The Element's Contents in the Soil and River Sediments of the Watershed in the Volcanic Area of South Iceland and the Assessment of Their Mobility Potential

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Table Captions:

Table S1: Interelement correlation coefficients for the river sediment samples.
Table S2: Interelement correlation coefficients for the soil samples.
Table S3: Element contents in sediments and soils extracted using the BCR protocol.

Table S1. Interelement correlation coefficients for the river sediment samples.

	Al	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Na	Ni	P	Pb	Sb	Si	Sr	V	Zn	N	C	H	S
Al	1																											
B		1																										
Ba	0.712[a]		1																									
Be	0.781		0.889	1																								
Bi	0.690	*0.454*[b]		0.623	1																							
Ca	0.946		*0.512*	0.586	0.652	1																						
Cd	0.561	*0.430*		*0.488*	0.756	0.588	1																					
Co	0.899		0.839	0.854	0.695	0.789	0.568	1																				
Cr	0.614			*0.459*		0.673		0.558	1																			
Cu	0.881		0.840	0.810	0.547	0.766	0.532	0.902	0.565	1																		
Fe	0.736		0.561	0.809	0.900	0.535	0.613	0.751		0.569	1																	
K	0.921		0.789	0.775	0.565	0.892	0.585	0.861	0.660	0.872	0.623	1																
Li			*0.458*	*0.522*							*0.420*		1															
Mg	0.903		0.550	0.620	0.655	0.951	0.624	0.844	0.800	0.773	0.648	0.869		1														
Mn		0.697			0.667		0.586				0.648				1													
Na	0.941		0.568	0.615	0.609	0.976	0.575	0.787	0.623	0.763	0.621	0.925		0.907		1												
Ni	0.767		0.557	0.624	0.474	0.791	0.495	0.805	0.889	0.710	0.536	0.764		0.923		0.752	1											
P			0.553	0.564									0.585					1										
Pb	0.900		0.696	0.802	0.718	0.806	0.541	0.915	0.584	0.847	0.755	0.813		0.838		0.817	0.792		1									
Sb																				1								
Si	0.671		0.671	0.802	0.529	0.518	*0.439*	0.788	0.607	0.708	0.650	0.573		0.637		*0.515*	0.753		0.810		1							
Sr	0.889		0.848	0.805	0.539	0.832	0.576	0.923	0.717	0.885	0.615	0.950		0.877		0.857	0.855		0.842		0.732	1						
V	0.647		0.699	0.814	*0.434*	*0.441*		0.703		0.638	0.662	0.554	0.561			*0.481*	*0.424*	0.640	0.707		0.663	0.564	1					
Zn		0.618		0.426	0.817		0.575				0.772				0.770				*0.420*					1				
N							*-.481*		*-.499*					*-.480*				*0.480*							1			
C							*-.480*		*-.443*				*0.441*	*-.435*				0.572							0.969	1		
H				*0.419*									*0.594*					0.682					*0.600*		0.783	0.845	1	
S											*0.494*							*0.427*					0.590		*0.453*	*0.493*	*0.549*	1

[a]**bold** – correlation is significant at the 0.01 level; [b]*italic* – correlation is significant at the 0.05 level

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Table S2. Interelement correlation coefficients for the soil samples.

	Al	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Na	Ni	P	Pb	Sb	Si	Sr	V	Zn	N	C	H	S
Al	1																											
B		1																										
Ba			1																									
Be	*0.667*		0.904	1																								
Bi					1																							
Ca	*0.785*					1																						
Cd					*0.732*		1																					
Co	0.807		*0.668*	0.838	0.826	*0.705*		1																				
Cr							*0.693*		1																			
Cu	0.861					0.842				1																		
Fe	*0.699*			*0.792*	0.838	*0.744*		0.956			1																	
K				*0.763*				*0.727*			*0.784*	1																
Li													1															
Mg					*0.770*	0.931		*0.690*	*0.736*	0.832	*0.729*			1														
Mn					*0.742*			0.801			0.911				1													
Na	0.805					0.911		*0.727*		*0.746*	*0.781*	*0.724*		*0.771*		1												
Ni	*0.696*				*0.711*	0.806		*0.684*	*0.780*	0.919				0.918			1											
P																		1										
Pb	0.881		*0.746*	*0.720*				*0.740*		*0.723*						*0.751*			1									
Sb	0.553												*0.727*							1								
Si	*0.723*							*0.717*		*0.776*							*0.753*		*0.679*		1							
Sr	*0.765*			0.818	*0.672*	*0.700*		0.918			0.916	0.870			*0.711*	0.840			0.829			1						
V	0.800		0.916	0.927				0.877			*0.765*	*0.695*							0.798			*0.797*	1					
Zn			0.883	0.939				*0.786*			*0.731*	*0.763*										*0.723*	0.895	1				
N			*0.680*						*-.753*																1			
C									*-.701*																0.981	1		
H			0.840	*0.699*																				*0.694*	0.873	0.866	1	
S																												1

[a]**bold** – correlation is significant at the 0.01 level; [b]*italic* – correlation is significant at the 0.05 level.

Table S3. Element contents in sediments and soils extracted using the BCR protocol.

	Acid soluble	Reducible	Oxidizable	Residual	Acid soluble	Reducible	Oxidizable	Residual
	Sediment				Soil			
Al								
Mean	667	6115	1241	20971	917	7704	1830	23831
Max	1036	8257	1815	38419	1377	10719	3049	31909
Min	324	2952	319	14001	428	5896	648	18873
B								
Mean	0.49	1.80	1.02	6.37	0.10	3.10	2.76	7.13
Max	3.15	4.08	12.10	11.30	0.68	5.13	12.67	9.71
Min	0.00	0.35	0.00	3.57	0.00	0.32	0.00	5.34
Ba								
Mean	3.08	15.93	0.72	19.86	3.21	24.97	1.23	22.79
Max	5.56	26.78	2.56	30.58	5.03	44.34	3.08	31.01
Min	1.41	5.22	0.00	11.06	0.56	15.38	0.00	12.23
Be								
Mean	0.051	0.292	0.030	0.481	0.079	0.334	0.043	0.536
Max	0.072	0.494	0.047	0.706	0.151	0.475	0.072	0.665
Min	0.031	0.138	0.004	0.355	0.047	0.251	0.010	0.375
Ca								
Mean	1505	3499	748	17653	1322	2885	802	19175
Max	2416	6276	1347	33693	2047	4596	1287	25706
Min	829	1509	403	12140	692	2130	432	15804
Cd								
Mean	0.025	0.000	0.002	0.234	0.019	0.000	0.008	0.278
Max	0.051	0.000	0.017	0.314	0.027	0.000	0.019	0.574
Min	0.011	0.000	0.000	0.175	0.011	0.000	0.000	0.184
Co								
Mean	1.35	4.30	0.85	18.74	1.27	5.25	0.90	20.63
Max	2.44	5.71	1.28	26.67	1.93	7.88	1.32	26.07
Min	0.48	2.15	0.33	12.75	0.34	2.95	0.38	14.46
Cr								
Mean	0.17	4.22	0.45	10.63	0.12	3.48	0.60	9.31
Max	0.61	12.33	3.95	25.48	0.21	6.02	1.70	15.39
Min	0.09	1.61	0.00	4.33	0.02	1.58	0.00	5.27
Cu								
Mean	3.71	11.56	5.44	37.70	1.66	10.20	6.15	39.59
Max	15.16	16.77	13.37	68.39	3.25	15.01	15.47	73.52
Min	1.32	5.43	2.33	21.99	0.96	5.12	2.62	29.83
Fe								
Mean	185.4	11173.0	922.6	39080.4	90.6	11896.0	1141.0	42012.8
Max	511.4	21035.9	1994.6	53323.6	178.5	16323.8	2480.7	51144.8
Min	62.3	5969.8	264.7	31072.4	41.5	9751.2	350.6	32522.9
K								

Mean	138.8	208.5	50.9	827.7	146.9	239.2	63.2	956.6
Max	288.5	329.0	71.3	1469.5	310.5	374.7	99.9	1285.9
Min	62.0	76.4	29.1	468.0	64.7	119.4	34.5	513.4
Li								
Mean	0.365	0.515	0.000	1.975	0.091	0.322	0.000	2.284
Max	0.564	0.672	0.000	2.548	0.212	0.463	0.000	3.115
Min	0.130	0.278	0.000	1.294	0.032	0.236	0.000	1.885
Mg								
Mean	382	2276	416	11037	379	1751	455	10897
Max	656	3443	696	17929	610	2912	732	15355
Min	176	1039	185	7799	184	1143	232	8301
Mn								
Mean	101.5	178.4	21.6	405.9	49.5	218	25.48	406
Max	243.4	302.4	29.3	633.6	88.8	318	36.55	498
Min	19.5	78.4	13.4	308.1	14.5	93	14.75	327
Na								
Mean	162,0	844,1	194,5	3609,7	155,4	764,4	220,8	4004,0
Max	344,4	1485,5	334,5	6561,9	300,5	1246,0	356,2	5421,4
Min	94,1	328,5	125,6	2464,8	104,4	520,6	106,7	3072,8
Ni								
Mean	0.609	4.791	1.158	15.855	0.551	3.664	1.386	14.735
Max	1.199	8.090	2.069	30.473	1.103	6.837	2.457	27.499
Min	0.233	2.264	0.413	8.019	0.149	2.337	0.942	9.438
P								
Mean	2.9	115.0	0.0	901.3	0.4	40.9	0.0	1073.4
Max	10.9	309.4	0.0	1303.2	1.0	115.5	0.0	1396.0
Min	0.0	14.8	0.0	336.2	0.0	7.5	0.0	856.5
Pb								
Mean	0.218	1.847	0.646	4.549	0.213	2.281	1.033	5.312
Max	0.459	3.207	1.611	7.404	0.426	2.737	2.234	6.593
Min	0.028	0.985	0.000	3.146	0.093	1.730	0.070	4.005
S								
Mean	12.3	0.7	75.0	135.2	0.0	0.0	63.1	155.9
Max	62.9	9.4	208.7	303.7	0.2	0.0	126.4	228.8
Min	0.0	0.0	0.0	79.8	0.0	0.0	16.8	104.1
Si								
Mean	781	5742	1053	162	764	5495	1378	155
Max	1019	7812	1933	283	962	7161	2256	217
Min	469	3254	402	93	575	4350	705	110
Sr								
Mean	11.69	15.25	3.46	47.50	14.65	15.37	3.99	52.36
Max	18.31	25.10	5.94	74.42	19.42	21.55	6.30	73.29
Min	6.73	5.44	1.55	25.97	9.24	10.36	1.84	30.55
V								
Mean	0.15	44.41	9.36	84.82	0.09	34.16	12.41	93.56

Max	0.84	116.23	18.42	133.85	0.23	56.52	18.45	117.74
Min	0.03	16.90	3.21	51.41	0.04	19.95	5.27	64.12
Zn								
Mean	2.66	11.05	2.98	33.76	2.38	11.53	4.57	36.20
Max	4.01	14.13	5.09	43.92	3.38	15.49	8.10	40.37
Min	1.34	6.76	1.03	27.29	1.15	8.64	2.41	30.44

Figure Captions:

Figure S1 Distribution of elements (K, Li, and Na) by fractions.
Figure S2 Distribution of elements (Al, Bi, Co, Fe, Ni, Si, V, Zn) by fractions.
Figure S3 Distribution of elements (As, B, Cd, Cr, Cu, Mn, P, Pb, S, and Sb) by fractions.
Figure S4 Distribution of elements (Ba, Be, Ca, Mg, and Sr) by fractions.

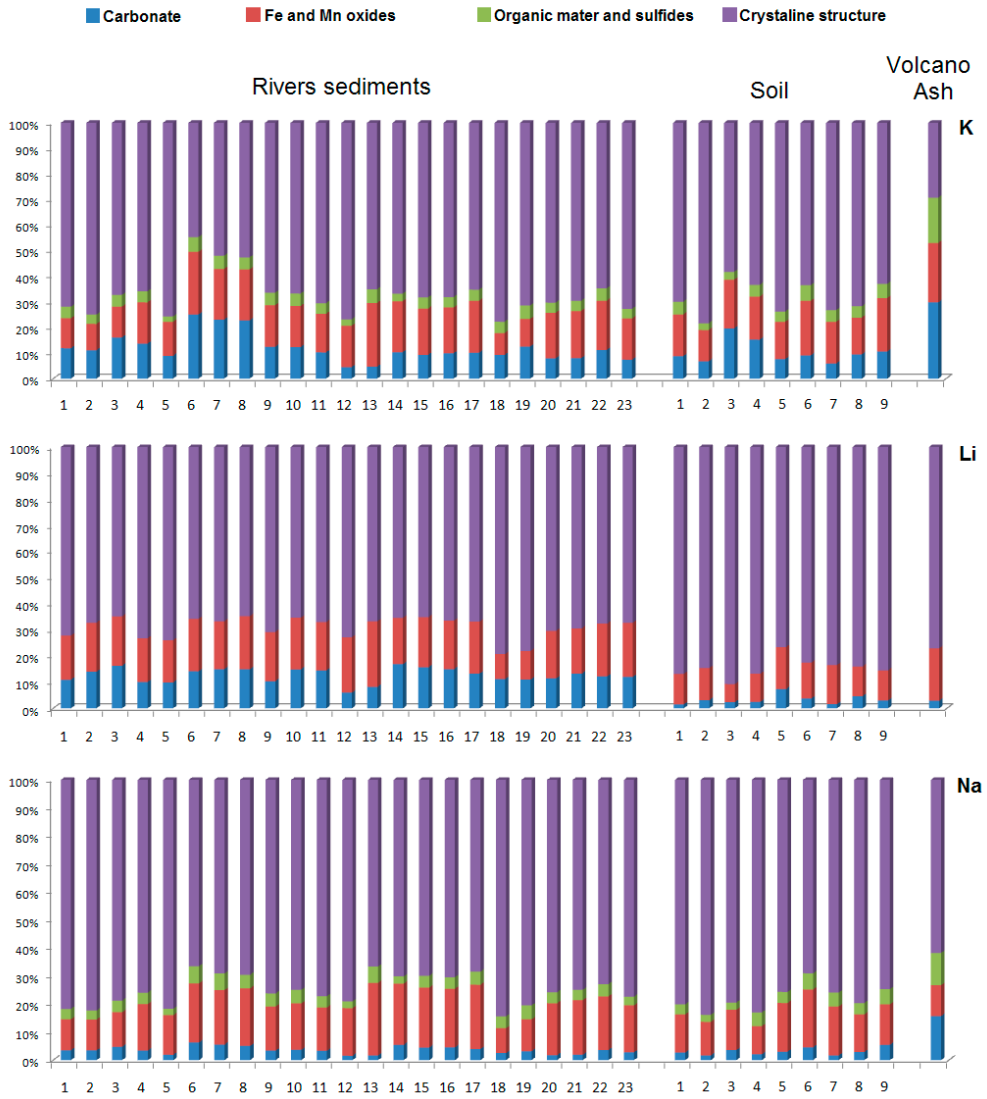

Figure S1. Distribution of elements (K, Li, and Na) by fractions.

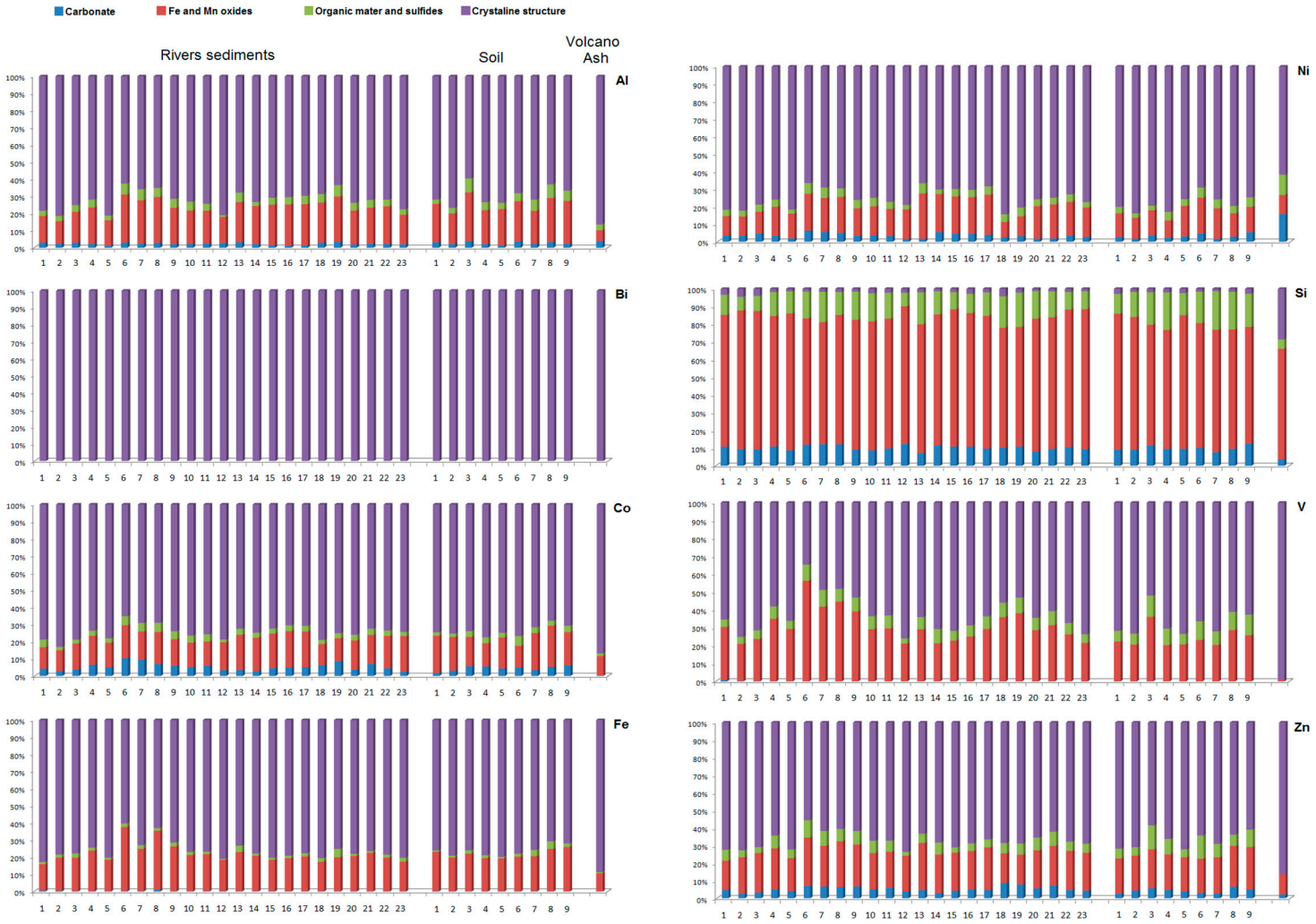

Figure S2. Distribution of elements (Al, Bi, Co, Fe, Ni, Si, V, Zn) by fractions.

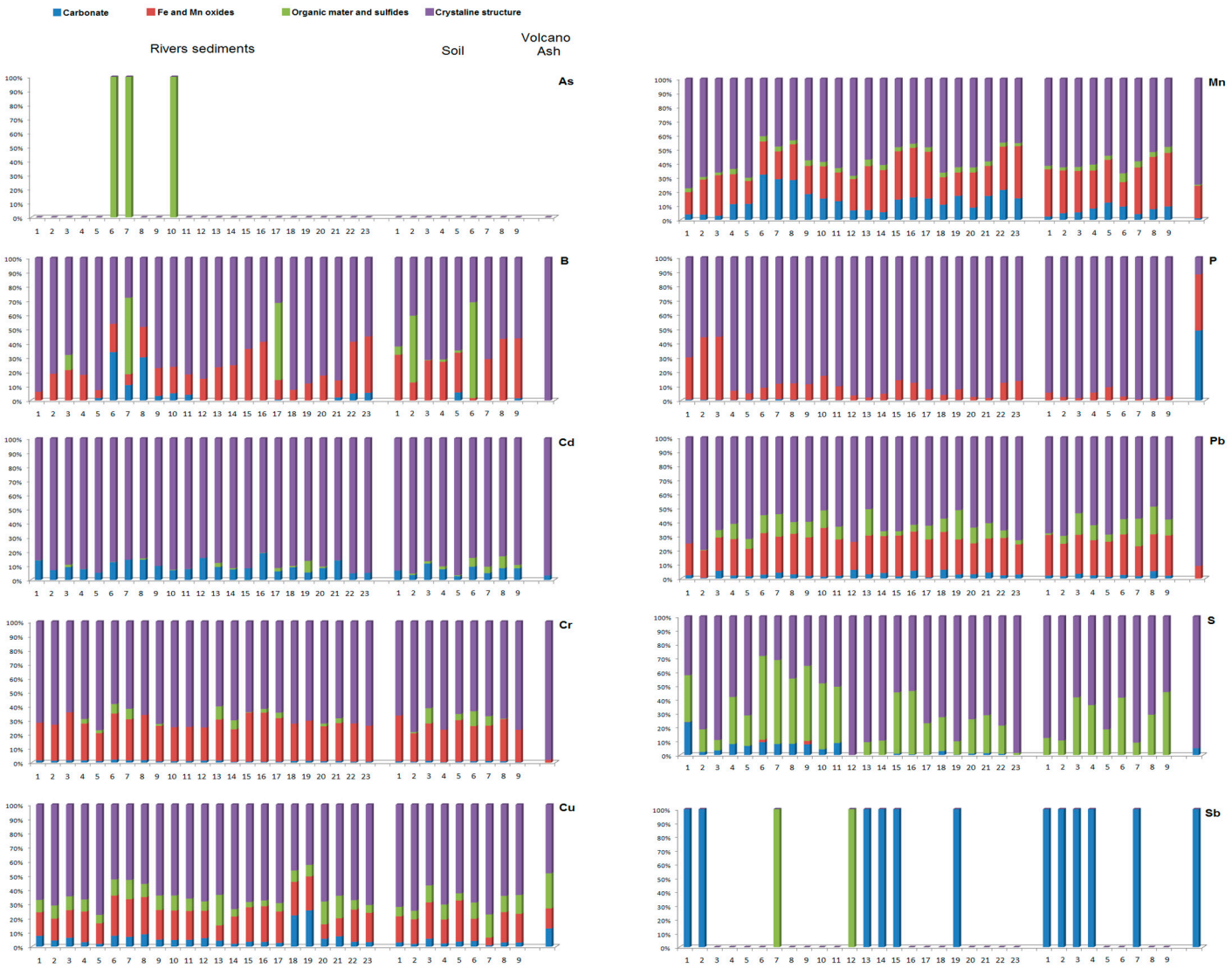

Figure S3. Distribution of elements (As, B, Cd, Cr, Cu, Mn, P, Pb, S, and Sb) by fractions.

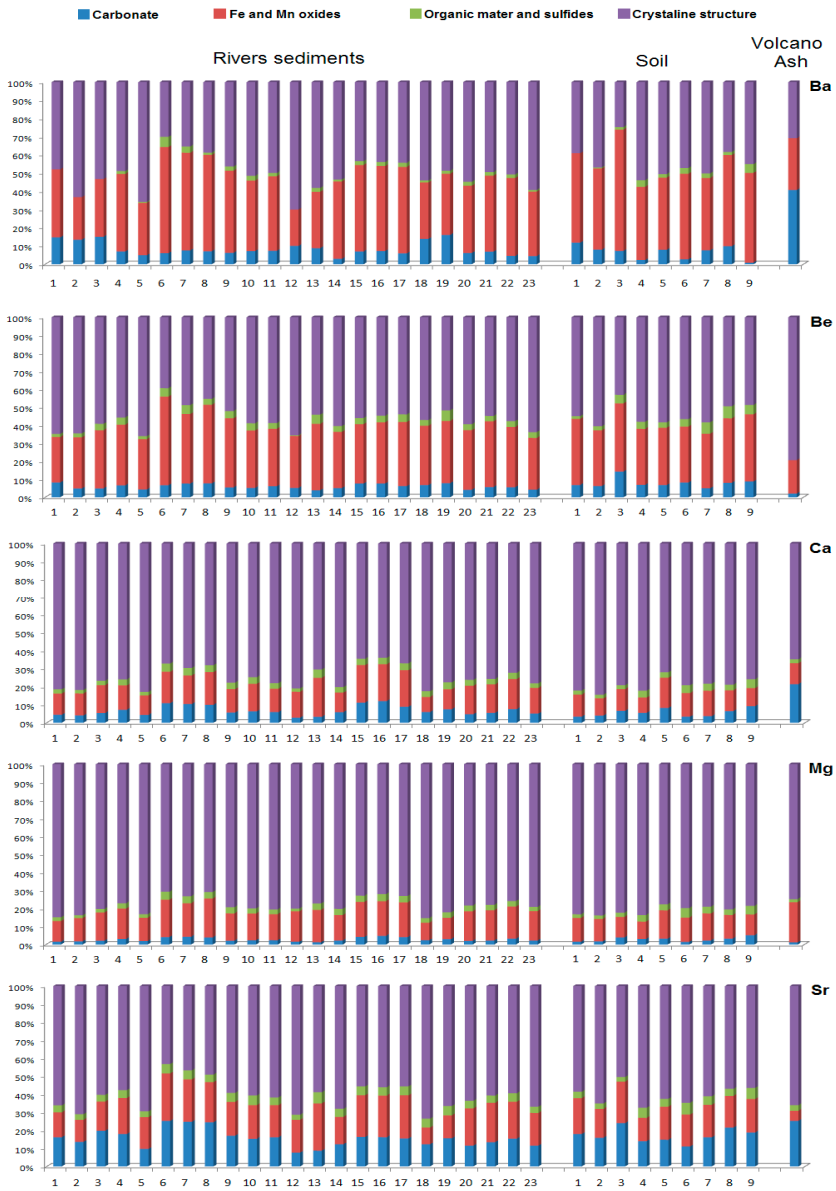

Figure S4. Distribution of elements (Ba, Be, Ca, Mg, and Sr) by fractions.