COST Action TD 1407 Training school

Technology Critical Elements: Toxicity Testing and Assessment of Risks

National Institute of Chemical Physics and Biophysics, Tallinn, Estonia

16-18 April 2018

(updated 06.04.2018)

Preliminary Program

(subject to modifications and errors without notice)

Sunday, 15 April

Arrival at Tallinn and Check-in.

Monday, 16 April

8:00-8:30 Registration

8:30-9:00 Welcome, introduction to NOTICE-COST action and Training School.
Anne Kahru, Sonja Zimmermann

9:00-9:30 Short introduction of the trainers and trainees

***** Coffee-Break *****

Part 1: Approaches and methods for risk assessment

10:00-13:00 EFSA approach to risk assessment. *Alberto Mantovani*
Lectures + Team work
(case study work on human health risk assessment with special focus on food safety)

*****Lunch*****

14:00-17:00 US approach to risk assessment. *Orish Orisakwe*
Lectures + Team work
(case study work on human health risk assessment with special focus on food safety)

Evening: Social Event

Tuesday, 17 April

Part 2: Exposure assessment

9:00-10:15 Lectures on Environmental TCE concentrations
9:00 - 9:45 Rare earth elements. *Laure Giamberini*
9:45 - 10:30 Platinum group elements. *Sonja Zimmermann*

***** Coffee-Break *****

Part 3: (Eco)Toxicity testing

11:00-12:45 Lectures on toxicity testing

11:00-11:45 Introduction to (eco-)toxicity testing. *Sonja Zimmermann*
11:45-12:15 Factors affecting the outcome of aquatic exposure studies. *Sonja Zimmermann*
12:15-12:45 Mixed toxicity tests. *Laure Giamberini*

***** Lunch *****

13:45-14:45 Lab visit + Demonstrations of toxicity tests. *Villem Aruoja*

Introduction to Lab visit. *Villem Aruoja*
Algae. *Villem Aruoja/Elise Joonas*
Water fleas. *Margit Heinlaan/ Marge Muna*

***** Coffee-Break *****

15:00-16:30 Team-work. (4 groups with 6 trainees each)

Villem Aruoja, Antonio Cobelo-García, Laure Giamberini, Sonja Zimmermann

Preparation of an experimental design and working plan for a certain (eco)toxicological question considering aspects like:

- What kind of exposure studies are reasonable: acute/chronic, life cycle tests, test organisms, toxicological endpoints etc.?
- How to perform the experiment(s): exposure parameter, sampling procedures, storage of samples, measurements, metal analytics, timing, number of replicates etc.?
- Quality assurance/Reliability: appropriate controls, error sources, reliability of the analytical methods
- Statistics

16:30-17:00 Plenary discussion of team work.

Wednesday, 18 April

Part 4: Effect assessment

9:00-10:15 Lectures on the (Eco)toxicity of TCE

9:00 - 9:45 Rare earth elements. *Laure Giamberini*
9:45 - 10:30 Platinum group elements. *Sonja Zimmermann*

***** Coffee-Break *****

Part 3: (Eco)Toxicity testing *(continued)*

11:00-12:30 Team work *(continued)*

***** Lunch *****

13:30-end. Plenary discussions + Conclusions

▷ Presentation and discussion of the final results of the team work
  - risk assessment
  - toxicity testing
▷ Summary + identifying problems, main gaps and research needs for risk assessment and toxicity testing of TCEs