



Turkish Atomic Energy
Authority



Institute for Reference
Materials and Measurements

Europe and Metrology in Turkey (EMIT) – Event S03-05 on "Advanced gamma-ray Spectrometry" at TAEK-SANAEM Ankara, Turkey 20-24 June 2011

Gamma-ray spectrometry is the backbone of any radioactivity laboratory. The development of robust large sized HPGe-detectors with good resolution and stability enables the technique to be used for analysing a multitude of samples and obtaining, in one analysis, activity values for many radionuclides. The technique is deceptively simple and there are indeed many pitfalls that the user needs to be aware of in order to obtain robust quantitative results. Furthermore there are ways of enhancing the performance of the technique both with regards to accuracy and to detection limits.

This course is aimed at persons acquainted with radioactivity measurements. It will briefly cover the basics of gamma-ray spectrometry and then go deeper into issues like:

- Coincidence summing corrections
- Nuclear decay data
- Angular correlations
- Advanced detector systems e.g. Compton suppression and muon shield
- Monte Carlo simulations
- Efficiency transfer
- Uncertainty calculations and detection limits

The course will mix lectures with practical exercises both in front of a computer as well as in the TAEK-SANAEM gamma spectrometry laboratory.

Who should attend?

TAEK staff (from SANAEM and CNAEM) involved in radioactivity measurements

Lecturers

Dr. Mikael Hult (IRMM) and Dr. Tim Vidmar (SCK-CEN) assisted by Dr. Emin Yeltepe (SANAEM) and Mr. Namik Sahin (SANAEM).

Venue

The course will take place in Ankara at TAEK-SANAEM 20-24 June 2011. The course language will be English

Registration

The number of participants is limited to maximum 15.

For information on course content and details contact Dr. Mikael Hult (IRMM) mikael.hult@ec.europa.eu, for registration contact Ms. Ülkü Yücel (SANAEM) ulku.yucel@taek.gov.tr or Ms. Nurdan Gungör ÇNAEM nurdan.gungor@taek.gov.tr

The EMIT Project description can be found at:
<http://irmm.jrc.ec.europa.eu/Turkey>