

Electronic Supporting Information

Development of a novel semi-automated analytical system of microplastics using reflectance-FTIR spectrometry: Designed for the analysis of large microplastics

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Measurement flow with MARS

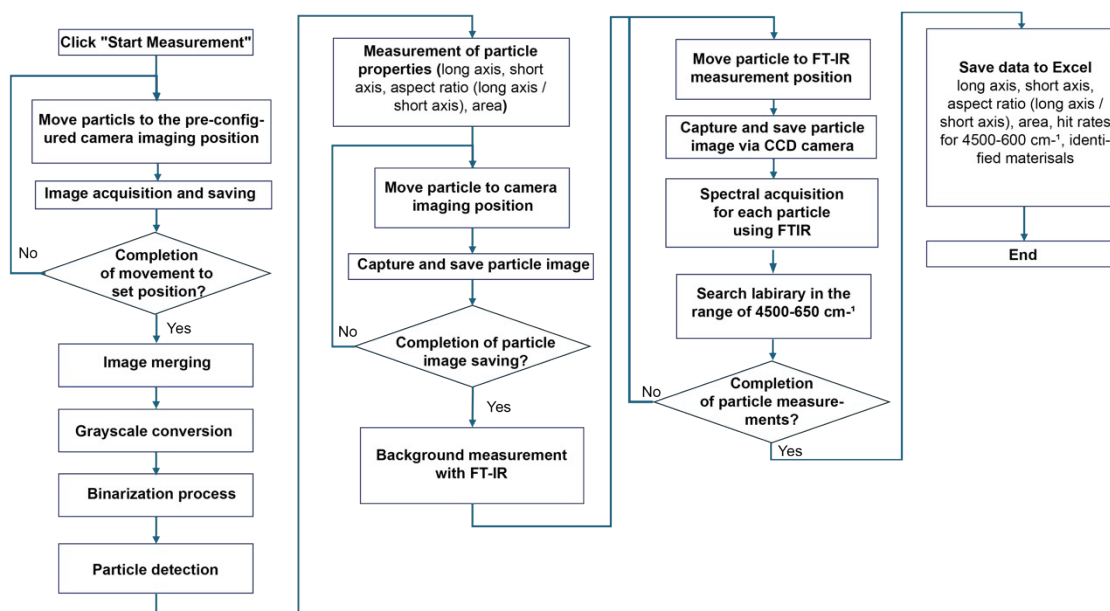


Fig.S1

Workflow of the analysis using MARS (Microplastic Analyzer using Reflectance-FTIR Semi-automatically).

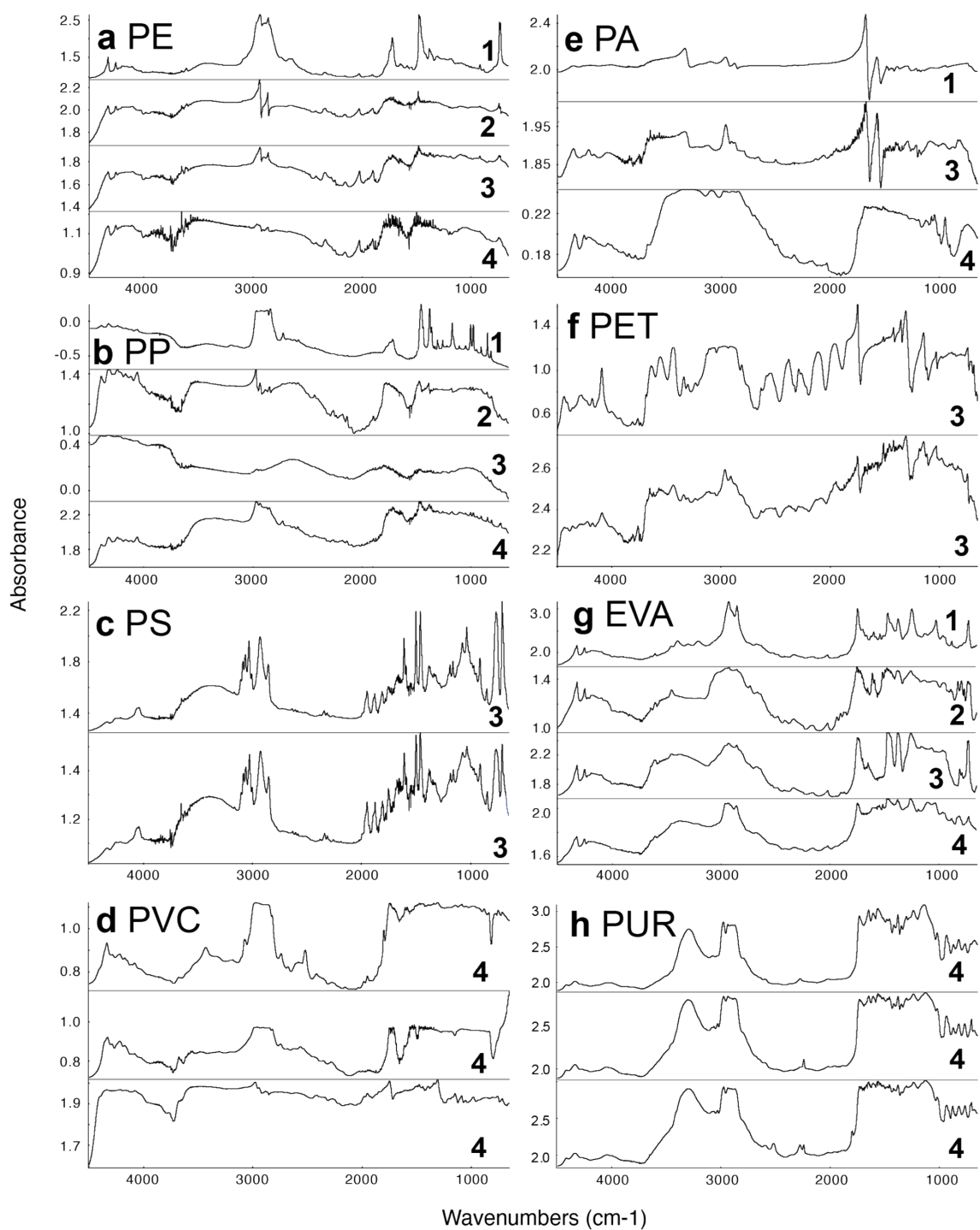


Fig. S2

Reflectance spectral features of plastic particles from each polymer type with two to four identified characteristics: (1) spectra with strong specular reflection (differentiated peak shape), (2) diffuse reflection spectra (low peak distortion, i.e., absence of specular reflection), (3) spectra with a mix of specular and diffuse reflection, and (4) highly saturated spectra (where peak shapes are nearly unobservable). (a) polyethylene (PE), (b) polypropylene (PP), (c) polystyrene (PS), (d)

polyvinyl chloride (PVC), (e) polyamide (PA), (f) polyethylene terephthalate (PET), (g) ethylene-vinyl acetate (EVA), and (h) polyurethane (PUR).