

Title	Speciation Analysis of Radionuclides in the Environment. NKS-B Speciation project report 2007
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Abstract	<p>This report describes the work carried out under the NUK-B project SPECIATION 2007. In 2007, the project partners had two meetings in April and November, organized a NUK seminar on speciation and hot particles. SPECIATION 2007 mainly focused on two issues on speciation (1) further development of speciation methods for radionuclides, and (2) investigation of speciation of radionuclides in environment. The report summarized the work done in partners labs, which includes: (1) Further development on the speciation of ¹²⁹I and ¹²⁷I in water samples; (2) Speciation method for ¹²⁹I and ¹²⁷I in air; (3) Dynamic system for fractionation of Pu and Am in soil and sediment; (4) Investigation on Re-absorption of Pu during the fractionation of Pu in soil and sediment; (5) Speciation of ¹²⁹I in North Sea surface water; (6) Partition of ¹³⁷Cs and ¹²⁹I in the Nordic lake sediment, pore-water and lake water; (7) Sequential extraction of Pu in soil, sediment and concrete samples, (8) Pu sorption to Mn and Fe oxides in the geological materials, (10) Investigation of the adsorbed species of lanthanides and actinides on clays surfaces. In addition, two review articles on the speciation of plutonium and iodine in environment have been planned to be submitted to an international journal for publication.</p>
Key words	Speciation, radionuclides, radioecology, radioanalytical chemistry, ¹²⁹ I, plutonium, fractionation, dynamic system