

## Supplementary Materials

**Table S1.** Instrument parameters with filter blank and field blank values.

Instrument	Species	Wavelength	Calibration	LOD in ppb	Blank (g/Filter)	Field blank (g/Filter)
AAS-Flame	Ca	422.7	0.999	0.0037*	0.000010	0.000010
	Fe	248.3	0.999	0.0043*	0	0.000007
	K	766.5	0.999	0.0009*	0.000002	0.000007
	Mg	285.2	0.999	0.0022*	0.000003	0.000002
	Na	589.0	0.994	0.0037*	0.000024	0.000034
	Zn	213.9	0.999	0.0033*	0.000007	0.000010
AAS-GF/Zeeman	Al	309.3	0.978	0.21	0	0.000099
	Cd	228.8	0.999	0.02	0	0
	Co	240.7	0.998	0.01	0.00000004	0.00000005
	Cr	357.9	0.998	0.025	0.00000009	0.0000003
	Cu	324.8	0.993	0.29	0.0000004	0.0000007
	Mn	279.5	0.962	0.06	0.00000002	0.0000010
	Mo	313.3	0.981	0.31	0.0000002	0.0000004
	Ni	232.0	0.999	0.16	0.0000002	0.0000021
	Pb	283.3	0.982	0.07	0	0
	V	318.5	0.998	2.7	0.00000003	0.0000002
	As	193.7	0.999	0.53	0	0.000000009
	Sb	217.6	0.999	0.4	0.0000000008	0.000000005
	Se	196.0	0.999	0.8	0.00000002	0.00000002
AAS- VP Spectrophotometer	Hg	253.7	0.999	0.06	0.0000002	0.00000059
	NH <sub>4</sub> <sup>+</sup>	620	0.998	-	0.0000025	0.00000774
Ion chromatograph	F <sup>-</sup>	-	-	0.01*	0	0.0000185
	Cl <sup>-</sup>	-	-	0.01*	0.0000643	0.000103
	NO <sub>3</sub> <sup>-</sup>	-	-	0.01*	0	0
	SO <sub>4</sub> <sup>2-</sup>	-	-	0.01*	0.000027	0.000044
SemiContinuous Carbon analyzer	OC	-	-	-	0.000109	0.000176
	EC	-	-	-	0.0000000037	0.000000203

\*LOD value in ppm unit.