



Contribution ID: 164

Type: oral

## Activities at Forschungszentrum Jülich in Safeguards Analytical Techniques and Measurements

*Tuesday, 21 October 2014 14:30 (20 minutes)*

The application of safeguards by the IAEA involves analytical measurements of samples taken during inspections. The development and advancement of analytical techniques with support from the Member States contributes to strengthened and more efficient verification of compliance with non-proliferation obligations. Since recently, a cooperation agreement has been established between Forschungszentrum Jülich and the IAEA in the field of analytical services. The current working areas of Forschungszentrum Jülich are: (i) Production of synthetic micro-particles as calibration standard and reference material for particle analysis, (ii) qualification of the Forschungszentrum Jülich as a member of the IAEA network of analytical laboratories for safeguards (NWAL), and (iii) analysis of impurities in nuclear material samples.

With respect to the synthesis of particles, a dedicated setup for the production of uranium particles is being developed, which addresses the urgent need for material tailored for its use in quality assurance and quality control measures for particle analysis of environmental swipe samples. Furthermore, Forschungszentrum Jülich has been nominated as a candidate laboratory for membership in the NWAL network. To this end, analytical capabilities at Forschungszentrum Jülich have been joined to form an analytical service within a dedicated quality management system. Another activity is the establishment of analytical techniques for impurity analysis of uranium-oxide, mainly focusing on inductively coupled mass spectrometry. This contribution will present the activities at Forschungszentrum Jülich in the area of analytical measurements and techniques for nuclear verification.

### Country or International Organization

Germany

**Primary author:** DUERR, Martin (Forschungszentrum Jülich)

**Co-authors:** KNOTT, Alexander (Forschungszentrum Jülich); BOSBACH, Dirk (Forschungszentrum Jülich); NIEMEYER, Irmgard (Forschungszentrum Jülich GmbH); FRONING, Martina (Forschungszentrum Jülich); ZORIY, Myroslav (Forschungszentrum Jülich); MIDDENDORP, Ronald (Forschungszentrum Jülich); KÜPPERS, Stephan (Forschungszentrum Jülich)

**Presenter:** DUERR, Martin (Forschungszentrum Jülich)

**Session Classification:** State of the Art Destructive Analysis