

Program Overview

Monday, 25th September	Tuesday, 26th September	Wednesday, 27th Sept.
H. H. Koch, building 112	H. H. Koch, building 112	Buildings 202 and 204
	8:00 Registration	
	Radioanalytical method development and comparison (Chairman: Dr. Karl Andreas Jensen)	Lab Group 1+2
	8:30 Dr. Jian Zheng (Invited talk 3)	8:00 Introduction lecture Dr. Karl Andreas Jensen
	9:05 Oral-4 Dr. Mats Eriksson	9:30 Coffee break
	9:30 Oral-5 Dr. Jixin Qiao	Lab Group 1
	9:55 Oral-6 Dr. Pablo Lebed	
10:00 Registration and coffee	10:20 Coffee break	
Opening session (Chairman: Dr. Jixin Qiao)	Application in environmental radioactivity and nuclear forensics (Chairman: Mats Eriksson)	9:45 Lab training Dr. Karl Andreas Jensen Dr. Per Roos
11:00 Welcome (Jens-Peter Lynov, Kasper Andersson, Jixin Qiao)	10:40 Prof. Walter Geibert (Invited talk 4)	
11:45 Prof. Frank Vanhaecke (Opening lecture)	11:15 Oral-7 Dr. Petra Lagerkvist	
	11:40 Oral-8 Mr. Youyi Ni	
	12:05 Oral-9 Dr. Anna Vesterlund	
12:30 Lunch	12:30 Lunch	12:45 Lunch
Quadrupole and Sector Field ICP-MS (Chairman: Dr. Petra Lagerkvist)	Determination of stable elements (Chairman: Per Roos)	Lab Group 2
13:30 Dr. Douglas Baxter (Invited talk 1)	13:30 Oral-10 Dr. Susanna Salminen-Paatero	13:15 Lab training Dr. Karl Andreas Jensen Dr. Per Roos
14:05 Oral-1 Dr. Ilia Rodushkin	13:55 Oral-11 Mr. Zilvinas Zacharauskas	
14:30 Oral-2 Dr. Per Roos	14:20 Oral-12 Dr. Szabolcs Osváth	
14:55 Coffee break	14:45 Coffee break	
Triple Quadrupole ICP-MS (Chairman: Dr. Ilia Rodushkin)	New instrumental development (Chairman: Susanna Salminen-Paatero)	
15:30 Prof. Phil Warwick (Invited talk 2)	15:10 Dr. Mikael Axelsson (Invited sponsor lecture)	16:15 Wrap-up
16:05 Oral-3 Dr. Karl Andreas Jensen	15:45 Mr. Søren Dalby (Sponsor lecture)	
16:30-18:00 Lab tour for participants at Nutech	16:00 Closing ceremony	
16:30-18:00 Nordic ICP internal committee meeting		
19:00-21:00 Nordic ICP dinner (Flammen Roskilde)		

Seminar Program

MONDAY, 25 SEPTEMBER

10:00 Registration and Coffee

Opening session – Chair: Jixin Qiao

11:00 Welcome speech

(Jens-Peter Lynov, Center for Nuclear Technologies, Technical University of Denmark, Denmark)

11:15 General introduction of NKS and a view on the use of measurement techniques in emergency management

(Kasper Grann Andersson, Technical University of Denmark, Denmark / Nordic Nuclear Safety and Research (NKS))

11:30 General introduction of Radioecology section and the ICP User 2017 program

(Jixin Qiao, Radioecology, Center for Nuclear Technologies, Technical University of Denmark, Denmark)

11:45 Exploiting the isotopic information provided by ICP-mass spectrometry

(Frank Vanhaecke, Department of Analytical Chemistry, Ghent University, Belgium)

12:30 Lunch

Quadrupole and Sector Field ICP-MS – Chair: Petra Lagerkvist

13:30 Developing ICP-MS-based methods for regulatory purposes: Examples from a contract laboratory

(Douglas Baxter, ALS Scandinavia AB, Luleå, Sweden)

14:05 Determination of trace and ultra-trace elements by ICP-SFMS

(Iliia Rodushkin, Division of Geosciences, Luleå University of Technology / ALS Laboratory Group, ALS Scandinavia AB, Luleå, Sweden)

14:30 Analysis of U and Pu isotopes in Thule debris

(Per Roos, Center for Nuclear Technologies (Nutech), Technical University of Denmark (DTU), Denmark)

14:55 Coffee break

NKS-B ICP User Seminar 2017

Triple Quadrupole ICP-MS – Chair: Ilia Rodushkin

- 15:30 Advantages of ICP-QQQ for nuclear waste characterization
(Phil E Warwick, GAU-Radioanalytical, University of Southampton, UK)
- 16:05 Spectral interferences on the radionuclides: Method development ICP-MS-MS
(Karl Andreas Jensen, Centre for Environmental Radioactivity (CERAD CoE), Norwegian University of Life Sciences (NMBU), Norway)

16:30-18:00

For participants

Lab tour at Nutech

For the committee

Internal meeting at H. H. Koch room

19:00-21:00 Nordic ICP dinner – **for all**

[Flammen Roskilde, RO's Torv, Københavnsvej 29, 4000 Roskilde – 2 stops by bus 600S]

TUESDAY, 26 SEPTEMBER

8:00 Registration

Radioanalytical method development and comparison

Chair: Karl Andreas Jensen

8:30 Development and application of radiochemical methods based on the use of ICP-MS instruments

(Jian Zheng, National Institute of Radiological Sciences, National Institute for Quantum and Radiological Science and Technology, Japan)

9:05 Some aspects of analysing mixed U/Pu particles by different mass-spectrometric techniques

(Mats Erikson, Swedish Radiation Safety Authority, SSM, Sweden)

9:30 An inter-comparison exercise on the application of ICP-MS techniques for measurement of long-lived radionuclides

(Jixin Qiao, Center for Nuclear Technologies (Nutech), Technical University of Denmark (DTU), Denmark)

9:55 Radiochemistry laboratory possibilities offered by modern ICP-MS: protactinium, lanthanides and strontium

(Pablo J Lebed, Centre for Environmental Radioactivity (CERAD CoE), Norwegian University of Life Sciences (NMBU), Norway)

10:20 Coffee break

Application in environmental radioactivity and nuclear forensics

Chair: Mats Eriksson

10:40 The specific challenges of short-lived U and Th-series isotope analyses by ICP-MS

(Walter Geibert, Alfred Wegener Institute for Marine and Polar Research, Bremerhaven, Germany)

11:15 Pitfalls of determination of $^{236}\text{U}/^{238}\text{U}$ with ICP-SFMS

(Petra Lagerkvist, CBRN Defence and Security, Swedish Defence Research Agency (FOI), Sweden)

11:40 Determination of potentially bioavailable Pu in Japanese rice paddy soils with sector field inductively coupled plasma mass spectrometry

(Youyi Ni, Peking University, China / National Institutes for Quantum and Radiological Science and Technology, Japan)

12:05 Implementing a method for age determination of uranium using the $^{230}\text{Th}/^{234}\text{U}$ chronometer

(Anna Vesterlund, CBRN Defence and Security, Swedish Defence Research Agency (FOI), Sweden)

12:30 Lunch

NKS-B ICP User Seminar 2017

Determination of stable elements – Chair: Per Roos

- 13:30 Heavy metals (Zn, As, V, Cu, Co, Ni, U, Pb, and Cr) in archived human samples
(Susanna Salminen-Paatero, Department of Chemistry, Radiochemistry, University of Helsinki, Finland)
- 13:55 Using ICP-QQQ to measure precise stable Pb isotope ratios in environmental materials to assess pollution source terms
(Zilvinas Zacharauskas, University of Southampton, National Oceanography Centre, Southampton, UK)
- 14:20 ICP-OES measurement of some transition metals in HF acid media
(Szabolcs Osváth, Center for Nuclear Technologies, Technical University of Denmark, Denmark / National Public Health Institute, Department of Radiobiology and Radiohygiene, Hungary)
- 14:45 Coffee break

New instrumental development – Chair: Susanna Salminen-Paatero

- 15:10 Latest developments in elemental analysis
(Mikael Axelsson, Trace Elemental, ICP-MS and Discrete Analyzers, ThermoFisher Scientific Sweden)
- 15:45 Recent developments of multicollector inductively coupled plasma mass spectrometry (MC-ICPMS) Faraday cup amplifiers.
(Søren Dalby, Isotope Ratio Mass Spectrometry and High Resolution ICP-MS Sales, Nordic and Iceland, Thermo Fisher Scientific)
- 16:00 Closing ceremony

WEDNESDAY, 27 SEPTEMBER

- 8:00 Introduction lecture for ICP-MS lab training – **for all**
*(Karl Andreas Jensen, Centre for Environmental Radioactivity (CERAD CoE),
Norwegian University of Life Sciences (NMBU), Norway)*
[In Building 202, meeting room]
- 9:30 Coffee break
- 9:45-12:45 Lab training (Karl Andreas Jensen, Per Roos) – **for Group 1**
Free time for Group 2
- Lunch [In Building 202, meeting room]
- 13:15-16:15 Lab training (Karl Andreas Jensen, Per Roos) – **for Group 2**
Wrap up for Group 1