



Department of Nuclear Sciences and Applications
IAEA Environment Laboratories, Monaco

ALMERA
(Analytical Laboratories for the Measurement of Environmental Radioactivity)

**Workshop on the Measurement of
Natural Radionuclides in Environmental Samples and
Naturally Occurring Radioactive Material**

Ref. No.: K4-TM-54644

Title: ALMERA (Analytical Laboratories for the Measurement of Environmental Radioactivity) Workshop on the Measurement of Natural Radionuclides in Environmental Samples and Naturally Occurring Radioactive Material

Host Institute: Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

Dates: 3–7 July 2017

**Deadline for
Nominations:** 26 May 2017

Organizers: The International Atomic Energy Agency (IAEA) and the Karlsruhe Institute of Technology (KIT)

**Host Country
Organizer:** Mr Sascha Trumm
Center for Advanced Technological and Environmental Training (FTU)
Karlsruhe Institute of Technology (KIT)
KIT – Campus Nord
Hermann-von-Helmholtz-Platz 1
76344 EGGENSTEIN-LEOPOLDSHAFEN
GERMANY

Tel.: +49 721 608 23791
Email: sascha.trumm@kit.edu

Language: English

Background Information:

ALMERA ('Analytical Laboratories for the Measurement of Environmental Radioactivity') is a worldwide network of analytical laboratories, established by the IAEA. ALMERA member laboratories are able to provide, in a timely manner, internationally acceptable radioanalytical data in normal situations as well as in case of accidental or intentional releases of radioactivity, as requested by their nominating authorities. The IAEA provides methodological and data quality support to ALMERA member laboratories and coordinates collaborative development and validation of analytical methods.

The ALMERA network holds annual coordination meetings to discuss the implementation of planned activities and to define future activities of the network. The IAEA then organizes workshops and training courses on subjects identified as being of priority interest to network members. In this context, ALMERA laboratories are invited to nominate participants for the ALMERA Workshop on the Measurement of Natural Radionuclides in Environmental Samples and Naturally Occurring Radioactive Material, to be held from 3 to 7 July 2017 at the Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany.

Purpose:

The purpose of the workshop is to provide advanced training on the determination of natural radionuclides of interest for the measurement and assessment of environmental radioactivity and naturally occurring radioactive material (NORM), as well as an opportunity for sharing expertise in this area.

Expected Outputs:

The expected outputs of the workshop are:

- Improved knowledge and understanding of analytically challenging aspects of the measurement of natural radionuclides in environmental and NORM samples.
- Enhanced skills in hands-on analysis of natural radionuclides in various matrices.
- Practical basis for harmonized approaches to the analysis, interpretation and reporting of natural radionuclide measurement results across ALMERA laboratories.

Scope and Nature:

The workshop will provide an opportunity to enhance the knowledge and hands-on experience necessary for the measurement and assessment of naturally occurring radionuclides in environmental and NORM samples. The workshop will focus on challenging steps and metrological aspects of techniques frequently used in radioanalytical laboratories and the robust measurement of radionuclides that are commonly required for assessments. The workshop programme includes: advanced aspects of gamma spectrometry of natural radionuclides, including corrections required for specific gamma lines, both demonstration of typical peak cases and hands-on analysis of complex spectra; uncertainty of measurement results; traceability; standards and reference materials; laboratory practice with the analysis of lead-210 and polonium-210, including radiochemical separation; laboratory practice with the analysis of radon-226, including radiochemical separation; sampling strategies and case studies for NORM;

and a technical visit. The workshop will provide participants with the opportunity to discuss challenges they face in their day-to-day laboratory work and help them in the practical implementation of methods for measuring natural radionuclides and interpreting the results. The workshop will consist of lectures, laboratory and practical exercises. The workshop will also include group discussions of challenges encountered by participants in their daily work on the analysis of natural radionuclides in environmental and NORM samples.

Participation:

The workshop is open to participants from ALMERA network member laboratories who are involved in radioanalytical work. All ALMERA representatives wishing to attend the workshop should be nominated by their Government (Ministry of Foreign Affairs or National Atomic Energy Authority). Nominations for participation (using **Form A**) should be received by the IAEA not later than **26 May 2017**.

**Participants’
Qualifications:**

Participants should have a background in chemistry, physics or other natural sciences. Moreover, a working knowledge of common radiometric techniques (primarily gamma spectrometry, alpha spectrometry, liquid scintillation counting) and radiochemical procedures would enable participants to benefit fully from this workshop.

**Nomination
Procedure:**

Nominations should be submitted through the established official channels not later than **26 May 2017** for the attention of the Scientific Secretary of the workshop, Ms Iolanda Osvath, ALMERA Coordinator, IAEA Environment Laboratories, Department of Nuclear Sciences and Applications, IAEA, 4a Quai Antoine 1er, 98000 Monaco, Principality of Monaco (Tel.: +377 97 97 72 33; Fax: +377 97 97 72 73; Email: almera@iaea.org). Nominations should also be copied to the Administrative Secretary for the workshop, Ms Julie Le Normand (Email: J.Le-Normand@iaea.org). The full names and complete contact details (including postal address, telephone/fax numbers, and email address) of nominated participants should be provided.

Nominations received after this date or which have not been routed through the established official channels cannot be considered.

**Administrative and
Financial
Arrangements:**

Nominating Governments will be informed in due course of the names of the candidates who have been selected and will, at that time, be given full details of the procedures to be followed with regard to administrative and financial matters.

A limited number of grants will be made available by the IAEA to non-local participants from developing countries. The Grant Application Form (**Form C**) should be submitted through the established official channels as soon as possible and no later than **26 May 2017**. Selected participants will be provided with funding to cover their travel and subsistence expenses.

The organizers of the workshop do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the workshop, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks. Participants should also make their own arrangements for passports, visas, and vaccinations.