framatome

Radiochemical Analyses

for NPPs, Nuclear Facilities, Decommissioning Projects

Challenge

While routine analysis can often be performed on site, non-standard tasks require specialized laboratory services. Especially when radioactive material has to be characterized in detail, e.g. waste from nuclear power plant (NPP) operation, samples from decommissioning including core scrap or samples of unknown origin, and its constituents have to be determined qualitatively and quantitatively, the required analysis methods and measuring equipment are not at hand and the development of dedicated methods would consume too much time.

Solution

The Radiochemical Laboratory in Erlangen offers long time grown and comprehensive and complementary services and support. Typical examples for the analyses of radionuclide inventories and vectors are:

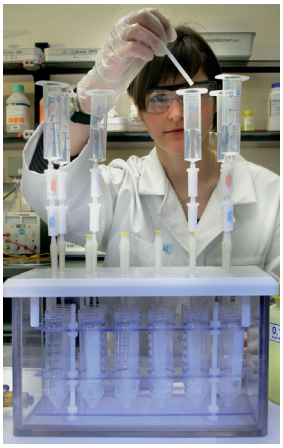
- Characterization of radioactive waste from NPP operation and decommissioning including core scrap
- Activity monitoring in nuclear systems, in primary system materials and in deposits
- Effluent monitoring and environmental surveillance
- Evaluation of neutron fluence detectors
- Evaluation of samples relevant for radiation
- Testing of filter materials (charcoal, zeolites)
- Specification monitoring.

The investigated samples are usually evaporator concentrate, filter concentrate, ion exchange resin, filtering auxiliary, cartridge filter material, ash, mixed waste, NPP coolant and pool water, waste water, filter, deposits, crud, metallic samples, core scrap, decontamination solutions, cleaning materials, dust, hot spots, textiles, excretions, soil, plants etc.

Customer benefits

- Analyses in one hand – from low to high activity level (from millibecquerel to terabecquerel)
- Wide scope of analyses
- Close to customers, with on-site experienced professionals
- Efficient quality management system, accredited laboratory
- Radiation protection services and transport of radioactive material

Your performance
is **our** everyday **commitment**



Technical information

Typical radionuclides analyzed in the laboratory:

- ^{60}Co, ^{134}Cs, ^{137}Cs, other gamma emitters
- ^{3}H, ^{10}Be, ^{14}C, ^{36}Cl, ^{41}Ca, ^{55}Fe, ^{59}Ni, ^{63}Ni, ^{87}Rb, ^{90}Sr, ^{93}Mo, ^{94}Nb, ^{99}Tc, ^{106}Ru, ^{108m}Ag, ^{129}I
- ^{233}U, ^{234}U, ^{235}U, ^{238}U, ^{238}Pu, ^{239}Pu / ^{240}Pu, ^{241}Pu, ^{241}Am, ^{242}Cm, ^{243}Cm / ^{244}Cm
- Other radionuclides on request

Key figures

More than **100** accredited procedures

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

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