

Supporting Information

Tantalum and Niobium Selective Extraction by Alkyl-Acetophenone

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Table S1. *D* and $SF_{Ta/Nb}$ values for Ta and Nb for 4-MAcPh and MIBK.

H_2SO_4 (mol L ⁻¹)	MAcPh			MIBK		
	<i>D</i> (Ta)	<i>D</i> (Nb)	$SF_{Ta/Nb}$	<i>D</i> (Ta)	<i>D</i> (Nb)	$SF_{Ta/Nb}$
1	44.6	0.8	55.8	24.4	0.8	30.5
3	223.6	2.0	111.8	177.4	2.0	88.7
6	462.7	2.1	220.3	339.7	2.1	161.8
8	391.4	1.3	301.1	N.A *	N.A *	N.A *
9	20.9	0.8	26.1	N.A *	N.A *	N.A *

* N.A: Not applicable because at concentrations of H_2SO_4 above 6M, MIBK is solubilized.

Table S2. *D* values for Ta, Ni, Mn, Fe and Ag as a function of H_2SO_4 concentration.

H_2SO_4 (mol.L ⁻¹)	<i>D</i> (Ta)	<i>D</i> (Fe)	<i>D</i> (Ni)	<i>D</i> (Mn)	<i>D</i> (Ag)
1	21.28	0.07	0.05	0.05	0.06
3	55.26	0.04	0.04	0.02	0.04
6	84.78	0.02	0.01	0.00	0.01
8	77.54	0.07	0.08	0.08	0.30
9	28.98	0.35	0.37	0.39	0.70