Venue

The workshop will take place in the German Environment Agency (UBA) Headquarter in Dessau-Roßlau.

How to find us

https://www.umweltbundesamt.de/sites/default/files/medien/377/dokumente/dessau-e.pdf

Accomodation

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

Registration

Please send an email with reference line "Bioaccumulation workshop" to sebastian.kuehr@ime.fraunhofer.de

Please confirm your attendance before September 30th 2018

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Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

Workshop
Bioaccumulation of manufactured nanomaterials in freshwater bivalves

Dessau-Roßlau, 23rd October 2018

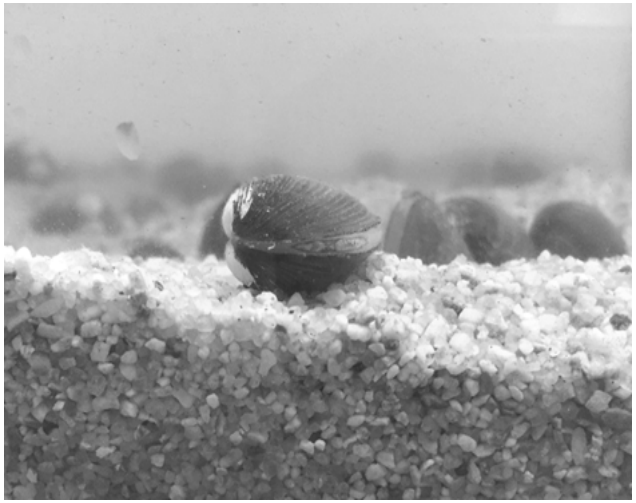
Für Mensch & Umwelt

Umwelt Bundesamt

Workshop

The identification and scientific assessment of compounds that bioaccumulate in organisms and biomagnify in food webs play a key role within the PBT-assessment. The bioaccumulation potential of compounds is commonly expressed in form of bioconcentration factors (BCF) determined in flow-through studies with fish according to OECD 305. Comparable studies with manufactured nanomaterials (MNMs) are difficult to carry out due to the lack of suitable test systems that allow a permanent and constant exposition of the compounds.

MNMs tend to sediment in water and are supposed to be primarily taken up by benthic species in aquatic ecosystems. Different studies have shown that mussels are able to ingest and to incorporate MNMs suspended in water. However, existing standardised test methods to investigate the bioaccumulation of substances in mussels have been developed and optimized for soluble, non-particulate substances. Therefore, an alternative test concept was developed allowing to investigate the bioaccumulation of MNMs in mussels under flow-through conditions.



The freshwater bivalve *Corbicula fluminea*

Main topics for the workshop

In order to facilitate the generation of ideas for improving the regulation concept of manufactured nanomaterials , six main topics will be addressed:

- Regulatory background and rationale for the project
- Presentation of the results from the research project „Development of a new test method to determine the bioaccumulation of manufactured nanomaterials in filtering organism (Bivalvia)“ FKZ 3716 66 410 0
- General Discussion:
  - Challenges due to nano-specific analytics
  - Development of toxicological endpoints
  - Proposals for the use of the test system in nanomaterials regulation
  - Implementation of the new test system for marine systems

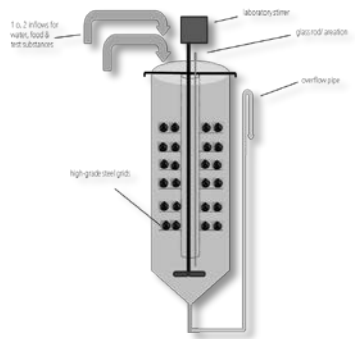
Objectives of the workshop

The objectives of the workshop is to identify the capability of the new developed test system for the environmental assessment of manufactured nanomaterials and the indication of potential necessary adjustments by taking into account the experience of scientists, regulators and international authorities.

The workshop participants will discuss and phrase recommendations for an improved assessment of bioaccumulation of manufactured nanomaterials where a classical risk assessment by the usage of tests like in accordance to OECD 305 are not expedient.

Test system

to determine the bioaccumulation of manufactured nanomaterials in filtering organisms.



- Flow-through system with a test volume of 8 L and a flow rate of 4 L/h
- 170 animals per unit
- Continuous addition of nanomaterial suspension and aeration
- Continuous, minimized, addition of food suspension (milled stinging nettle)
- Uptake and Depuration phase
- Sampling device