



News

• New resins:

We're very glad to announce that besides **TBP Resin**, **TK100** and **TK101 Resins**, for the direct concentration and separation of **Sr** and **Pb** respectively from water samples are joining Triskem offer. More information in the next Triskem Infos.

For more information please contact us at contact@triskem.fr

Literature

We'd like to draw your attention to publications that may be of interest for you.

Different publications on **Lab-On-Valve technology** for automated preconcentration and/or separation systems have been released by Environmental Radioactivity Laboratory (LaboRA) led by Dr Ferrer at University of Balearic Islands and working group headed by Dr Hou in Technical University of Denmark (DTU):

- **U in environmental samples**
[doi:10.1016/j.talanta.2010.12.018](https://doi.org/10.1016/j.talanta.2010.12.018)
- **Sr in environmental samples**
[doi:10.1016/j.talanta.2011.11.042](https://doi.org/10.1016/j.talanta.2011.11.042)
- **Sr and Pb in sludges samples**
<http://dx.doi.org/10.1016/j.apradiso.2013.11.123>
- **Tc in environmental samples**
<http://dx.doi.org/10.1016/j.talanta.2014.04.093>
- **Actinides in seawater**
dx.doi.org/10.1021/ac402673p

If you would like to communicate your latest publication using our products in the next TKIs please contact either Steffen Happel (shappel@triskem.fr) or Aude Bombard (abombard@triskem.fr).

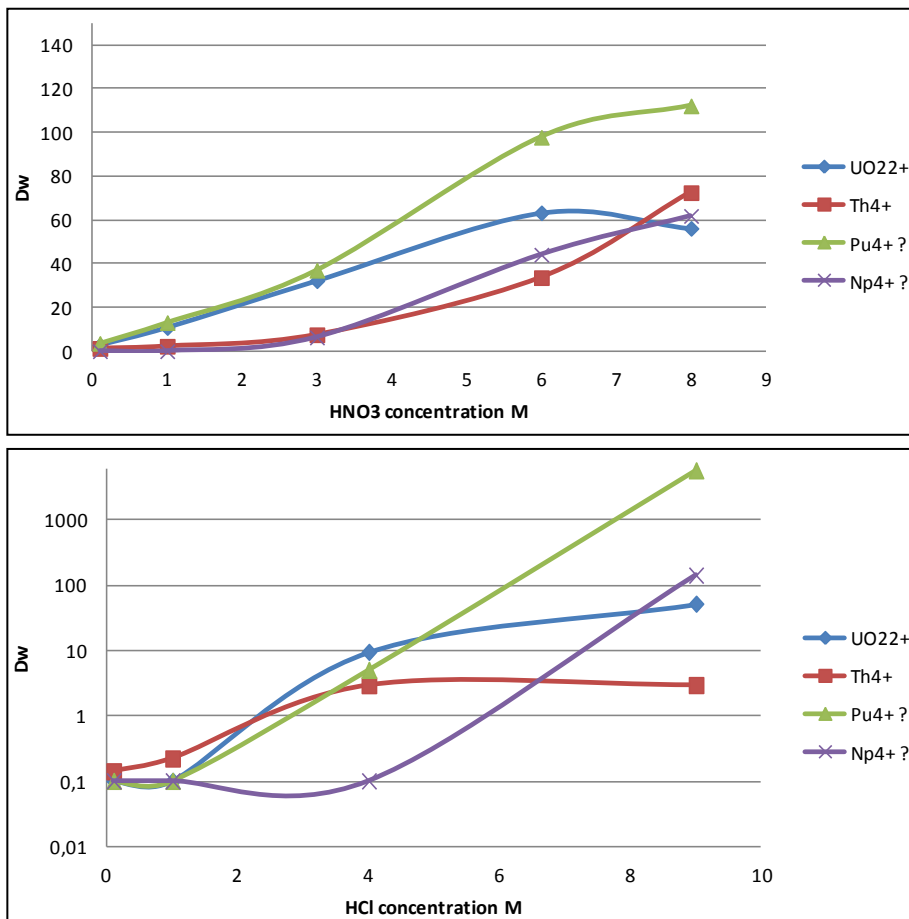


Figure 2 : D_w values of selected actinides in HNO_3 and HCl media on TBP Resin⁽¹⁾

Nora Vajda et al. could show that the TBP resin can be used for the separation of Pu from other actinides and developed a method for its use for the determination of Pu in water samples⁽²⁾.

Vajda et al. also evaluated the influence of Fe(III) and three anionic interferences (oxalic, sulfuric and phosphoric acid) on the U and Pu uptake⁽²⁾. In 8M HNO_3 a Fe concentration of 0.1M is not interfering with the uptake of U(VI) and Pu(IV), the same is true for Np(IV) and Th(IV). Contrary to that the same Fe concentration very strongly interferes with the retention of U and Pu in 9M HCl.

Figures 3 and 4 show the impact of increasing amounts of anionic interferences on the retention of U(VI) in 8M HNO_3 and of Pu(IV) in 9M HCl. Oxalates show no interference with the U uptake even at concentrations of up to 0.5M. Sulfate, and especially phosphate, interfere significantly when present in elevated amounts. The Pu(IV) extraction from 9M HCl is very robust, although the tested anions do interfere with its uptake when present in concentrations $\geq 0.1\text{M}$, the D_w values of Pu still remain greater than 500.