Table S2. Methodology of Pb an Cd analysis.

Microwave program (0.1 – 1.0 g of sample + 7 mL HNO3 (65%) + 1 mL H2O2 (30%))

|  |  |  |  |
| --- | --- | --- | --- |
| Step | Time | Temperature | Microwave Power |
| 1 | 10 minutes | 200°C | Up to 1000 Watt |
| 2 | 20 minutes | 200°C | Up to 1000 Watt |

ICP-MS Instrumental Operating Conditions (Perkin Elmer Sciex ELAN DRC-e)

|  |  |  |
| --- | --- | --- |
| Component/Parameter |  | Type/Value/Mode |
| Sample Introduction System |  | Scott Spray Chamber (Ryton)  Cross Flow Nebuliser |
| Plasma |  | ICP RF Power 1200W |
| Argon Flow Rates |  | Plasma 15 L/min  Auxiliary 1.2 L/m  Nebulizer 0.98 – 1.1 L/min |
| Interface |  | Sampler Cone Ni  Skimmer Cone Ni |
| Scanning Condition |  | Dwell time 50.0 ms  Sweeps/Reading 20 Readings/Replicate 1  No. of Replicates 3 |
| Scanning mode |  | Peak Hopping |
| Internal standard |  | 103Rh |
| Analytical Masses |  | 111, 114Cd, 206,207,208Pb |

ICP-MS: Inductively coupled plasma mass spectrometry

GF-AAS Instrumental Operating Conditions (Instrument Varian SpectrAA 800)

|  |  |  |
| --- | --- | --- |
| Parameter | Pb | Cd |
| Lamp | HCl | HCl |
| Lamp Current (mA) | 4.0 | 4.0 |
| Wavelength (nm) | 283.3 | 228.8 |
| Slit width (nm) | 0.5 | 0.5 |
| Background Correction | D2 | D2 |
| Matrix modifier | NH4H2PO4 | Pd |
| Omega platform tubes, pyrolytically coated | | |

Heating program (GF-AAS)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | T (oC) | | Time (s) | |  |  |
| Step | Pb | Cd | Pb | Cd | Ar Gas Flow (L/min) | Measurement |
| Drying | 350 | 350 | 40 | 40 | 3 | NO |
| Pyrolysis | 1100 | 700 | 15.0 | 15.3 | 3 | NO |
| Pyrolysis | 1100 | 700 | 2,0 | 2,0 | 0 | NO |
| Atomisation | 2300 | 2300 | 2.6 | 2.8 | 0 | YES |
| Cleaning | 2300 | 2300 | 2.0 | 2.0 | 3 | NO |
| Cooling | 40 | 40 | 15.0 | 20.9 | 3 | NO |

GF-AAS: Graphite furnace atomic absorption spectroscopy