Supplementary material

Separation and isotope ratio measurements of actinides and lanthanides in spent nuclear fuel samples by CE-MC-ICP-MS

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Table S1 - Cup configurations and subconfigurations used for MC-ICP-MS measurement of lanthanide fission products

	Configuration	Subconfiguration	L_4	L_3	L_2	L_1	C	H_1	H_2	H_3	H_4
	Lanthanides 1	Nd	140	142	143	144	145	146	147	148	150
	Lanthanides 2	Sm	147	148	149	150	151	152	153	154	156
		Eu-Gd	151	152	153	154	155	156	157	158	160
Amplificator			$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{12}\,\Omega$	$10^{12}\,\Omega$

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Table S2 - Cup configurations and subconfigurations used for MC-ICP-MS measurement of actinides

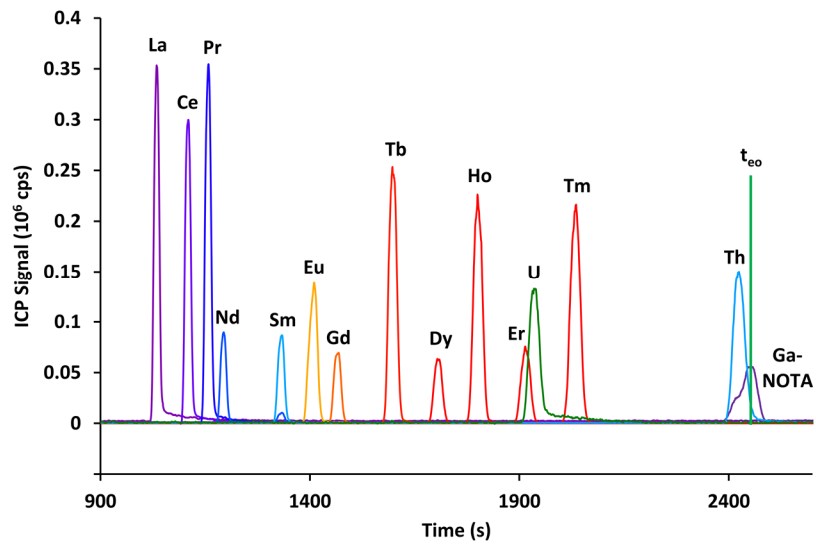|	Configuration	Subconfiguration	L_4	L_3	L_2	L_1	C	H_1	H_2	H_3	H_4
	Actinides	Am-Cm		241	242	243	244	245	246	247	
		Pu		236	237	238	239	240	241	242	
		U		233	234	235	236	237	238	239	
Amplificator				$10^{11}\,\Omega$	$10^{12}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	$10^{11}\,\Omega$	

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Figure S1 - Electrophoregram obtained by CE-Q-ICP-MS for the mixture containing 14 lanthanides, uranium and thorium with a 100 mmol.L^{-1} α-HIBA electrolyte. t_{eo} is the time where neutrals migrate, as calculated at the apex of the Ga-NOTA peak. Yb and Lu were ommited from the figure for visibility reasons.
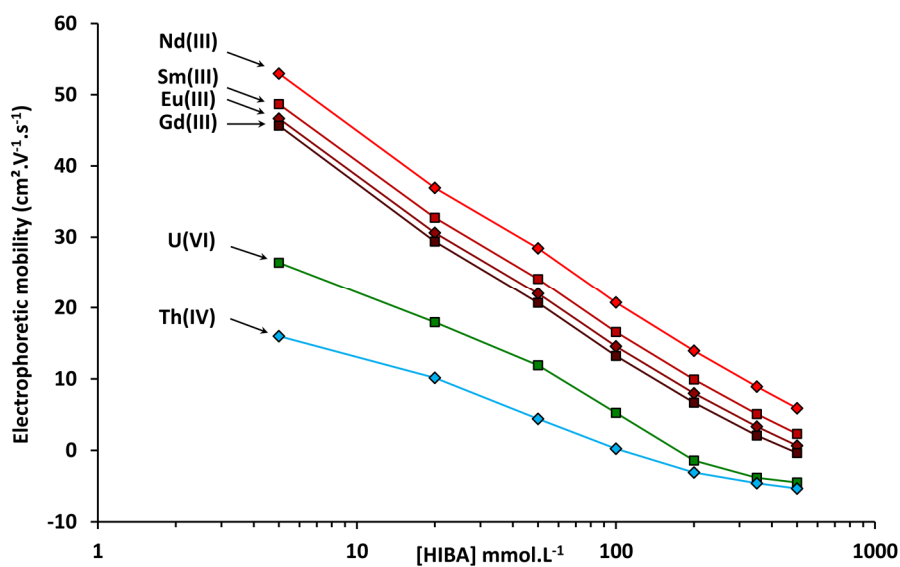

Figure S2 - Electrophoretic mobilities (x 10^{-5} cm².V^{-1}.s^{-1}) measured by CE-Q-ICP-MS of Nd, Sm, Eu, Gd, Th, and U as a function of the α-HIBA concentration at a pH of 3.