Public Release of the Bioaccumulation Assessment Tool (BAT) Ver.2.0: [Now Available](#) for free download

- The ACC LRI is a leader in the field of developing and applying models and tools to improve the scientific basis of bioaccumulation evaluations in modernized hazard and risk assessments.

- Chemical bioaccumulation is a complex process and there are multiple lines of evidence and metrics that can be used in bioaccumulation assessment. The **Bioaccumulation Assessment Tool (BAT)** facilitates the systematic and transparent integration of information in a consistent framework to inform bioaccumulation assessment decision-making.

- The BAT is a user-friendly, spreadsheet-based tool to guide the collection, generation, evaluation, and integration of various lines of evidence for evaluating bioaccumulation in aquatic and air-breathing (mammalian) organisms.

- The BAT provides a Weight of Evidence approach that is aligned with the [Guiding Principles and Key Elements for Establishing a Weight of Evidence for Chemical Assessment provided by the Organization for Economic Coordination and Development (OECD).](#)

- The BAT includes guidance for the critical evaluation of data confidence for all lines of evidence and summarizes the overall Strength of Evidence based on user-selected bioaccumulation assessment metrics and criteria.
  - Not only are the data confidence scoring methods useful for evaluating bioaccumulation and toxicokinetics data being used in the BAT, but these data evaluation templates can also be used when considering bioaccumulation and toxicokinetics data quality in general.

- **The BAT Ver.1.0**, developed by [ARC Arnot Research and Consulting](#) with input from a multistakeholder community and support from the CEFIC LRI, was publicly released in October 2018. Based on further engagement and case study applications (see example [Armitage et al., 2021](#)), the BAT was revised, with support from the CEFIC LRI and the ACC

LRI, to improve assessment capacity and workflow.

- **The BAT Ver.2.0,** includes several new features:Improved capacity to include in vivo mammalian laboratory testing (toxicokinetics) data;
  - Improved capacity to include in vivo invertebrate laboratory testing data;
  - Revised In Vitro-In Vivo Extrapolation (IVIVE) models for integrating in vitro biotransformation rate data for fish and mammals;
  - Upgraded user options for entering chemical dietary absorption efficiency for fish and mammals;
  - Increased capacity for including field bioaccumulation data;
  - Improved workflow for changing input data and user options;
  - Increased capacity to include propagation of uncertainty in biotransformation half-life and chemical absorption efficiency data in BAT models for calculating a suite of bioaccumulation metrics for fish and homeotherms including the bioconcentration factor (BCF), bioaccumulation factor (BAF), biomagnification factor (BMF) and total elimination half-lives (HL_T).

This Science Highlight was prepared by Richard A. Becker Ph.D. DABT of the ACC LRI. The views expressed are his alone.

Reference to commercial products, services, or links does not imply ACC endorsement.

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