

Table S1. ICP-AES instrumental parameters.

Parameter	Settled Condition
Nebuliser	Pneumatic concentric (K-style)
Spray chamber	Cyclonic
Plasma source configuration	Axial
RF Power	1100 W
Plasma gas flow rate	15.0 L min ⁻¹
Auxiliary gas flow rate	0.75 L min ⁻¹
Nebuliser gas flow rate	1.5 L min ⁻¹
Sample uptake rate	0.78 L min ⁻¹
Internal standard uptake rate	0.22 ml min ⁻¹
Integration time	15 s
Replicates	7
Analytes and wavelengths (nm)	Al (308.215; 394.401; 396.152)
	Ba (233.527; 455.403; 493.408)
	Cd (214.439; 226.502)
	Cu (324.754; 327.395)
	Fe (234.350; 238.204; 259.837; 259.940)
	Lu (291.139) ^a
	Mn (257.610; 259.372; 260.568; 293.305)
	Ni (216.555; 231.604)
	Pb (220.353)
	Ti (323.452; 334.941; 336.122; 337.280)
	Zn (202.548; 213.857)

^a Internal standard**Table S2.** Measured and certified values of Al, Cu, Fe, Mn and Zn in certified reference materials BCR-414 (marine plankton) and MURST-ISS-A1 (Antarctic bottom sediment). The concentrations are expressed in % while the uncertainties are expressed as standard deviations for experimental values (n=10) and certified values for MURST-ISS-A1, and as 95% confidence intervals for BCR-414.

	Al	Cu	Fe	Mn	Zn
BCR-414					
Measured value	2950 ± 120	35.3 ± 2.6	2170 ± 80	317 ± 16	120 ± 5
Certified value	/	29.5 ± 1.3	1850 ± 190*	299 ± 12	112 ± 3
Recovery %	/	120 %	118 %	106 %	107 %
MURST ISS-A1					
Measured value	69698 ± 2134	3.9 ± 2.2	25245 ± 655	503 ± 17	61.2 ± 2.1
Certified value	67100 ± 3300	4.20 – 7.38*	24400 ± 700	446 ± 19	53.3 ± 2.7
Recovery %	104 %	93 %	104 %	113 %	115 %

*indicative value