together teams of state and federal regulators along with private, academic, and stakeholder experts, ITRC broadens and deepens technical knowledge and reduces barriers to expedient regulatory approval. Since 1995, the collective success of this coalition has generated huge benefits to the environment, inspired new technical innovations, and saved hundreds of millions of dollars.

ITRC is a program of the Environmental Research Institute of the States, managed by the Environmental Council of the States. This partnership is based on a commitment to protect and improve human health and the environment across the United States of America.

ABOUT BIOAVAILABILITY AND CONTAMINATED SOIL

The bioavailability of a contaminant in soil is a measure of how much it can be absorbed into the body after a person has been in contact with the soil. Understanding how much a contaminant is absorbed is essential to determining how much of a contaminant people can be exposed to without negative health impacts. In general, only a fraction of the total contaminant present in the soil can enter the body and cause health impacts. Understanding how much that amount is leads to a better understanding of the risks and consequently to more informed remedial decisions. Often, evaluating bioavailability leads to a more effective use of the resources available without compromising the level of health protection. Many regulatory documents explicitly allow for the use of site-specific bioavailability assessments. However, more often than not, site investigations do not focus on evaluating site-specific bioavailability. Traditionally, the reasons included a lack of understanding of the issue, high-cost of in vivo tests, and uncertainty and lack of validation of in vitro tests.



In the last several years, for some contaminants, there have been advances in generating high quality supporting data, validating cheaper in vivo methods, and refining and validating in vitro methods. There are now relatively low-cost in vitro tests that correlate well with approved in vivo methods. One of the biggest hurdles to a more mainstream adoption of these technical innovations by regulatory agencies is the gap in training and understanding of the benefits and scientific underpinnings.

THE BIOAVAILABILITY IN CONTAMINATED SOIL PROJECT

The ITRC team on Bioavailability in Contaminated Soil (BCS) brought together leading experts in the field from the public and private sectors, world-famous academics, and public and tribal stakeholders. By the end of 2017, the

BCS team will produce a web-based Technical and Regulatory Guidance Document that describes in simple terms and using plain language the state-of-the-art, nation-wide consensus on when and how to evaluate site-specific bioavailability that will assist regulators and practitioners with making decisions. The document will include case studies of sites where site-specific bioavailability has been used in decision making. The team focused on those soil contaminants for which the state of the science on bioavailability is advanced enough that it can be practical to use: arsenic, lead, and polycyclic aromatic hydrocarbons (PAHs). The team will also develop an Internet-Based Training module that will be available beginning in 2018.

UPDATE STATUS

There will be monthly conference calls to review and finalize the final web-based guidance. The document will be sent to ITRC members for external review in October 2016 and will be publicly available in November 2017. The Internet-based training will be provided early 2018.

JOIN THE TEAM!

The Bioavailability in Contaminated Soil team began in February 2015.

By joining the team, you will help review the document, possibly contribute case studies, and participate in developing the internet-based training. To join, visit <http://itrcweb.org/Membership/TeamRegistration>.



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