

## SUPPLEMENTARY MATERIAL

**Table S1** Concentrations of elements, in mg/kg, in plant reference material (IAEA-140/TM).

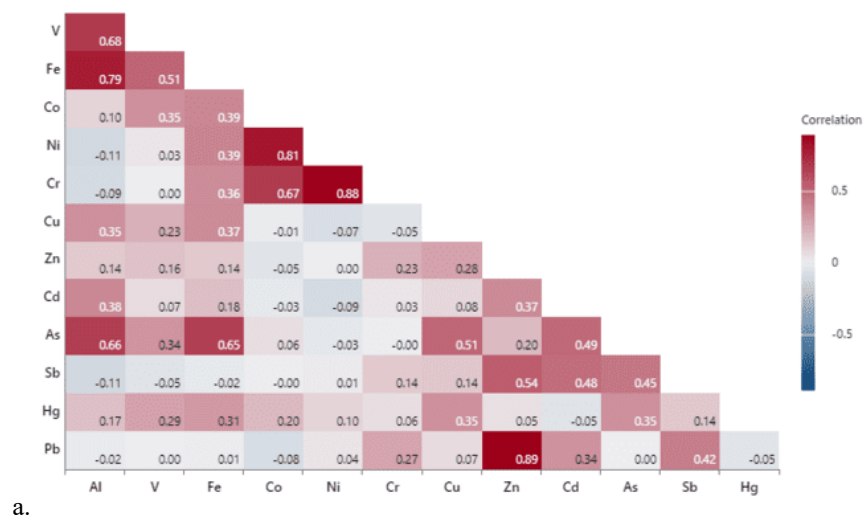
Elements	As	Cd	Co	Cr	Cu	Fe
Current results	0.405	0.474	0.744	10.8	4.81	1130
CRM declared value	0.422-0.464	0.5-0.574	0.746-1.01	9.6-11.2	4.77-5.33	1221-1291
Elements	Hg	Ni	Pb	V	Zn	Sb
CRM declared value	0.043	4.23	2.18	3.25	44.6	0.087
CRM declared	0.032-0.044	3.38-4.20	1.91-2.47	3.19-4.15	45.3-49.3	0.085-0.125

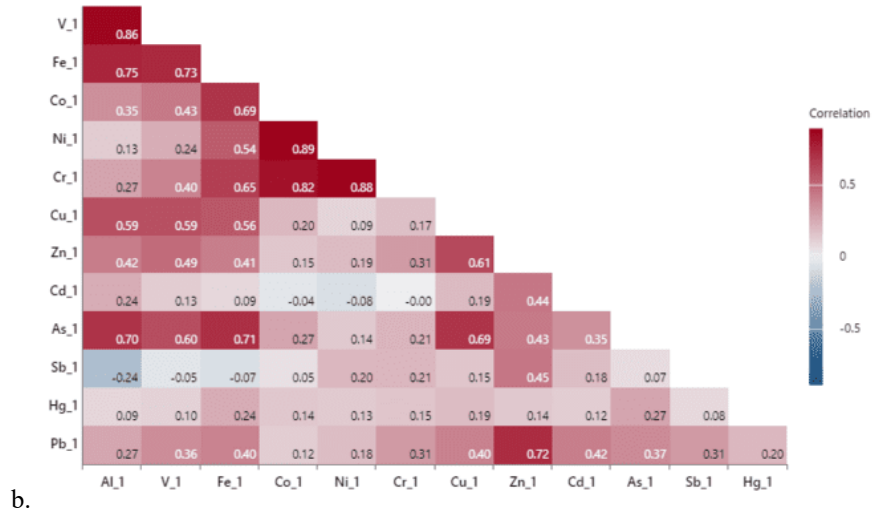
**Table S2** Contamination scales (Fernández and Carballeira, 2001a)

Scales	CF	Contamination scales
C1	0-1	None contamination
C2	1-2	Suspected contamination
C3	2-3.5	Slight contamination
C4	3.5-8	Moderate contamination
C5	8-27	Severe contamination
C6	> 27	Extreme contamination

**Table S3** The enrichment factor scale (Bern *et al.*, 2019; Barbieri, 2016)

Scales	EF	Contamination status
1 <sup>st</sup>	< 2	No to slight enrichment
2 <sup>nd</sup>	2 - 5	Moderate enrichment
3 <sup>rd</sup>	5 - 20	Significant enrichment
4 <sup>th</sup>	20 - 40	Very high enrichment
5 <sup>th</sup>	> 40	Extremely high enrichment





**Fig. S1.** The correlogram of pairwise Pearson correlation for a. raw concentration data and b. Box-Cox transformed data.

**Table S4** Pairwise Pearson correlations of box-cox transformed data (optimal  $\lambda = -0.5$ )

Sample 1	Sample 2	N	Correlation	95% CI for $\rho$	P-value
V_1	Al_1	75	0.865	(0.793, 0.913)	0.000
Fe_1	Al_1	75	0.748	(0.628, 0.834)	0.000
Co_1	Al_1	75	0.352	(0.136, 0.536)	0.002
Cu_1	Al_1	75	0.594	(0.424, 0.724)	0.000
Zn_1	Al_1	75	0.421	(0.215, 0.591)	0.000
As_1	Al_1	75	0.699	(0.561, 0.799)	0.000
Fe_1	V_1	75	0.732	(0.606, 0.822)	0.000
Co_1	V_1	75	0.432	(0.227, 0.600)	0.000
Cr_1	V_1	75	0.399	(0.189, 0.574)	0.000
Cu_1	V_1	75	0.589	(0.418, 0.720)	0.000
Zn_1	V_1	75	0.487	(0.292, 0.643)	0.000
As_1	V_1	75	0.598	(0.429, 0.726)	0.000
Pb_1	V_1	75	0.359	(0.144, 0.542)	0.002
Co_1	Fe_1	75	0.691	(0.550, 0.793)	0.000
Ni_1	Fe_1	75	0.542	(0.359, 0.684)	0.000
Cr_1	Fe_1	75	0.651	(0.498, 0.765)	0.000
Cu_1	Fe_1	75	0.561	(0.383, 0.699)	0.000
Zn_1	Fe_1	75	0.414	(0.206, 0.586)	0.000
As_1	Fe_1	75	0.708	(0.573, 0.805)	0.000
Pb_1	Fe_1	75	0.400	(0.190, 0.575)	0.000
Ni_1	Co_1	75	0.888	(0.827, 0.928)	0.000
Cr_1	Co_1	75	0.821	(0.730, 0.884)	0.000
Cr_1	Ni_1	75	0.877	(0.811, 0.920)	0.000
Zn_1	Cr_1	75	0.309	(0.088, 0.501)	0.007
Pb_1	Cr_1	75	0.313	(0.092, 0.504)	0.006
Zn_1	Cu_1	75	0.614	(0.450, 0.738)	0.000

As_1	Cu_1	75	0.691	(0.550, 0.793)	0.000
Pb_1	Cu_1	75	0.401	(0.192, 0.576)	0.000
Cd_1	Zn_1	75	0.443	(0.240, 0.608)	0.000
As_1	Zn_1	75	0.430	(0.225, 0.599)	0.000
Sb_1	Zn_1	75	0.446	(0.243, 0.611)	0.000
Pb_1	Zn_1	75	0.720	(0.589, 0.814)	0.000
As_1	Cd_1	75	0.347	(0.130, 0.532)	0.002
Pb_1	Cd_1	75	0.415	(0.208, 0.587)	0.000
Pb_1	As_1	75	0.367	(0.153, 0.549)	0.001
Pb_1	Sb_1	75	0.314	(0.094, 0.505)	0.006

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