resources

MDPI

Article

Evaluation of Wet Digestion Methods for Quantification of Metal Content in Electronic Scrap Material

Subhabrata Das and Yen-Peng Ting *

Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore 117585 Singapore; subhabrata@u.nus.edu

* Correspondence: chetyp@nus.edu.sg; Tel.: +(65)-6516-2190

Table S1: Operating conditions for the various digestion methods

Method	Acids used	Solid/Liquid (g/mL)	Operating Temperature (°C)	Digestion time (hour)
ASTM method D 6257-11	Aqua regia, HF	0.005	150°C	1
US EPA SW 846 Method 3050B	HNO_3, HCl, H_2O_2	0.01	95±5 °C	1.5
MWD - 1	Aqua regia	0.042	175	1
MWD - 2	HNO_3, HF	0.042	180	1
MWD - 3	HNO_3, HCl, HF	0.025	200	1
UD - 1	HNO_3, HCl, H_2O_2	0.02	60	0.5
UD - 2	Aqua regia, HF	0.02	60	0.5
UD - 3	HNO_3, HF	0.017	60	0.5
UD - 4	HNO_3, HF	0.02	60	0.5

MWD: microwave-assisted digestion; UD: ultrasound-assisted digestion.