

Electronic Supplementary Information (ESI)

Feasibility of Microwave-assisted Ultraviolet Digestion of Polymeric Waste Electrical and Electronic Equipment for the Determination of Bromine and Metals (Cd, Cr, Hg, Pb and Sb) by ICP-MS

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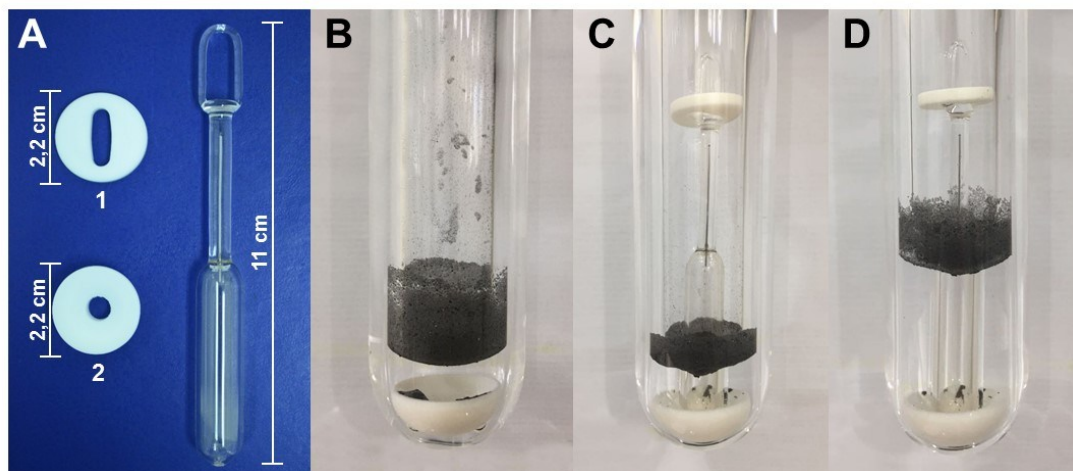


Fig. S1. Steps for the digestion by MAWD-UV: A) UV lamp and PTFE devices, being 1) lamp spacer and 2) lamp base ring; B) lamp spacer with 5 mL of solution and addition of the sample; C) positioning the UV lamp in the quartz vessel and with the lamp spacer and D) addition of 10 mL of solution performing 15 mL of total solution.

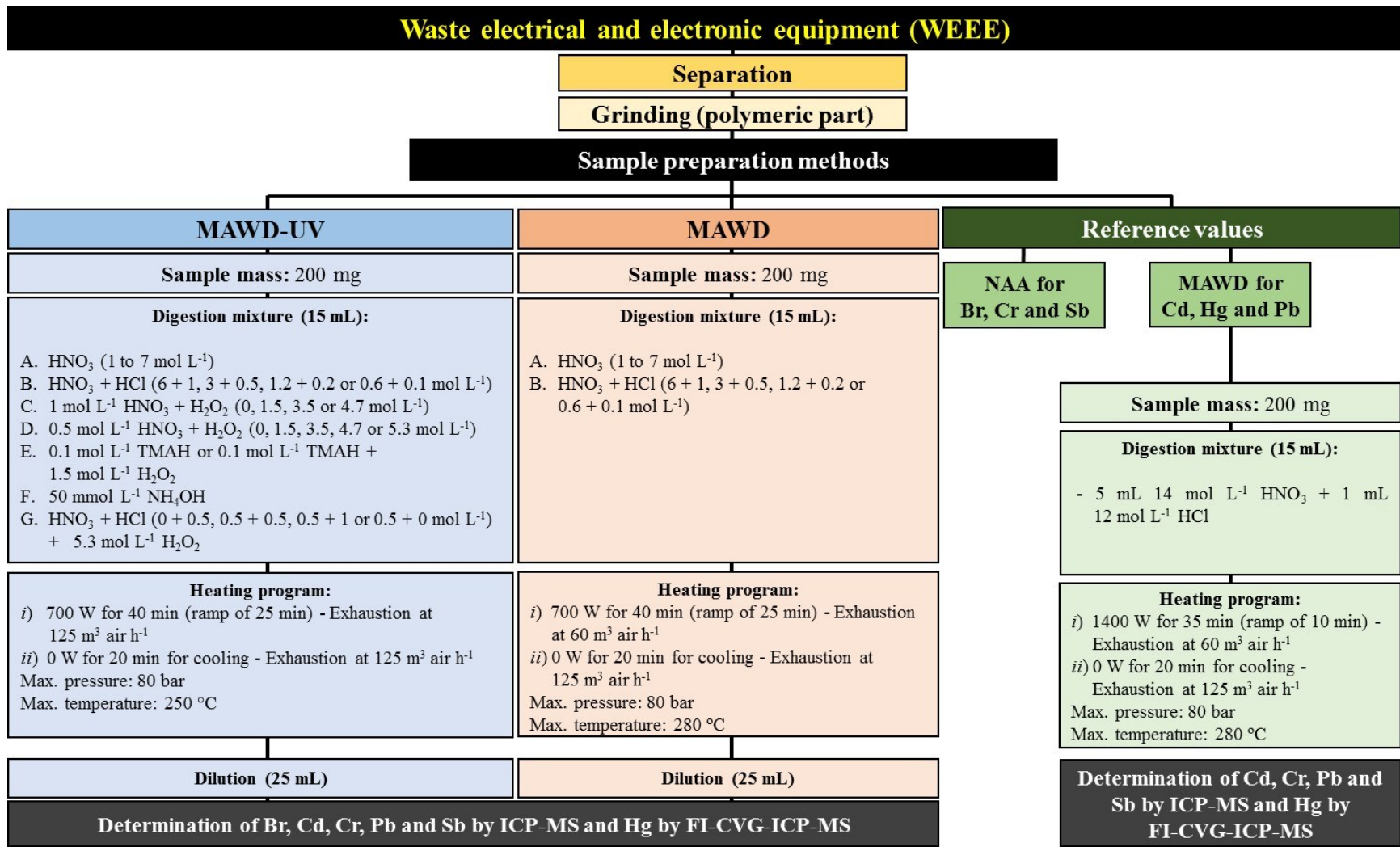


Fig. S2. Overview of the experiments for the development of MAWD-UV method for polymeric WEEE for the determination of bromine and metals (MAWD-UV: microwave-assisted ultraviolet wet digestion; MAWD: microwave-assisted wet digestion; NAA: neutron activation analysis; ICP-MS: inductively coupled plasma mass spectrometry; FI-CVG-ICP-MS: flow-injection cold vapor generation inductively coupled plasma mass spectrometry).

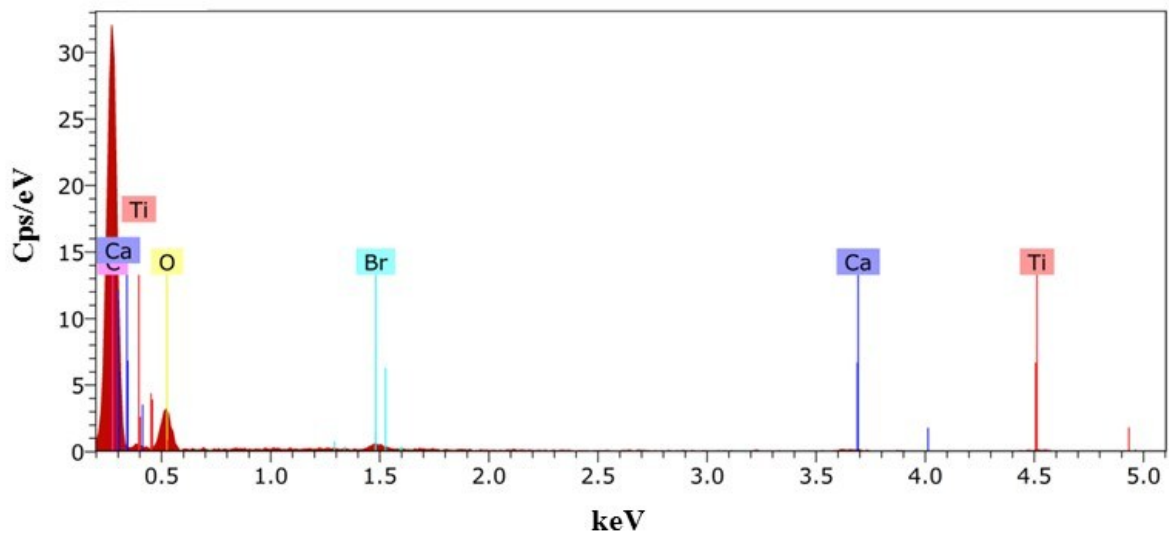


Fig. S3. SEM-EDS spectrum of solid residue after digestion of polymeric parts from a keyboard sample by MAWD-UV, using 1 mol L⁻¹ HNO₃.