

Supplementary Material

Text S1. Sample digestion methods and validation of methods

- (1) A small amount of the sample (0.0001 g) was weighed into a 10 mL quartz volumetric tube and 1 mL of nitric acid was added;
- (2) Place the quartz volumetric tube into the graphite digester and digest at 120°C for 24 h under the cap until the nitric acid is clear;
- (3) Remove the quartz volumetric tube and allow to cool before adding ultrapure water to a volume of 10 mL;
- (4) After standing the quartz volumetric tube for 30 min, the Cu^{2+} and Cd^{2+} content of the solution can be determined by inductively coupled plasma mass spectrometry;
- (5) The recovery rate of the metal analysis method was determined by adding known amounts of Cu^{2+} and Cd^{2+} to the sample and analyzing the solution. The recovery rates for Cu^{2+} and Cd^{2+} were found to be 98% and 95%, respectively, indicating good accuracy of the method.
- (6) To validate the digestion and analysis methods, blank samples and certified reference materials were included in the analysis. The blank samples showed no detectable metal concentrations, while the certified reference materials showed similar metal concentrations to those reported by the manufacturer.