

Table SI 1 Mean concentration and RSD values of the elements measured in the < 75 µm particle size. The major elements (Ca, Fe, Mg, Al, Mn, Na and K) are showed in g/kg, while the rest of them are presented in mg/kg.

	S1		S2		S3		S4		S5		S6		S7		S8		S9		S10	
	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD
Ca	185.52	1.5	182.6	1.7	129	15	165.9	2.2	144	9.6	139.6	4.2	123.0	1.7	100.4	4.0	196.9	3.0	173.6	1.8
Fe	40.5	3.5	36.74	2.0	74.1	5.1	68.8	5.0	55.1	2.6	55.09	1.9	59.9	6.5	17.54	4.7	17.65	2.8	21.25	1.4
Mg	146.40	1.7	16.62	1.7	15.41	3.2	16.29	3.7	17.72	1.4	16.87	5.5	17.40	3.1	38.95	2.4	23.4	8.3	17.23	1.8
Al	123.964	1.2	12.66	2.8	12.14	3.8	12.45	7.0	15.61	3.5	13.51	5.3	17.13	4.2	17.30	2.4	10.7	11	8.58	3.4
Mn	3.771	1.9	3.700	2.6	4.46	3.1	4.10	4.0	4.57	2.9	4.45	5.5	5.119	1.7	3.53	2.3	2.41	4.8	1.92	1.2
Na	2.313	3.0	2.562	2.8	2.305	3.4	2.212	2.7	2.734	2.6	2.462	3.5	3.15	3.8	4.31	2.9	2.00	11	1.95	4.0
K	2.072	3.6	2.027	3.4	1.70	6.6	1.86	16	2.29	5.1	1.719	5.4	2.094	1.5	1.2984	6.8	1.48	12	1.13	2.4
Sr	810	2.1	895	3.0	770	8.3	873	1.8	892	2.8	829	4.4	781	2.3	1132	4.1	1547	2.3	1072.6	2.4
Ba	469	2.2	397.3	1.5	800	2.3	858	1.2	803	2.6	932	14	941	4.1	891	6.9	292	1.4	430	3.9
Zn	548	3.7	356.5	1.4	461.3	1.8	479	6.3	406	2.9	423	6.5	522	5.9	261	3.8	311.6	1.3	285.2	1.9
Ti	160	8.6	179.9	3.6	185.3	4.9	193	16	288.5	1.8	261	5.4	358.2	1.8	356	3.7	197	16	136.4	2.3
Pb	129.4	2.1	113.2	1.9	224	6.8	234	3.4	200.0	1.7	225	5.4	214.2	15	108.2	4.4	91.4	3.2	67.30	1.5
Cu	79.9	5.7	64.0	2.8	170.6	1.5	175.2	4.8	119.6	4.0	131.2	6.3	110.3	5.7	29.13	2.5	38.9	3.2	35.9	6.4
Cr	39.0	11	39.9	3.1	47.2	11	42.7	3.7	81.2	4.8	49.3	7.3	76.2	1.7	17.7	12	24.7	6.9	20.5	7.4
Ni	41.3	9.9	33.0	3.9	55.6	7.6	51.5	6.4	64.5	6.7	44.2	9.4	60.0	3.4	11.5	16	21.69	3.8	21.1	11
As	26.8	5.7	18.28	1.3	63.8	2.1	59.2	6.4	34.0	5.3	30.3	5.8	26.4	4.1	10.31	3.9	15.6	8.1	18.78	2.4
V	14.84	5.3	14.76	3.1	22.0	5.8	22.3	6.2	20.32	2.4	23.37	4.1	19.46	3.6	13.38	4.3	14.22	3.0	14.70	6.1
Sn	14.20	6.3	12.9	8.7	18.13	2.8	18.7	17	18.71	5.1	19.7	13	21.6	14	9.35	9.3	7.30	10	5.385	9.2
Co	10.15	2.3	7.92	2.4	20.88	1.8	18.82	4.6	12.84	5.5	11.44	6.6	9.99	2.3	2.73	3.7	6.95	5.3	5.88	1.8
Mo	3.00	18	4.08	4.1	4.20	7.8	4.62	6.8	9.00	5.2	4.99	10	9.48	3.5	1.16	17	2.88	16	1.82	13
Cd	0.769	10	0.449	4.7	0.476	9.4	0.5636	3.2	0.499	8.1	0.430	7.0	0.4972	5.9	0.3081	5.6	0.6337	5.1	0.4849	5.3
Tl	0.5483	2.9	0.403	4.7	0.371	6.1	0.3787	2.0	0.3626	2.3	0.318	4.0	0.3572	2.1	0.1744	3.4	0.2680	6.2	0.2207	3.8
Ag	0.249	6.3	0.1952	7.6	0.337	11	0.3419	3.3	0.2968	4.2	0.2648	3.1	0.2712	3.1	0.2141	7.0	0.1561	6.8	0.1855	2.9

Table SI 2 Mean concentration and RSD values of the elements measured in the 75-250 μm particle size. The major elements (Fe, Ca, Mg, Al, Mn, Na and K) are showed in g/kg, while the rest of them are presented in mg/kg.

	S1		S2		S3		S4		S5		S6		S7		S8		S9		S10	
	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD	Mean	RSD
Fe	210	5.1	117.36	2.3	402	6.3	222	6.8	213	7.9	288	17	169.1	5.0	95	11	53.8	10	122	9.0
Ca	83.2	1.5	92.53	2.9	55.7	2.7	57.6	1.9	79.2	2.7	59.0	5.5	80.0	3.2	55.1	12	116.6	5.0	59.96	1.9
Al	20.69	3.3	23.34	3.5	17.56	5.8	16.3	18	23.63	4.7	16.7	13	23.2	7.1	18.5	9.3	17.4	10	10.03	7.0
Mg	19.74	5.2	21.79	1.3	20.28	7.0	18.7	13	22.17	3.2	19.1	12	19.8	6.2	31.3	8.3	27.3	8.4	14.68	5.8
Mn	7.54	3.0	6.11	3.2	9.28	5.5	7.6	15	8.232	3.3	7.9	13	6.87	3.1	4.89	13	4.352	1.5	2.90	5.1
Na	2.49	3.3	3.279	1.4	2.08	7.0	1.78	12	2.720	2.4	1.91	15	2.56	8.5	3.88	9.6	2.435	12	1.80	7.8
K	2.33	5.1	2.90	4.3	1.55	2.6	1.458	4.2	2.38	5.1	1.55	8.7	2.34	4.9	1.48	15	1.847	11	1.063	2.0
Zn	984	9.4	603	9.6	2550	12	1612	11	1146.3	3.8	2137	15	1446.8	2.8	553	3.8	483	14	344	15
Ba	693	15	645	19	801	2.3	1003	8	741	14	486	5	632.8	6.0	595	6.8	595	16	647	8.9
Sr	624	2.3	770	4.4	353	7.5	433	8.8	632	2.9	414	12	586	4.1	656	19	1001	1.6	508	3.8
Ti	267	4.5	317	5.5	254	3.3	217	14	339.37	1.2	243	11	326	3.5	372	12	340	9.4	241.5	1.8
Cu	212	18	100	14	369	24	244	9.9	143	24	240	15	147	16	69	18	51.8	12	54.0	16
Pb	146	17	164	10	606	11	404	10	254	23	368	21	240	3.5	110	24	99.0	8.8	60.0	7.0
Cr	46.63	1.3	29.44	2.1	79.49	6.3	48	2.9	48.1	5.6	55.5	12	37.9	6.2	23.6	10	18.9	13	23.41	3.8
Sn	49	27	53.0	6	186	4	49	20	45.9	19	91	11	61.7	11	27.7	18	30.0	28	10.2	24
As	30.3	3.6	20.08	3.3	40.5	9.4	42.4	4.6	30.1	7.6	39.2	7.9	24.4	8.1	13.03	7.8	15.63	4.3	20.7	12
Ni	29.6	3.7	19.63	2.8	49.9	10	34.9	4.3	32.2	14	35.1	4.5	22.6	5.1	13.35	15	12.8	19	14.6	14
V	27.14	1.6	20.9	6.8	33.50	3.0	29.1	18	27.72	2.4	31.6	9.9	25.05	3.9	16.81	12	17.07	1.8	25.9	6.1
Co	12.70	6.1	7.94	2.1	22.64	3.0	15.801	1.6	13.9	13	15.62	15.6	9.82	6.0	5.43	17	4.81	5.3	6.99	8.1
Mo	2.78	8.8	1.808	1.6	3.84	9.8	2.29	2.4	2.91	10	2.67	11	2.11	7.6	1.14	3.3	1.732	5.3	1.402	6.9
Tl	0.4924	1.5	0.447	5.4	0.3215	2.9	0.29	19	0.70	20	0.306	11	0.321	6.6	0.2113	7.3	0.241	7.3	0.213	7.4
Cd	0.49	24	0.271	23	0.308	13	0.283	19	0.451	11	0.266	19	0.302	9.0	0.180	13	0.4291	13	0.172	6.84
Ag	0.1912	4.6	0.202	7.02	0.259	11	0.2086	4.2	0.246	4.4	0.1980	3.3	0.197	7.5	0.193	14	0.1855	3.1	0.102	13.61

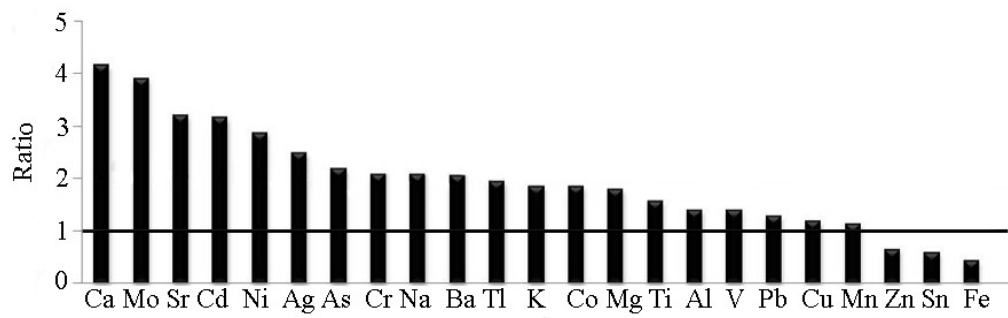


Fig.SI 1 Representation of the ratio between the concentration of the metals in the <75 μm and 75-250 μm particle sizes. The horizontal line indicates the ratio equal to 1. Ratio<1: major elements in the finest fraction. Ratio >1: major elements in the coarser fraction.