

SUPPLEMENTARY MATERIAL

Increasing the Sustainability of the Stabilization/Solidification of Potentially Toxic Elements Contained in Tailings from an Active Mine Using a Modified Lime Mortar

Jesús F. González-Sánchez ¹, Georgina Fernández-Villagómez ¹, Alan Ulises Loredó Jasso ², José M. Fernández ³, Íñigo Navarro-Blasco ³ and José I. Álvarez ^{3,*}

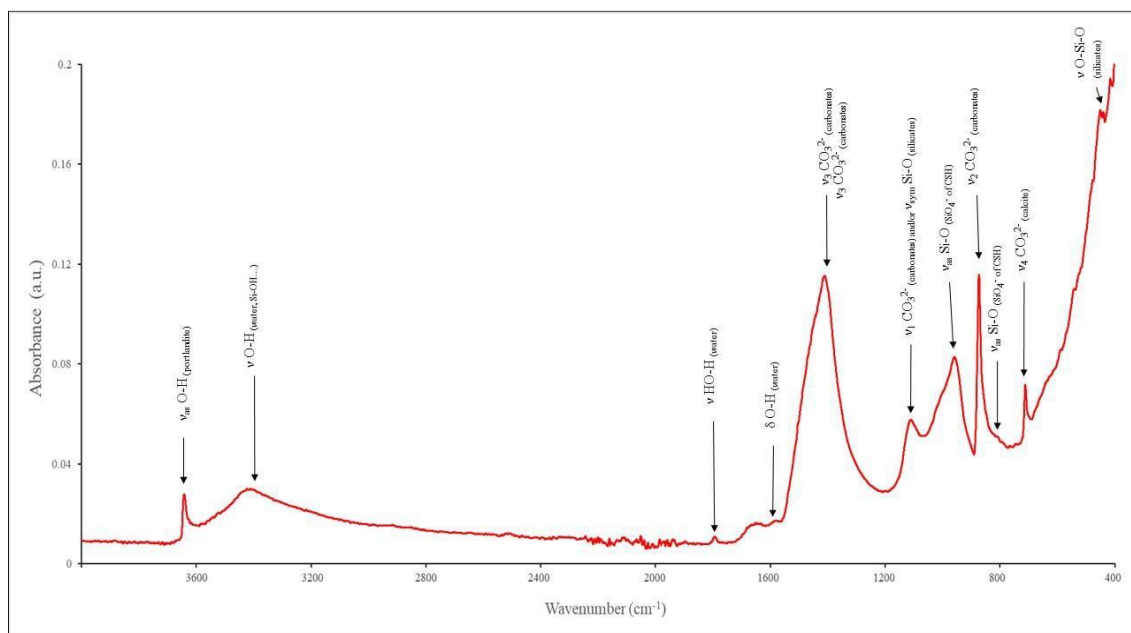


Figure S1. FTIR spectrum of the control sample. Identification of the main absorption bands.

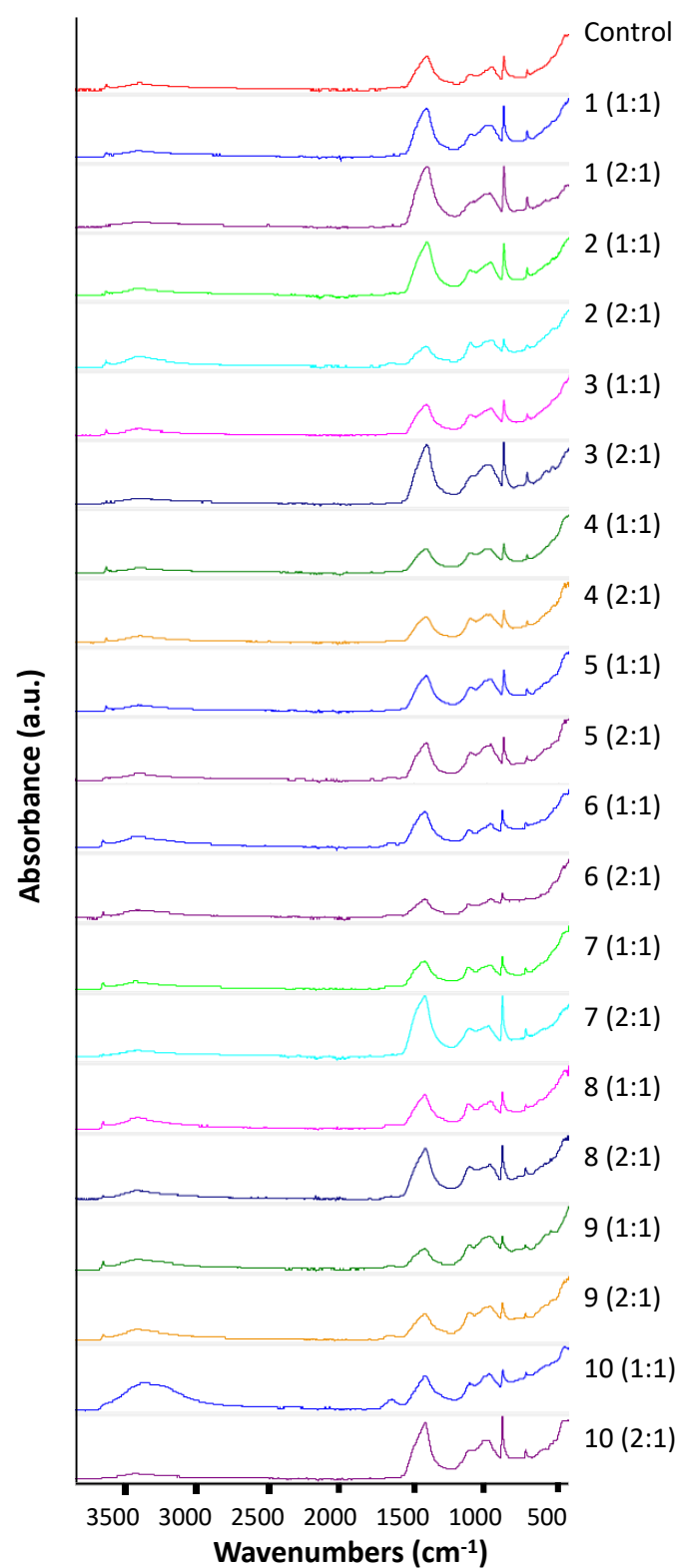


Figure S2. FTIR spectra of the tested samples.

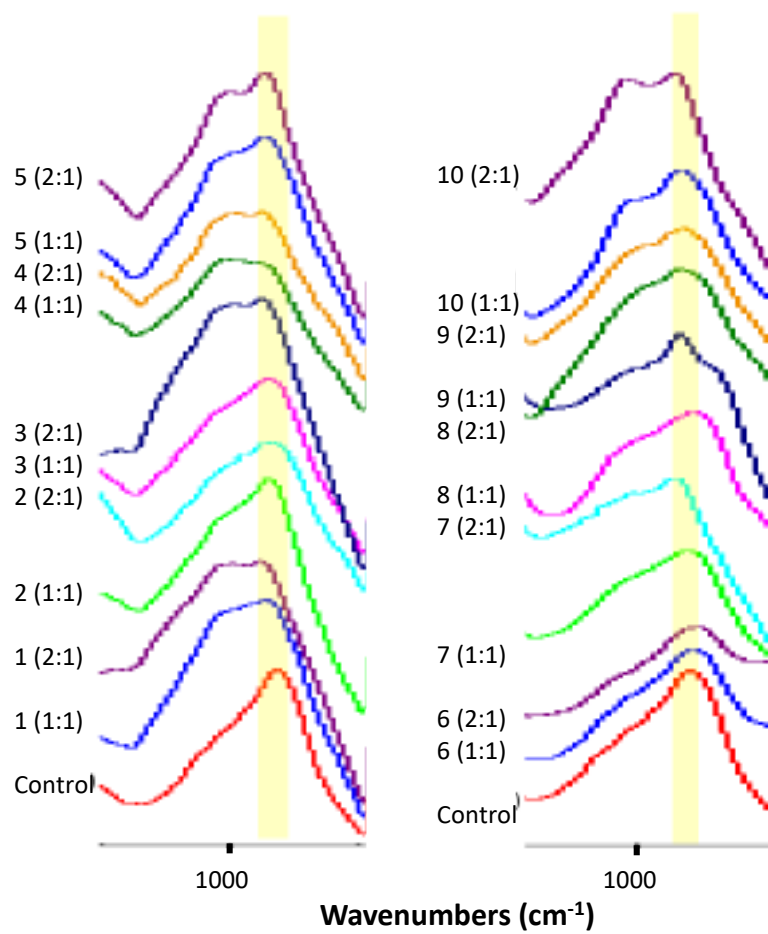
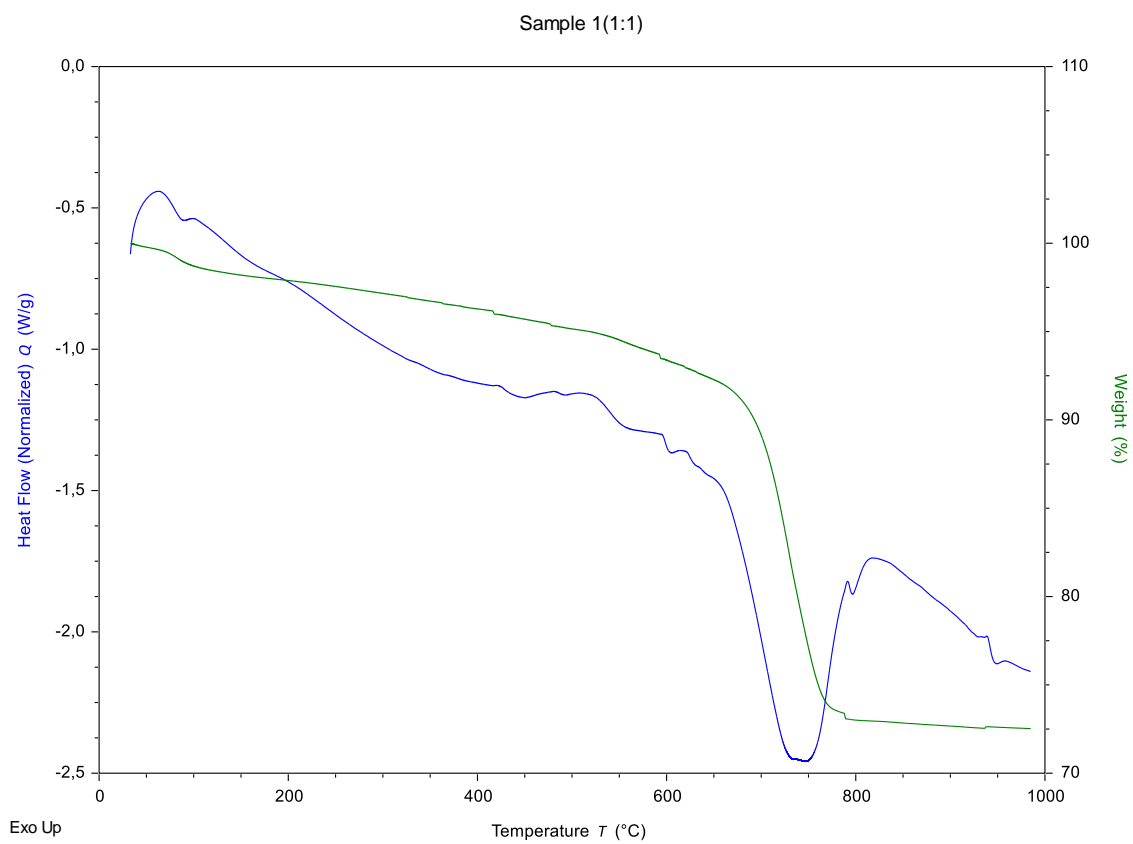
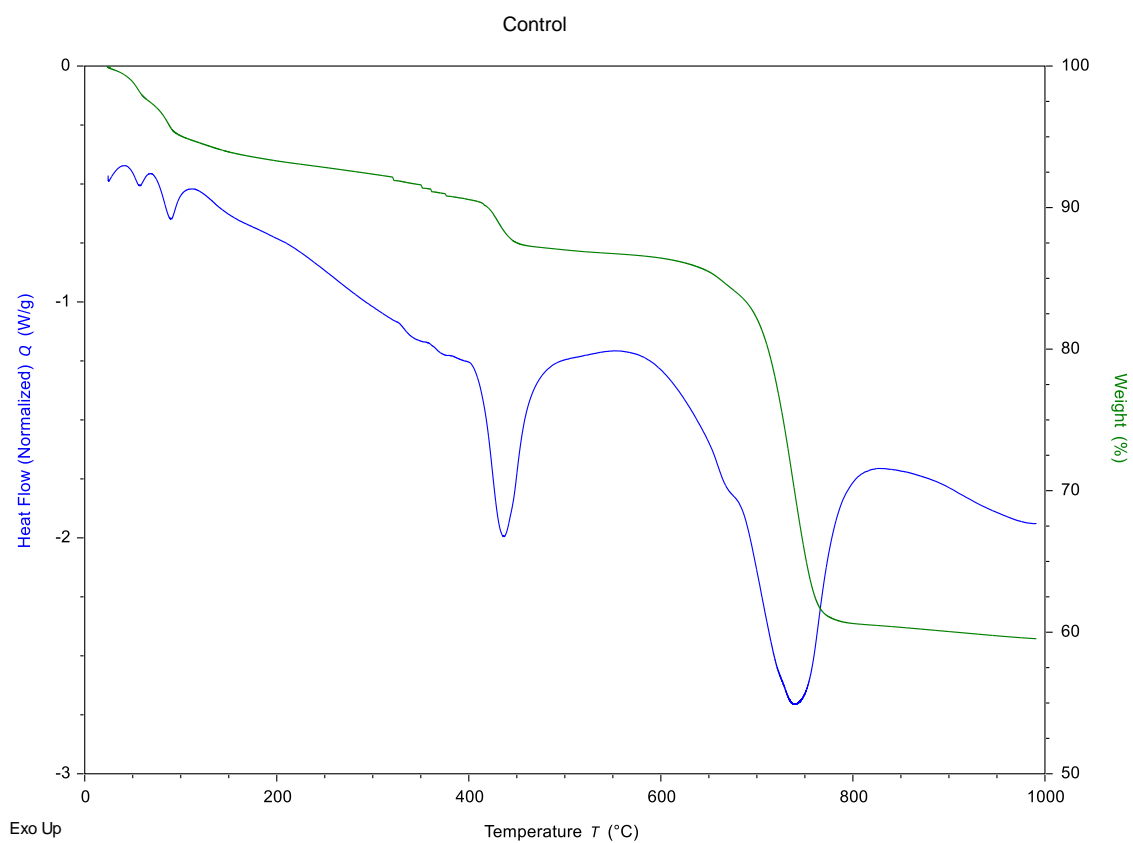
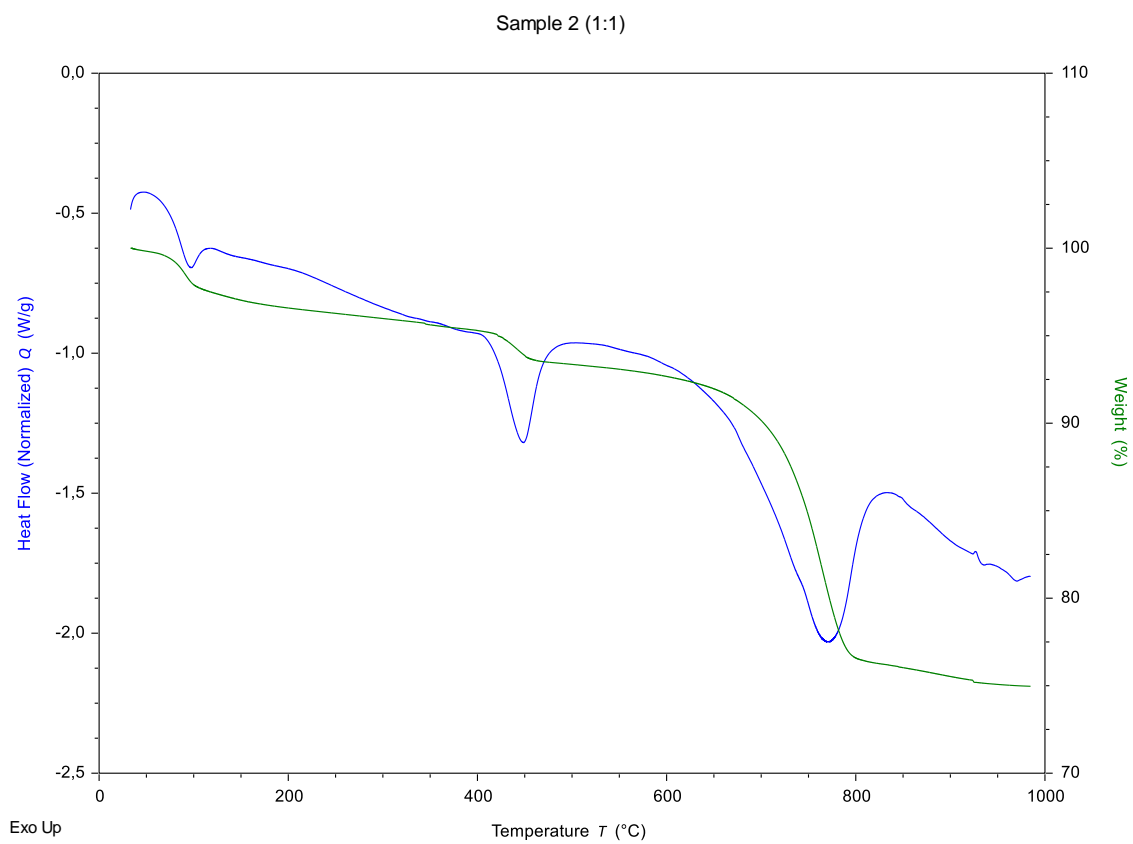
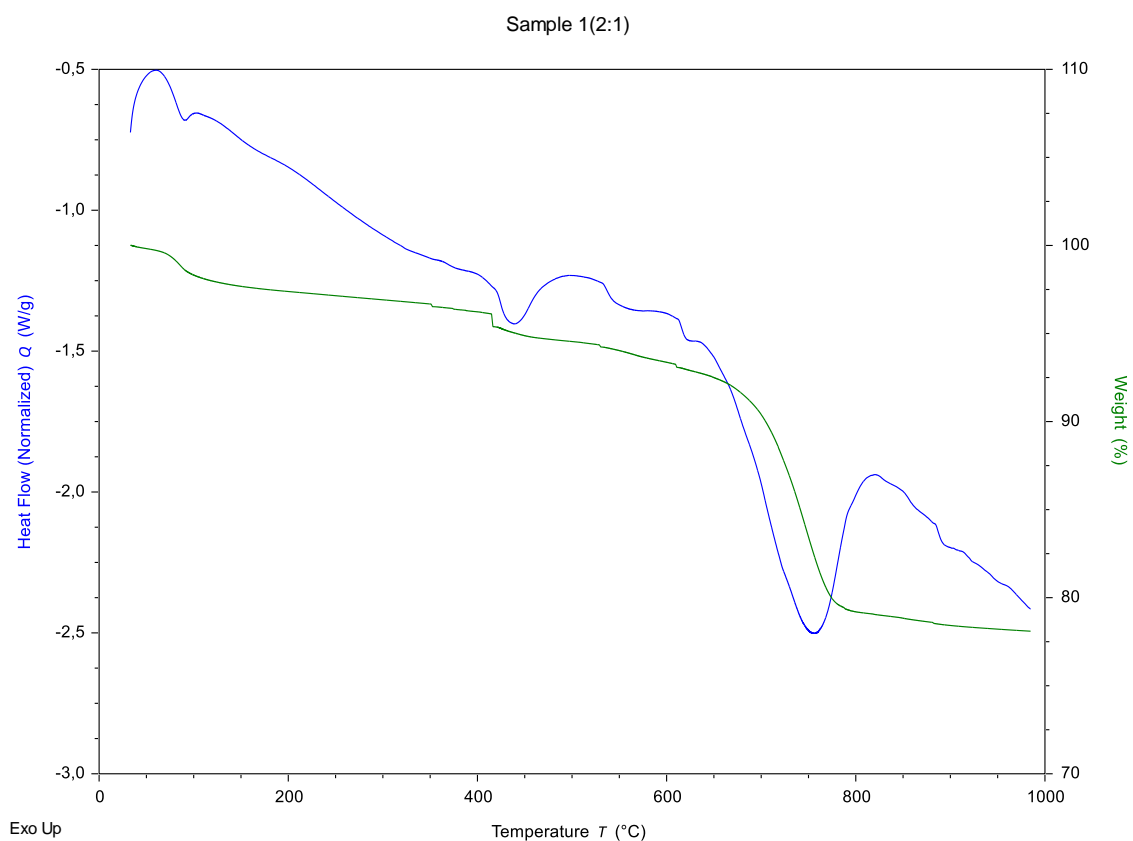
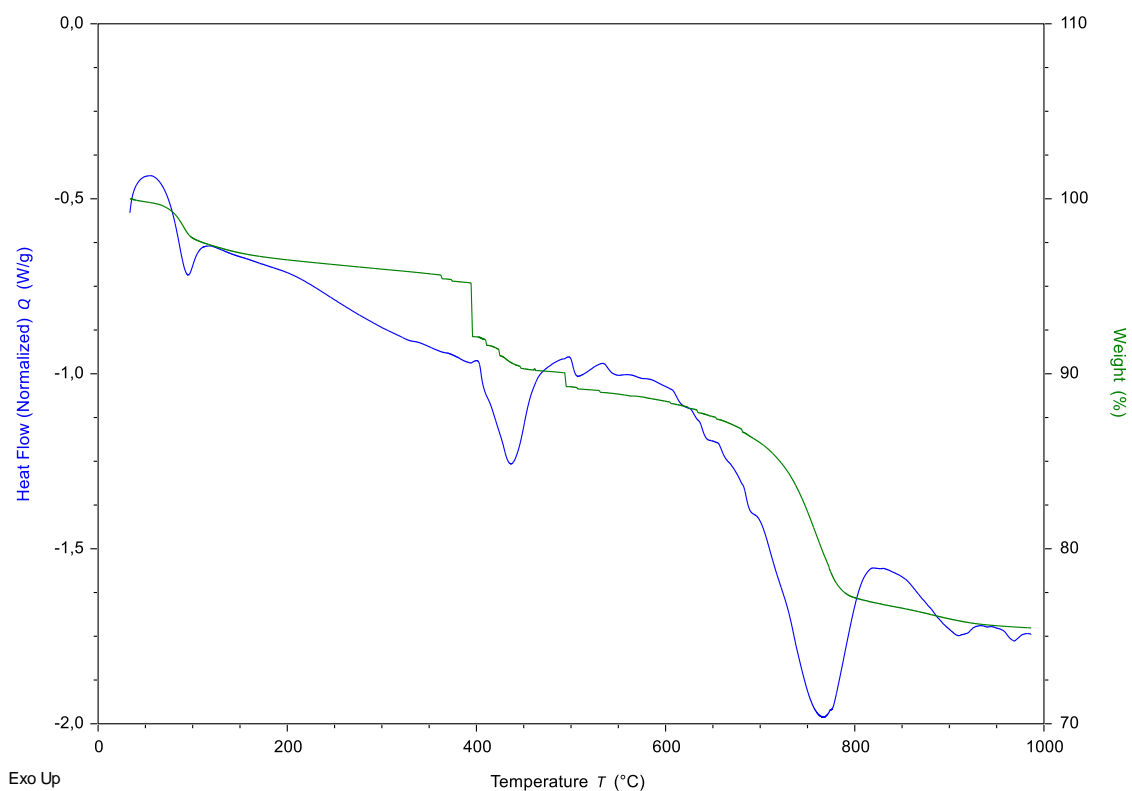


Figure S3. FTIR spectra of the tested samples (zoom at 1000 cm^{-1}).

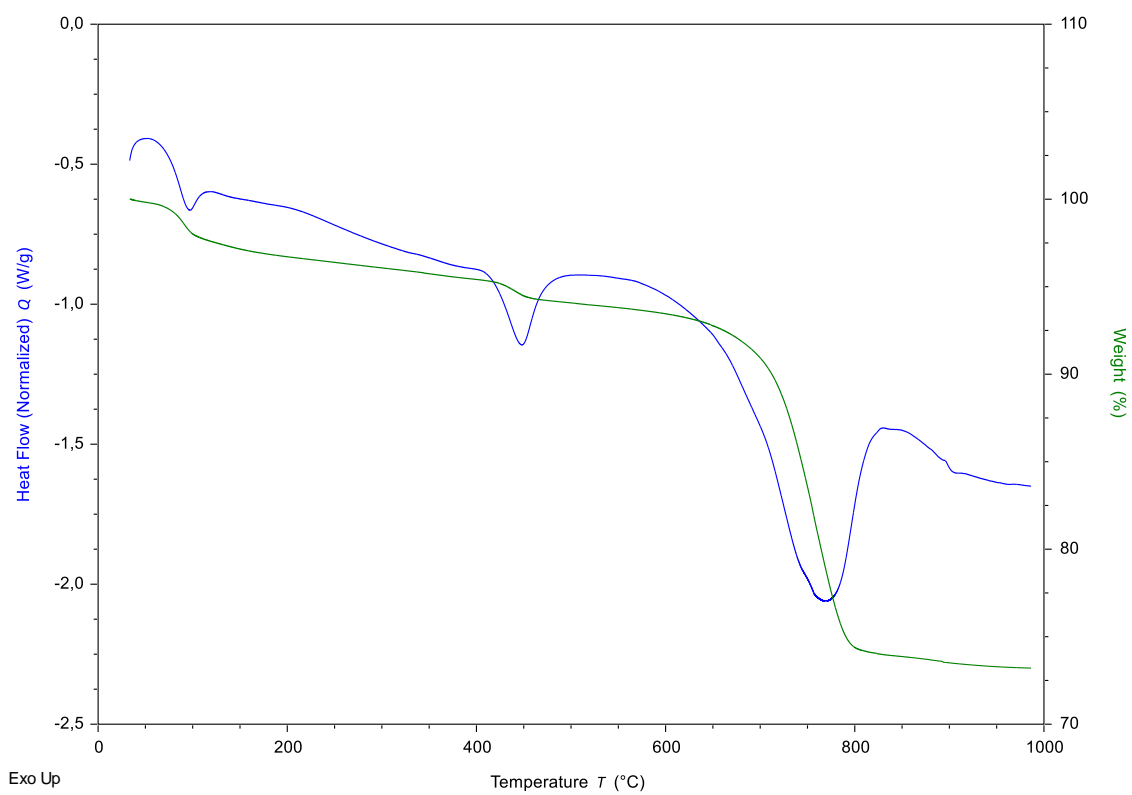




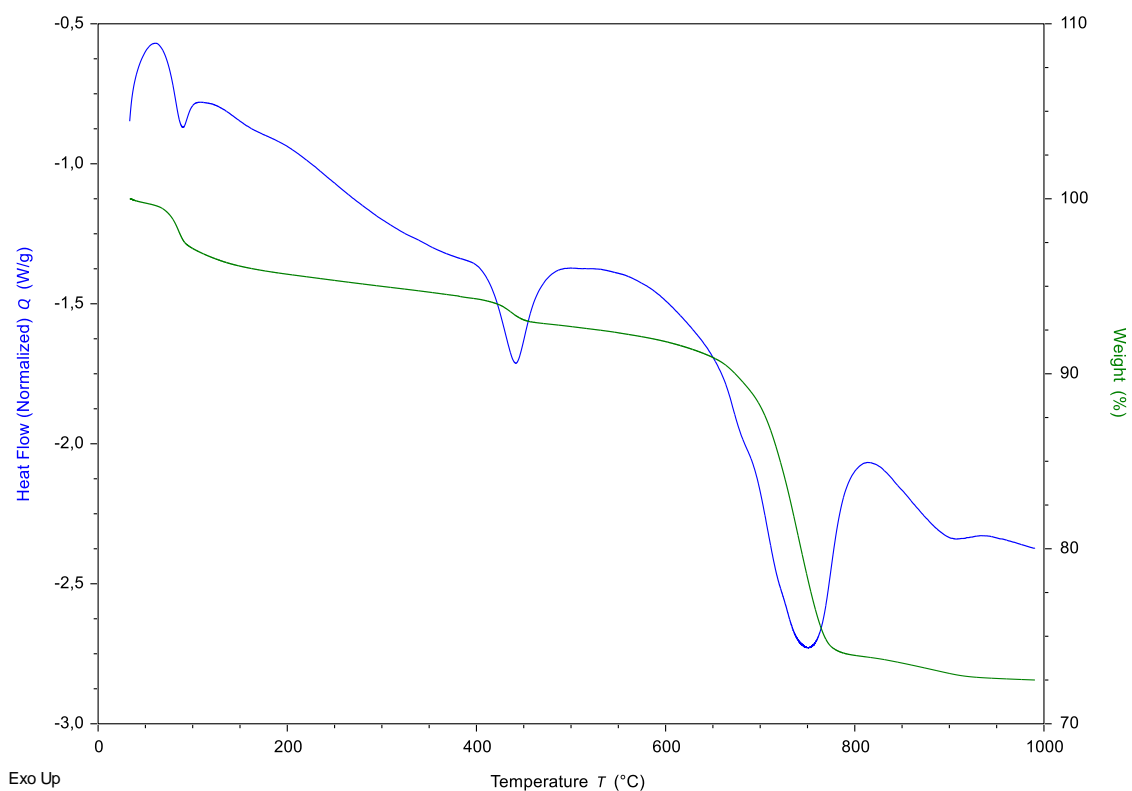
Sample 2 (2:1)



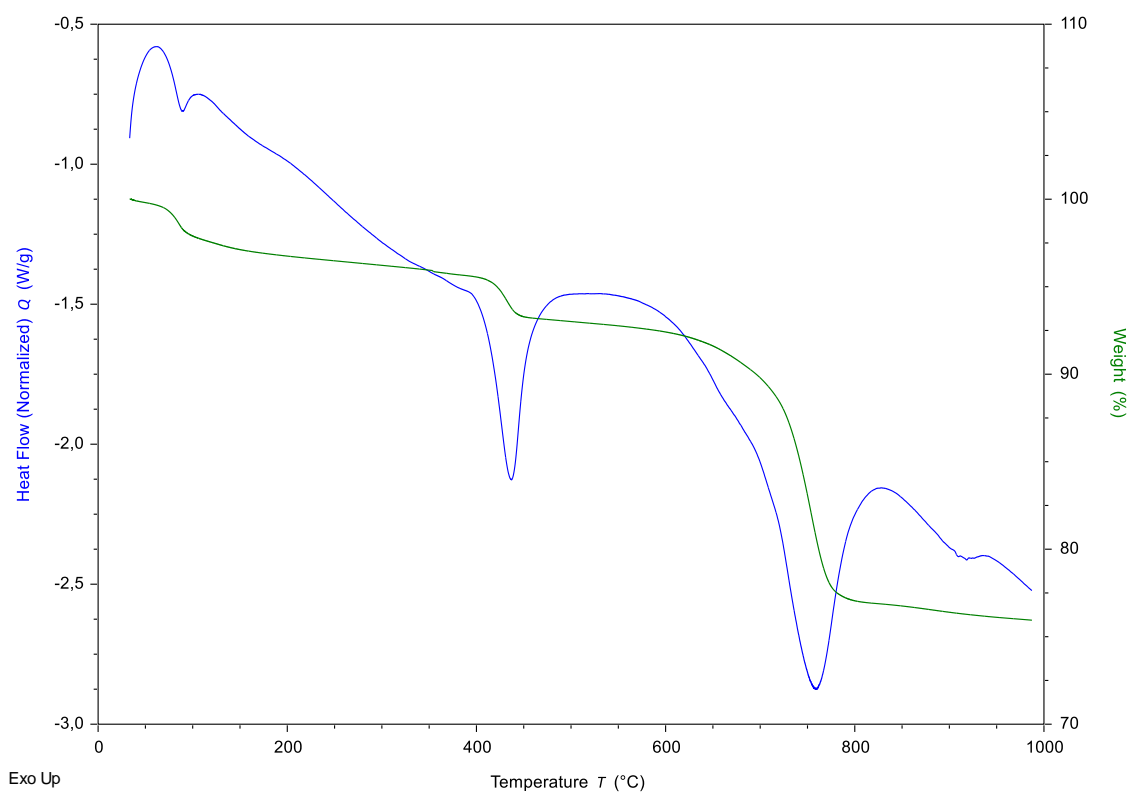
Sample 3 (1:1)



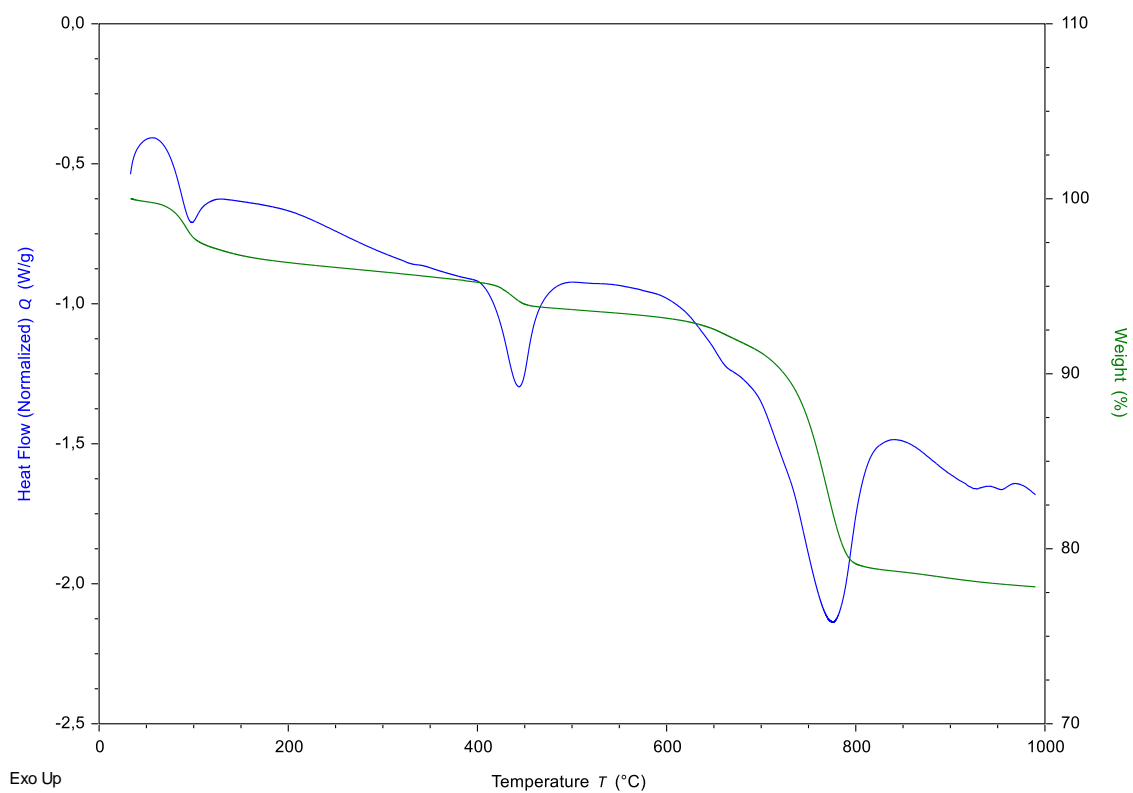
Sample 3 (2:1)



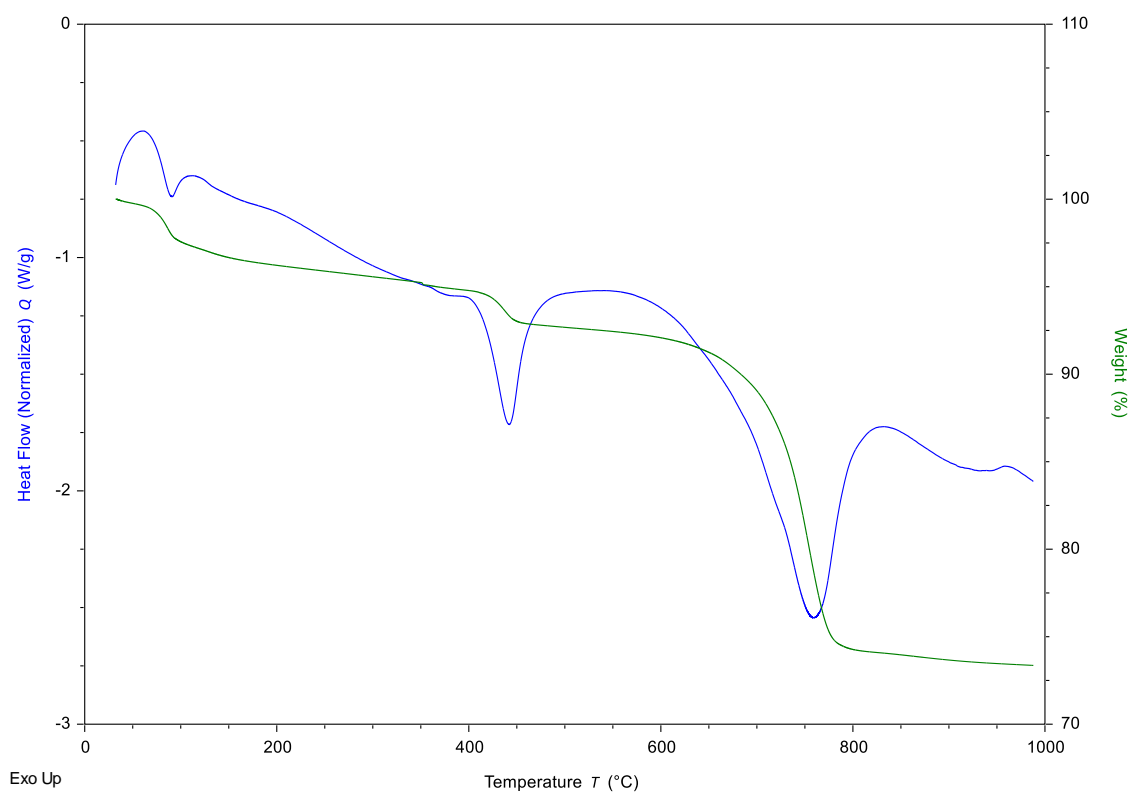
Sample 4 (1:1)



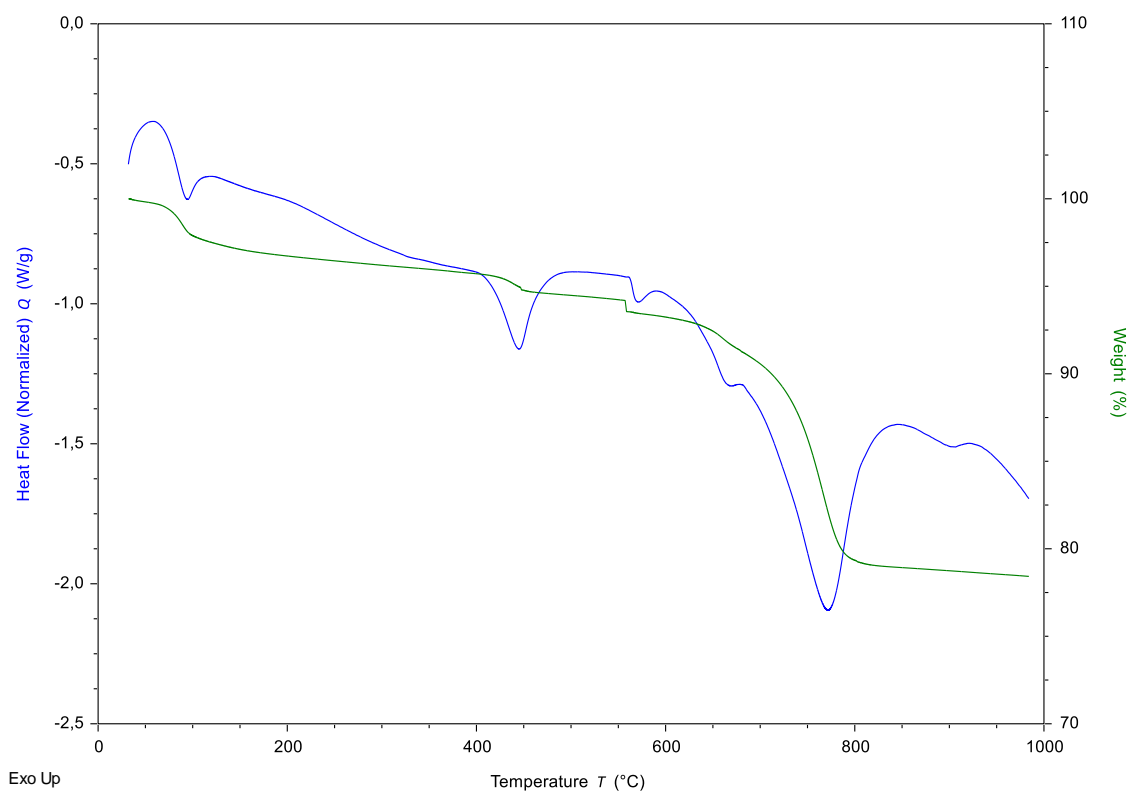
Sample 4 (2:1)



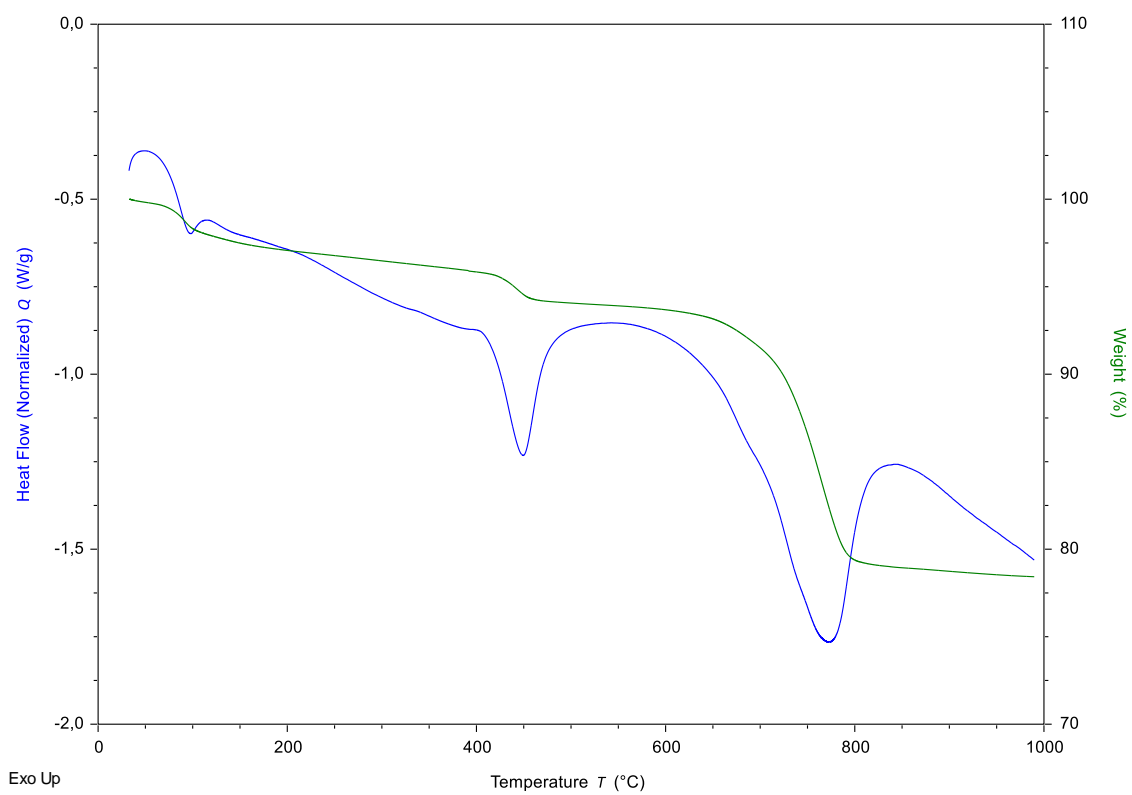
Sample 5 (1:1)



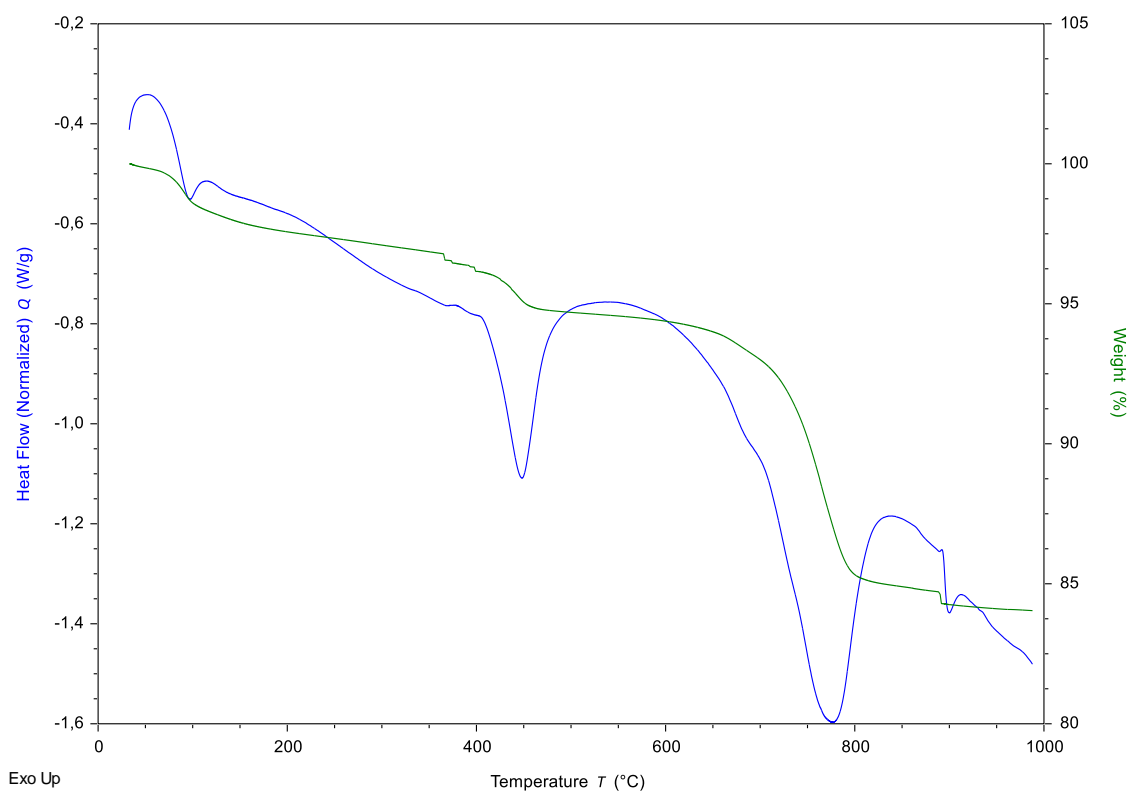
Sample 5 (2:1)



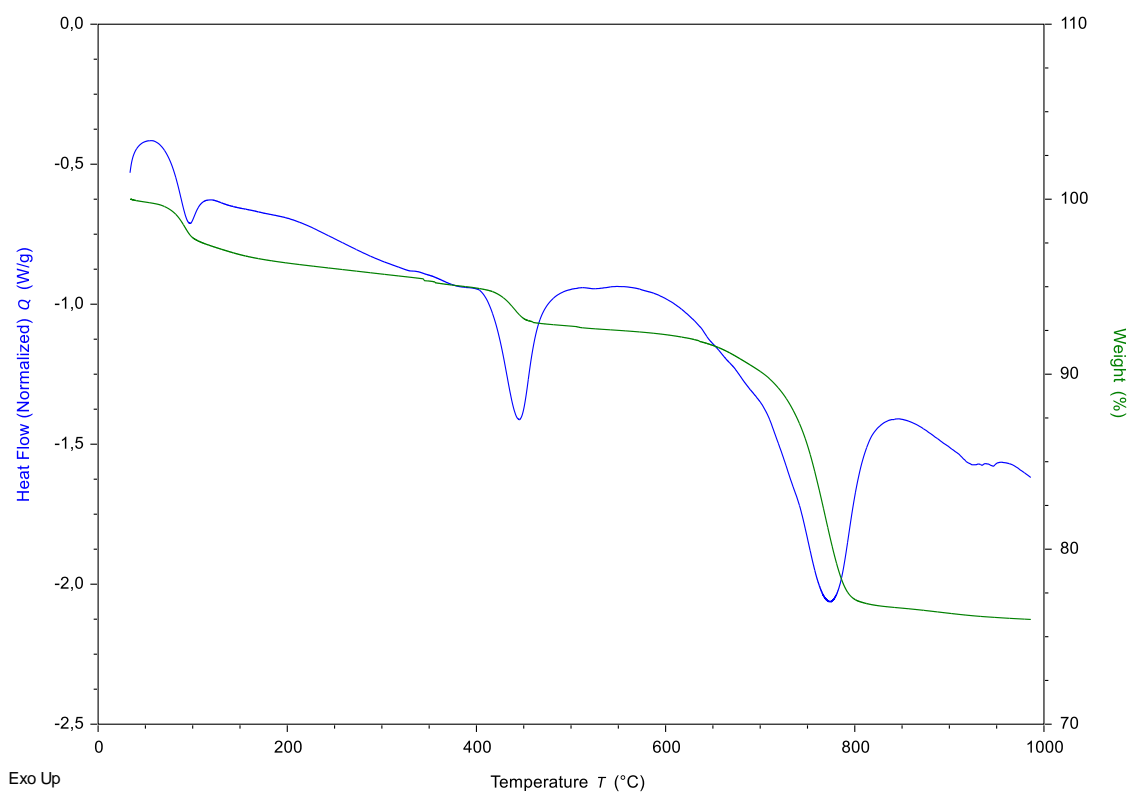
Sample 6 (1:1)



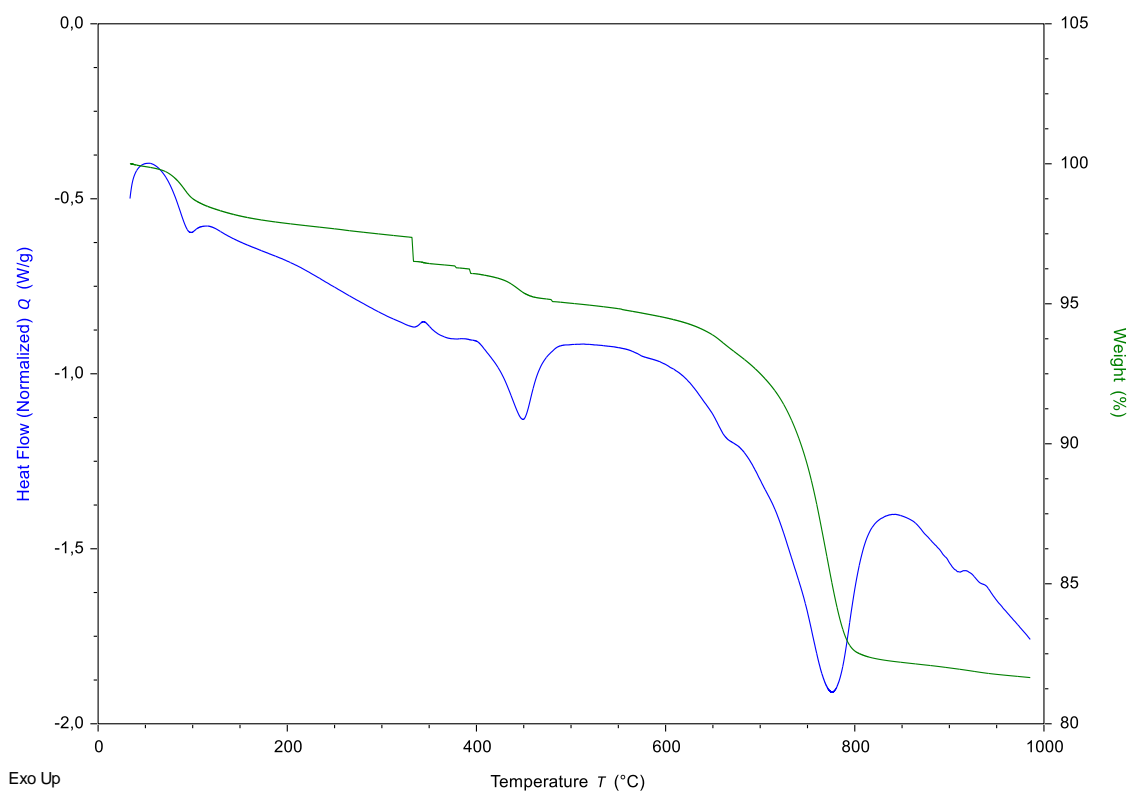
Sample 6 (2:1)



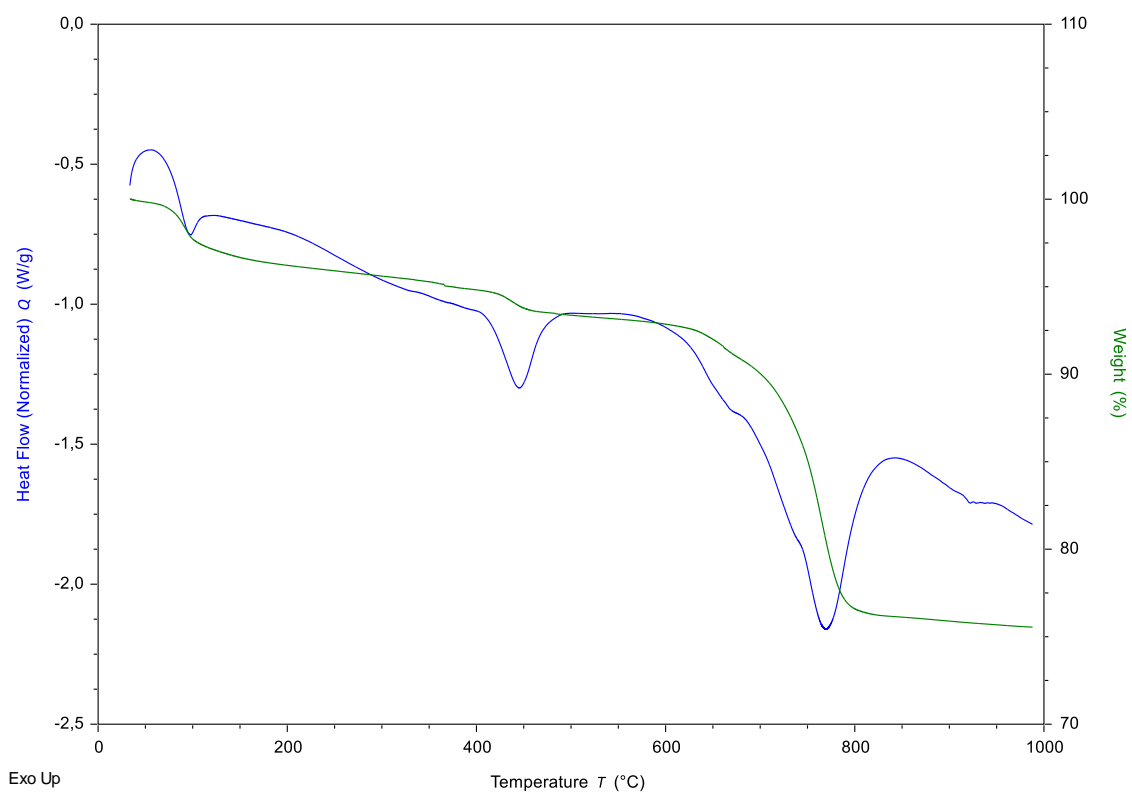
Sample 7 (1:1)



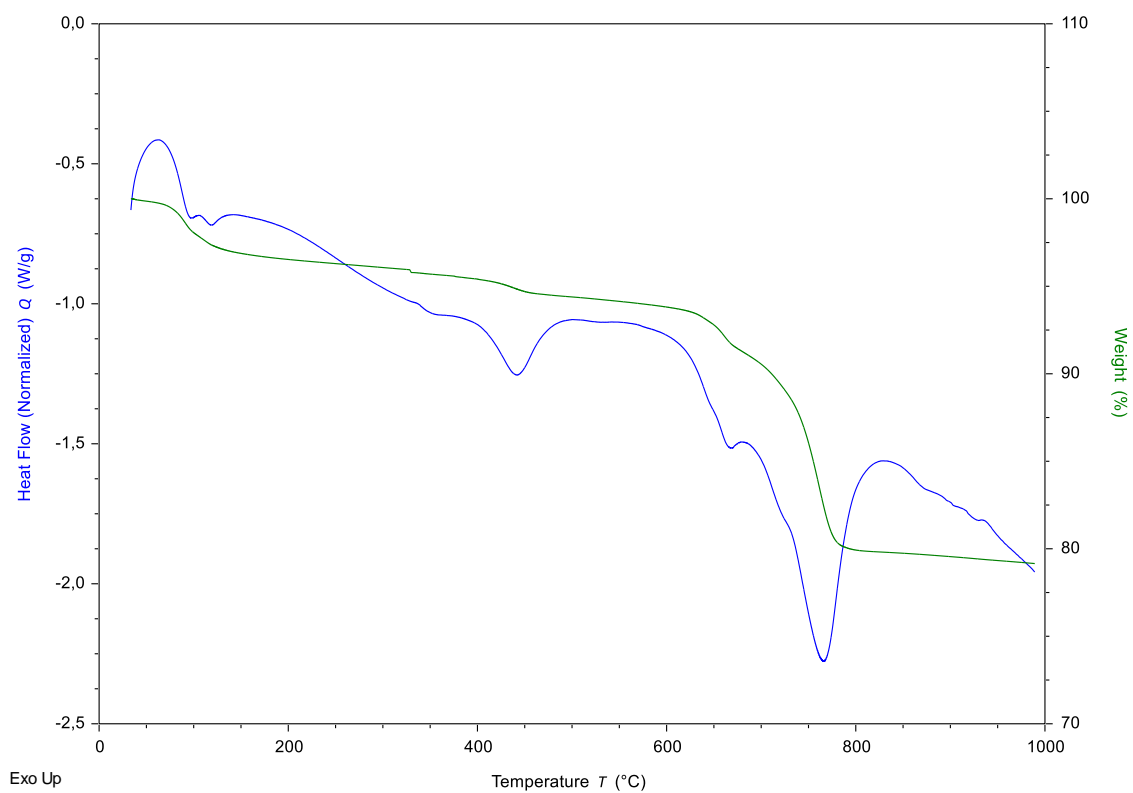
Sample 7 (2:1)



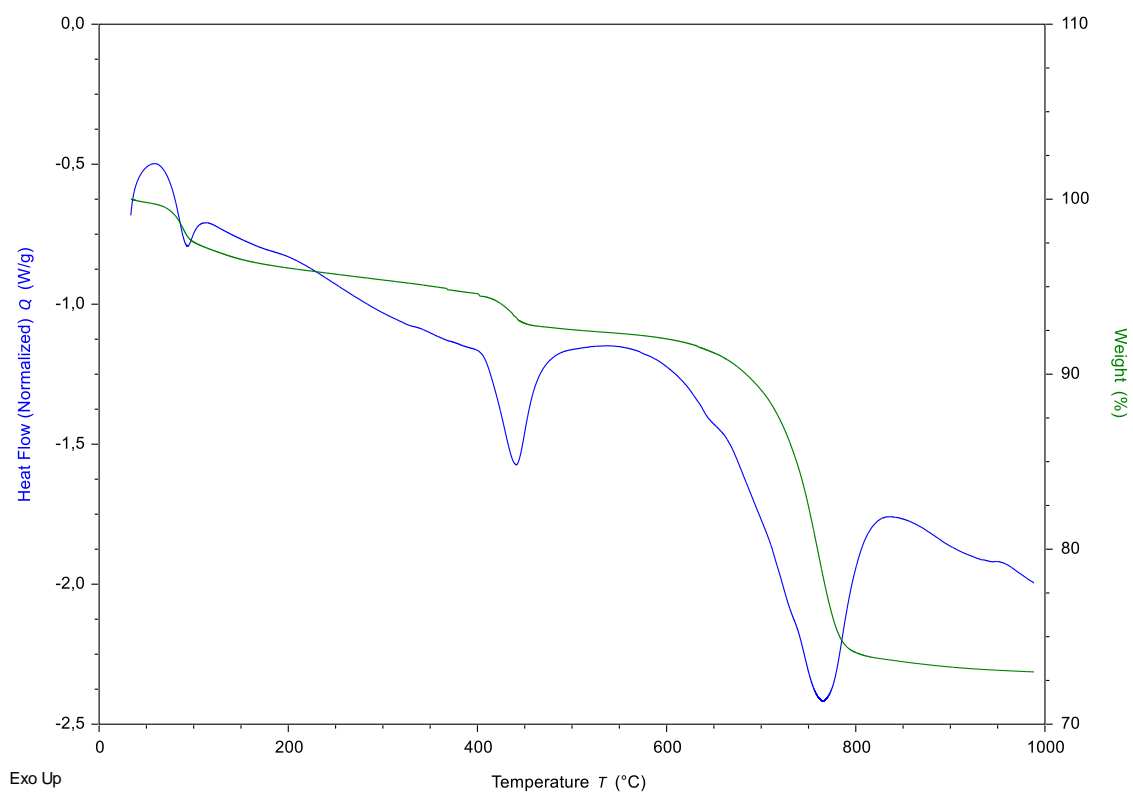
Sample 8 (1:1)



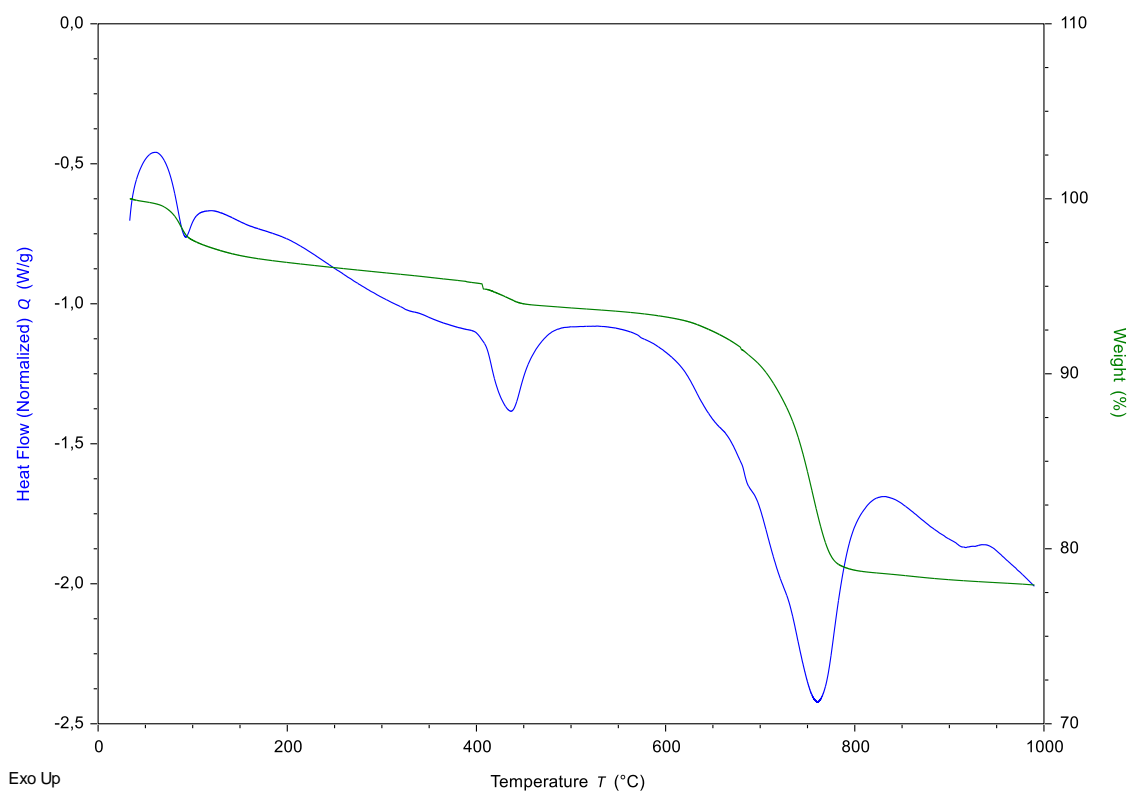
Sample 8 (2:1)



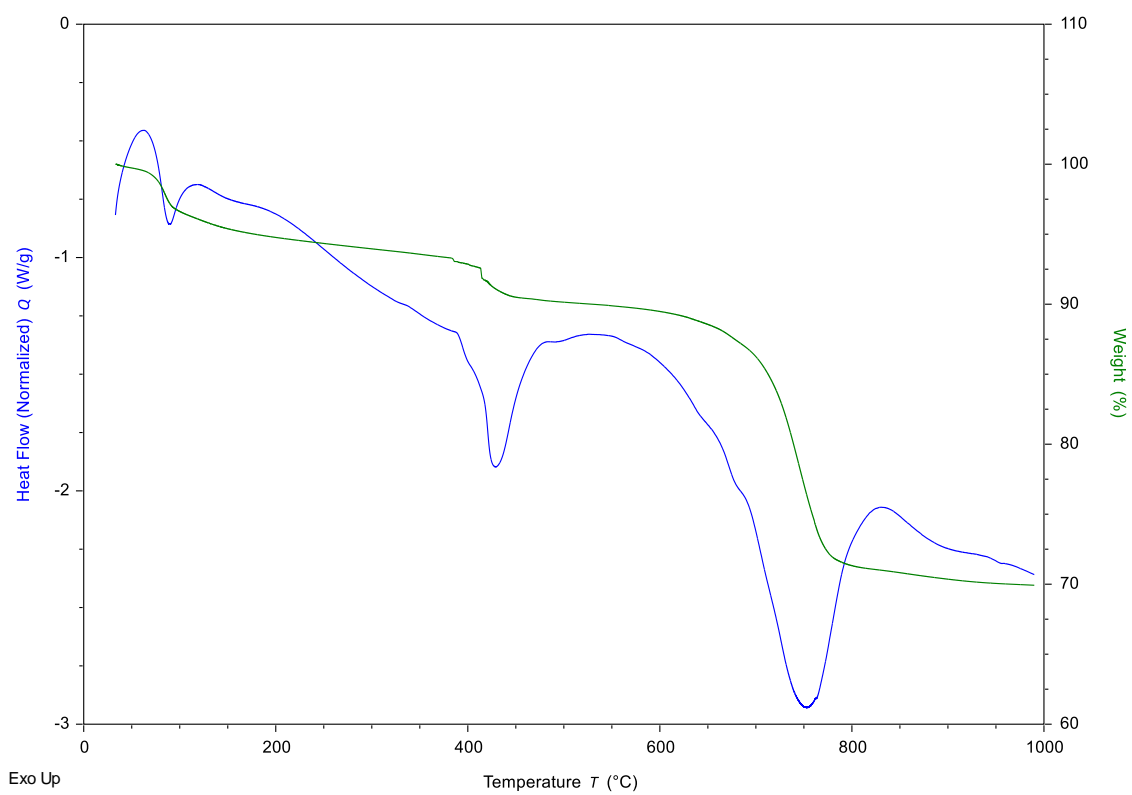
Sample 9 (1:1)



Sample 9 (2:1)



Sample 10 (1:1)



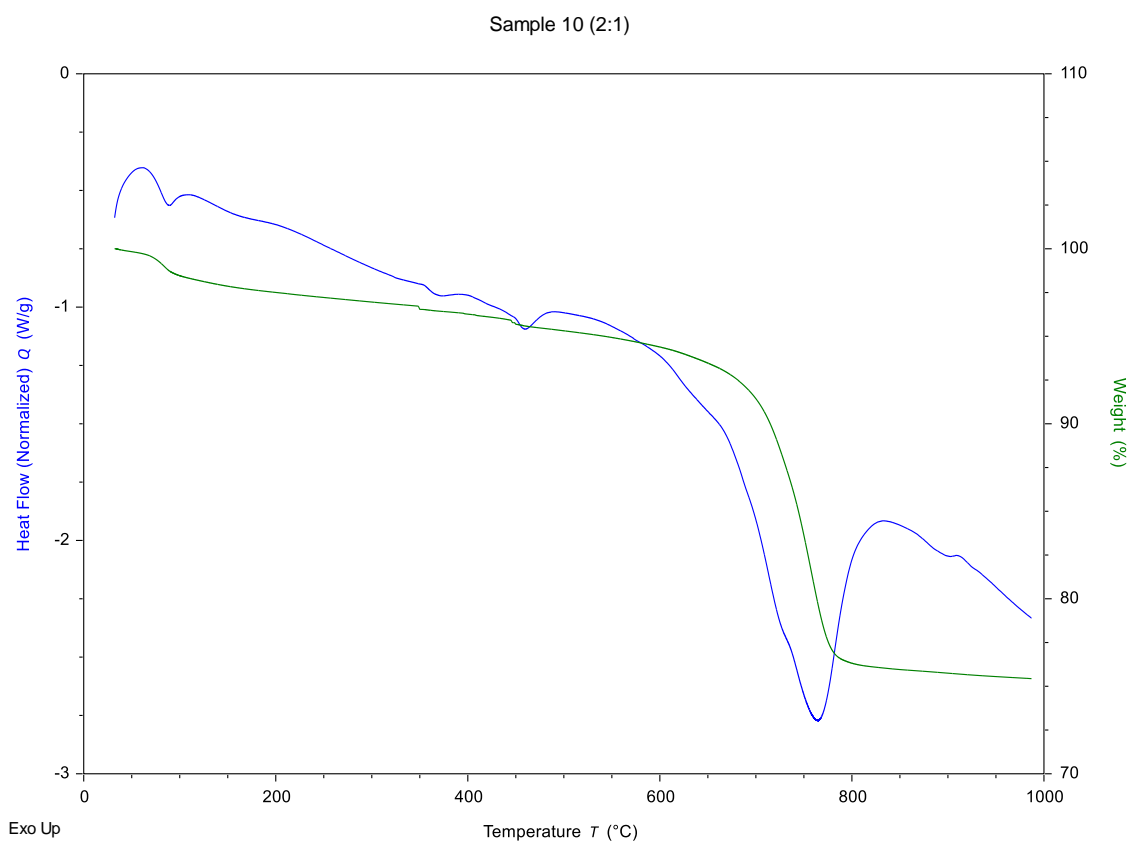
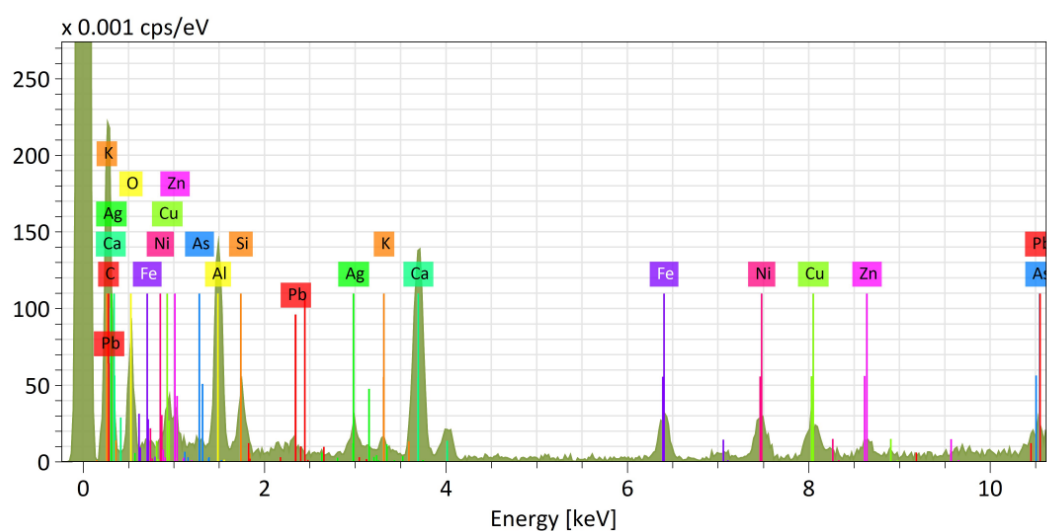
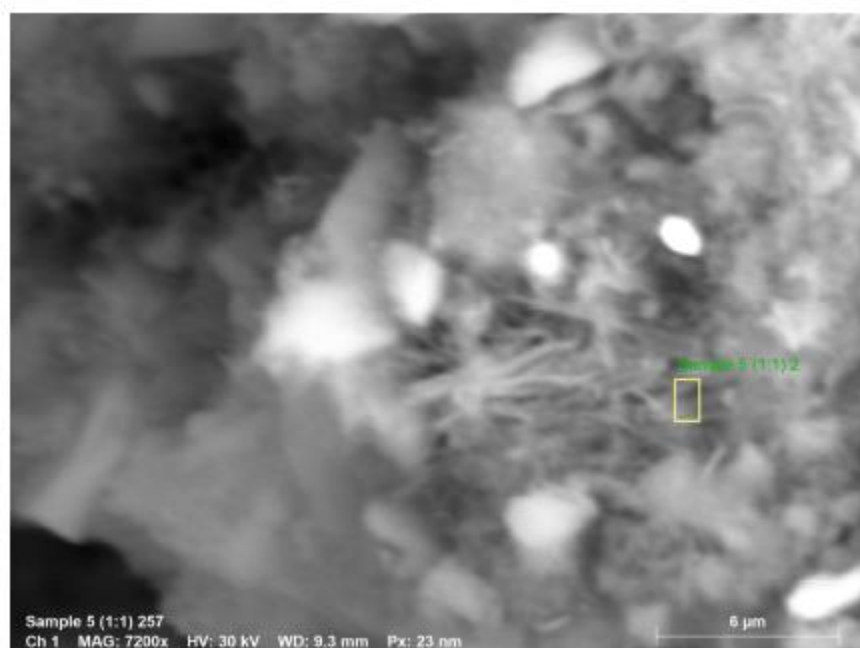


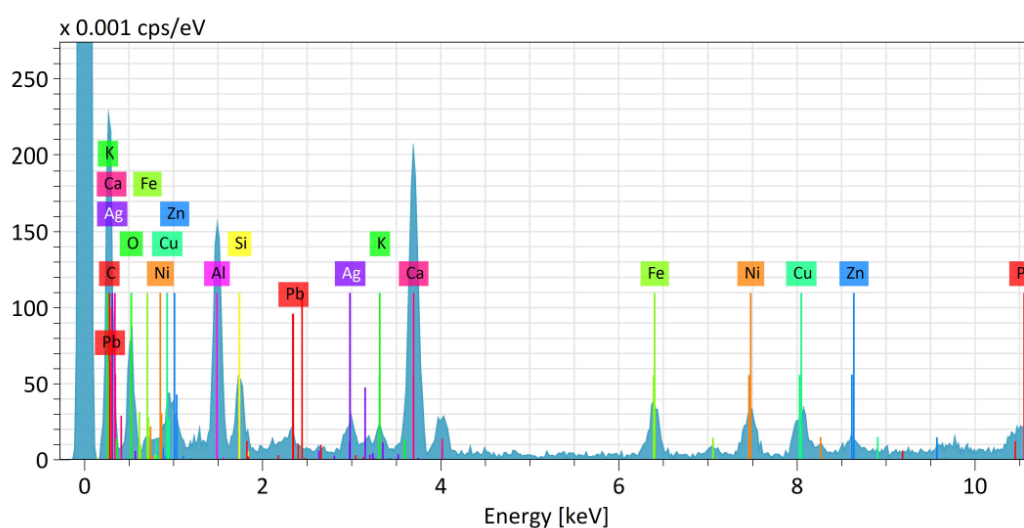
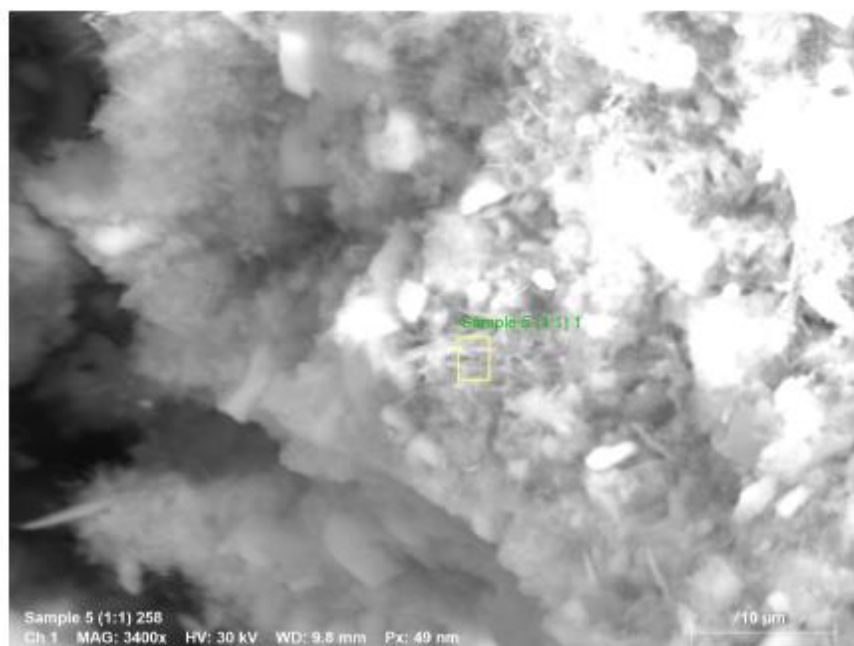
Figure S4. TG-DSC curves of the tested samples.



Normalized mass concentration [%]

Spectrum	C	O	Al	Si	K	Ca	Fe	Ni	Cu	Zn	As	Ag	Pb
Sample 5 (1:1) 2	52.18	33.53	4.82	1.18	0.15	4.49	1.14	0.60	0.48	0.16	0.23	0.85	0.19

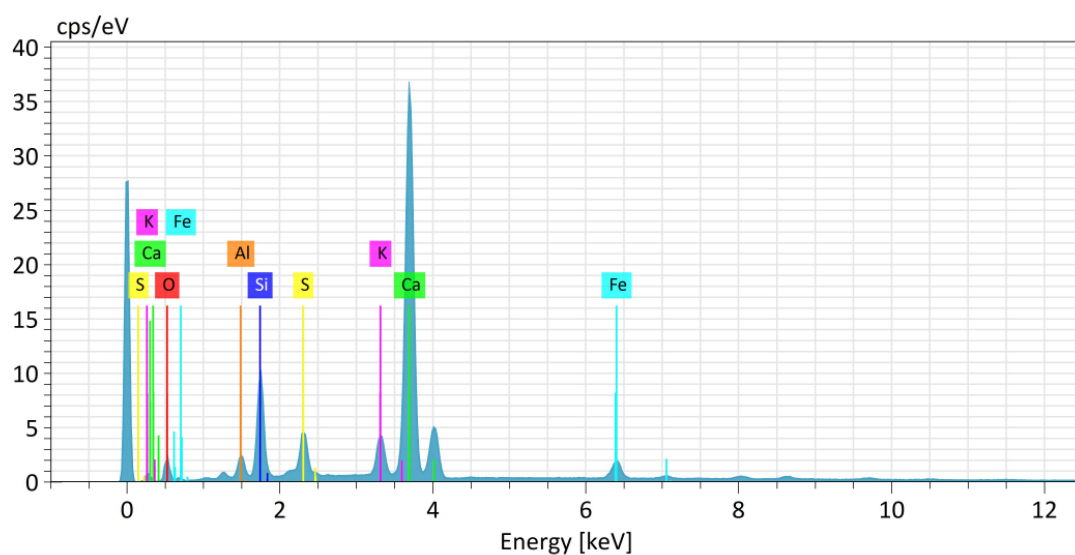
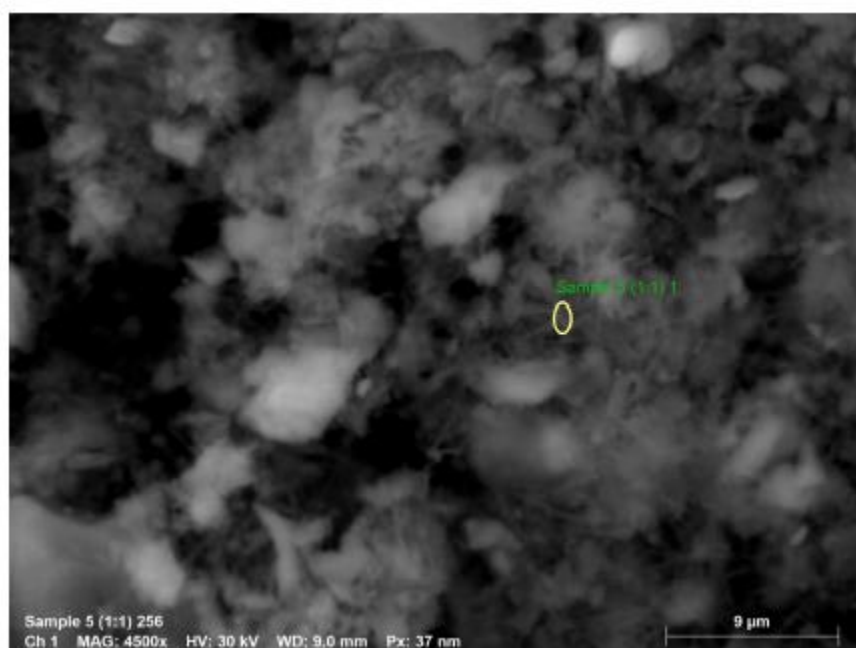
Figure S5. EDS element composition results of spots of the needle-like structures in the sample 5 (1:1).



Normalized mass concentration [%]

Spectrum	C	O	Al	Si	K	Ca	Fe	Ni	Cu	Zn	Ag	Pb
Sample 5 (1:1) 1	51.04	33.45	4.96	1.39	0.28	6.09	1.10	0.27	0.18	0.00	0.94	0.29

Figure S6. EDS element composition results of spots of the needle-like structures in the sample 5 (1:1).



Normalized mass concentration [%]

Spectrum	O	Al	Si	S	K	Ca	Fe
Sample 5 (1:1) 1	48.71	2.03	7.86	3.22	2.68	33.25	2.25

Figure S7. EDS element composition results of spots of the needle-like structures in the sample 5 (1:1).