

Chemistry and Environmental Services, Materials Analysis

Provided by the Radiochemical Laboratory in Erlangen

Challenge

Very specific information is often needed for the operation of nuclear power plants and for decommissioning projects. Nuclide inventories have to be determined accurately as well as chemical samples have to be investigated qualitatively and quantitatively. Moreover, highly radioactive samples require careful handling, for example for material examinations in hot cells in order to protect workers from radiation. On the other hand, also environmental samples of low radioactivity need to be analyzed. These complex tasks can only be solved with a variety of chemical/radiochemical analyses and measurement techniques.

In addition, specific questions may arise for safety installations to reduce the radiological impact of a severe accident and accident management strategies and equipment have to be developed and tested.

Solution

The Radiochemical Laboratory in Erlangen offers long time grown and comprehensive services and support.

- Radiochemical and chemical analyses of samples of different compositions and with different levels of radioactivity (low-level to highly active) from nuclear facilities and decommissioning projects are routinely performed, including the determination of radionuclide inventories/vectors for waste characterization etc.
- Our hot and semi-hot cells offer the possibility of various examinations: fracture mechanic and hardness tests, metallographic examinations, mechanical-technological testing of specimen and their preparation.
- Radiation metrology complements the challenging handling and analysis of radioactive samples. This comprises routine tasks as well as the evaluation of neutron fluence detectors, calibration services and various on-site services.
- Our radiochemical engineering experts are experienced in analyzing and interpreting plant data to support proper operation. This includes on-site service support as well as testing in our own facilities.

Customer benefits

- Unique and flexible services, from analytical services to engineering and testing, from millibecquerel to terabecquerel
- Efficient quality management system, accredited laboratory
- Support for operators by radiochemical engineering, including testing facilities for engineering and severe accident issues

**Your performance
is our everyday commitment**



Technical information

- Activities up to 10^{15} Bq can be handled, when necessary in hot and semi-hot cells
- Broad scope of chemical and radiochemical analyses, determination of hard-to-detect α -, β - and γ -emitters
- Accredited according to DIN EN ISO/IEC 17025:2005, certificate D-PL-21039-04
- Handling of environmental as well as highly active samples
- Radiation protection services and transport of radioactive material

Key figures

More than **100** accredited procedures

60 years of experience in handling and analyzing of many different radioactive materials

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