Venue

The workshop will take place in the Bauhaus Building by Walter Gropius in Dessau. The Bauhaus- and its sites in Weimar and Dessau have been listed in the UNESCO World Heritage List as an outstanding example of the Modern Movement in the 20th century. Between 1919 and 1933 the Bauhaus School, based first in Weimar and then in Dessau revolutionised artistic and architectural thinking and production worldwide. So apart from the workshop itself participants can enjoy the architecture and design of Bauhaus.

Accommodation

www.nh-hotels.com
www.radissonblu.de/hotel-dessau
www.bauhaus-dessau.de/accommodation

Registration

Please send an email with reference line "Bioaccumulation workshop" to

- ➔ *uta.zacharias@uba.de*
- ➔ *Phone: 0049-34021032629*

We kindly ask to indicate special dietary requirements

Organisation Team

UBA, Dessau & FHG-IME, Schmallenberg

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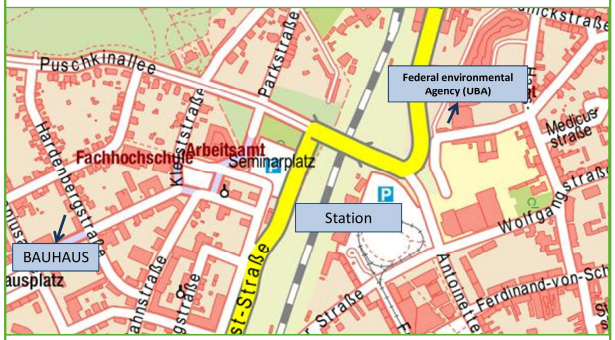
Umweltbundesamt (UBA)

PF 1406, 06844 Dessau-Roßlau
Tel: +49 340-2103-0
www.umweltbundesamt.de

Venue address

*Bauhaus Dessau, Seminar Room **3.22,***
Gropiusallee 38, 06846 Dessau-Roßlau,
www.bauhaus-dessau.de



Bioaccumulation Workshop

State of the art, challenges and regulatory implications

26th - 27th June 2014

BAUHAUS DESSAU

Fraunhofer IME

Für Mensch & Umwelt

Umwelt Bundesamt

Workshop

Bioaccumulation plays a vital role in understanding the fate of a substance in the environment and is key to the regulation of chemicals in several jurisdictions. For instance within the European REACH regulation the assessment of the bioaccumulation potential is one major aspect in terms of identifying substances which are persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB). The current approaches, partitioning between a hydrophobic and hydrophilic phase (log Kow) as an indicator for bioaccumulation and the BCF as a standard criterion to identify bioaccumulative substances show limitations. The log Kow does not take into account active transport phenomena or special structural properties (e.g. amphiphilic substances or dissociating substances). Moreover, additional screening criteria are necessary for air breathing organisms as BCF studies are restricted to water-breathing fish and uptake through the gills. Though there are alternative tests such as the recently revised OECD 305 now including dietary uptake, it still remains unclear how to deal with results of alternative tests in regulation. All these aspects stress the importance to further develop the assessment of bioaccumulation.

Programme

Thursday 26th June 2014

From 12:30 on welcome snack at Bauhaus — Café

14:00-18:30

Welcome and introduction

Bioaccumulation in the regulatory context: Current challenges and developments (Eisenträger & Drost, UBA)

Bioaccumulation of highly lipophilic substances in the context of the revised OECD TG 305

Bioaccumulation studies with highly lipophilic test items (Schlechtriem, FHG-IME, Schmallenberg)

Sorption of highly hydrophobic chemicals to organic matter relevant for fish bioconcentration studies (Böhm, JLU, Giessen)

Dependency of BCF/BMF on uptake and elimination (Kühne, Schüürmann, UFZ, Leipzig)

Discussion

Refinement of criteria and concepts for bioaccumulation assessment (Part 1)

Consideration of organ-specific distribution of accumulated chemicals in fish (Preuss, RWTH Aachen)

In vitro approaches in determining chemical metabolism for bioaccumulation prediction (Halder, European Commission DG JRC, Ispra)

The freshwater amphipod Hyalella azteca as alternative test organism for bioaccumulation studies (Schäfers, FHG-IME, Schmallenberg)

Discussion

Summary & Conclusion Day 1

19:30 Dinner (location will be announced soon)

Participants will have to pay their own way

Friday 27th June 2014

8:30-13:00

Refinement of criteria and concepts for bioaccumulation assessment (Part 2)

Elimination half-life as a metric for the bioaccumulation potential in aquatic and terrestrial food chains (Goss, UFZ, Leipzig)

Partitioning of anionic and cationic organic chemicals in phospholipid bilayers (Bittermann, UFZ, Leipzig)

Equilibrium partitioning of neutral organic chemicals in biological phases: proteins, storage lipids, membranes (Endo, UFZ, Leipzig)

Discussion

Contribution of non-lipid based processes to the bioaccumulation of chemicals

Introduction to non-lipid based accumulation of chemicals (Nendza, AL-Luhnstedt)

Gastrointestinal adsorption processes (Zwinscher, FHG-ITEM, Hannover)

Screening for enhanced BCF using Papp values from Caco-2 cells (Kühne, Schüürmann UFZ, Leipzig)

Manual on integration of non-lipid accumulation mechanisms in the PBT assessment under REACH (Nendza, AL-Luhnstedt)

Discussion

Summary & Conclusions of Day 2

General discussion of recommendations for improving bioaccumulation assessment