

IndusTox workshop

PBPK-modeling for data-poor substances for 1st tier estimation of blood and urine levels following inhalation and/or dermal exposure

Date: June 22, 2010

Location: CEFIC, Brussels

Introduction

Inhalation and or dermal exposure of a chemical may lead to uptake in the body. PBPK-modeling can estimate the level of a chemical in body tissues and body fluids following inhalation and/or dermal exposure. Generic PBPK-models contain algorithms as QSPRs (= Quantitative Structure-Property Relationships) for blood:air and tissue:blood partitioning. That is why such a PBPK model can be used even when experimental partition characteristics of a compound are lacking.

IndusChemFate is a newly developed generic PBTK (Physiologically Based Toxicokinetic) model for the derivation of human biomonitoring equivalent guidance values (BEGV) for multiple (data-poor) chemicals. It is a *first tier* or screening tool that requires a minimum of input data. It makes it possible to estimate biological monitoring guideline values as equal to airborne limit values. In addition, it may be of value in route to route extrapolation in regulatory toxicology.

This 1-day course is designed to introduce participants to the background of this tool. The participants will get insight in how to convert inhalation and dermal exposure to organ and tissue concentrations.

The course will cover:

- Explanation of the Generic PBPK Tool: IndusChemFate.
- The rapid calculation and visualization of body tissue and fluids concentrations after inhalation and dermal exposure using IndusChemFate as developed as a software tool in MS- Excel.
- Training in real life application of IndusChemFate for workers exposures.

Provisional program of the 1-day workshop

10:00 - 12:00	Lay-out of the generic PBPK model and instructions for use
12:00 – 14:00	Lunch
14:00 – 17:00	Various PBPK-model exercises with inhalation and dermal exposure
17:00	Evaluation of the generic PBPK model; suggestions for further developments

Presenters include:

- **Dr. Wil ten Berge** - a toxicologist with over 30 years experience in modelling and toxicology.
- **Dr. Frans Jongeneelen** – a occupational hygienist/toxicologist with 25 years of experience in

biomonitoring and chemical risk assessment.

Who should attend?

- Industrial professionals responsible for conducting or evaluating risk assessments on consumer and occupational exposure to chemicals.
- Occupational health professionals.
- Toxicologists interested in physiologically based pharmacokinetic modelling.

For more information and registration, please contact: frans.jongeneelen@industox.nl.