Microplastics in marine sediments from Burgas Bay, Black Sea: abundance, polymer composition and comparison of NaCl and $MgCl_2$ density separation methods using µFTIR imaging

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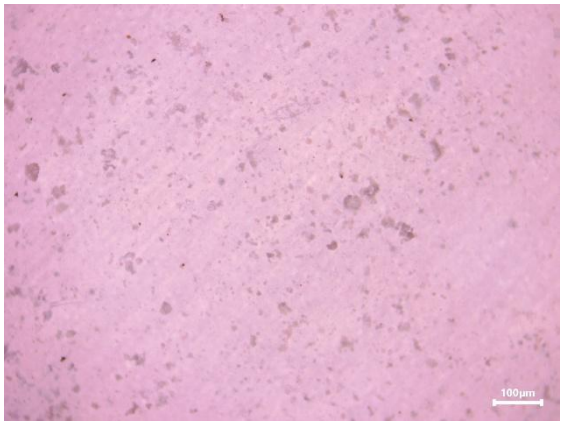
Supplementary Material

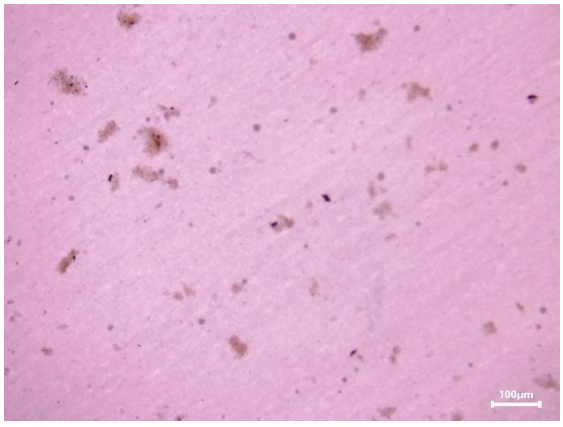
This Supplementary Material includes representative blank controls, additional microscopy images, and µFTIR data supporting the interpretation of microplastic particles identified in Burgas Bay sediments.

Supplementary Figure S1 – Procedural blank filter



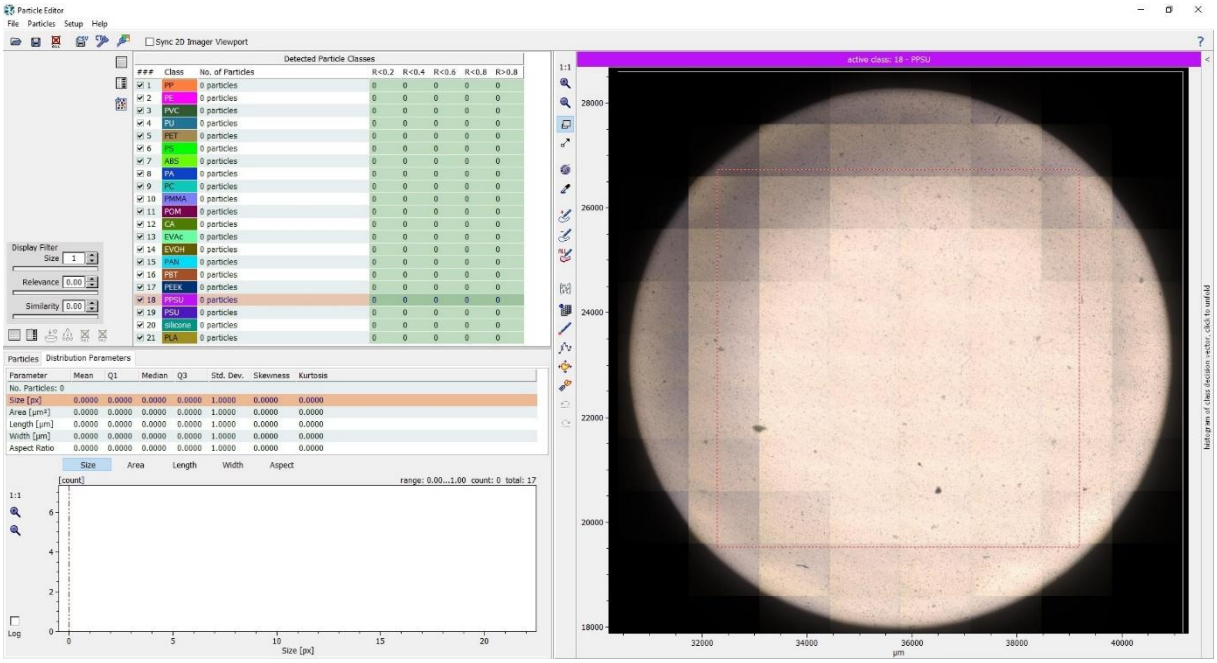
Supplementary Figure S1. Representative image of a procedural blank filter after processing of ultrapure water through the same extraction procedure used for sediment samples. No particles morphologically consistent with microplastics were observed

Supplementary Figure S2 – Airborne contamination blank



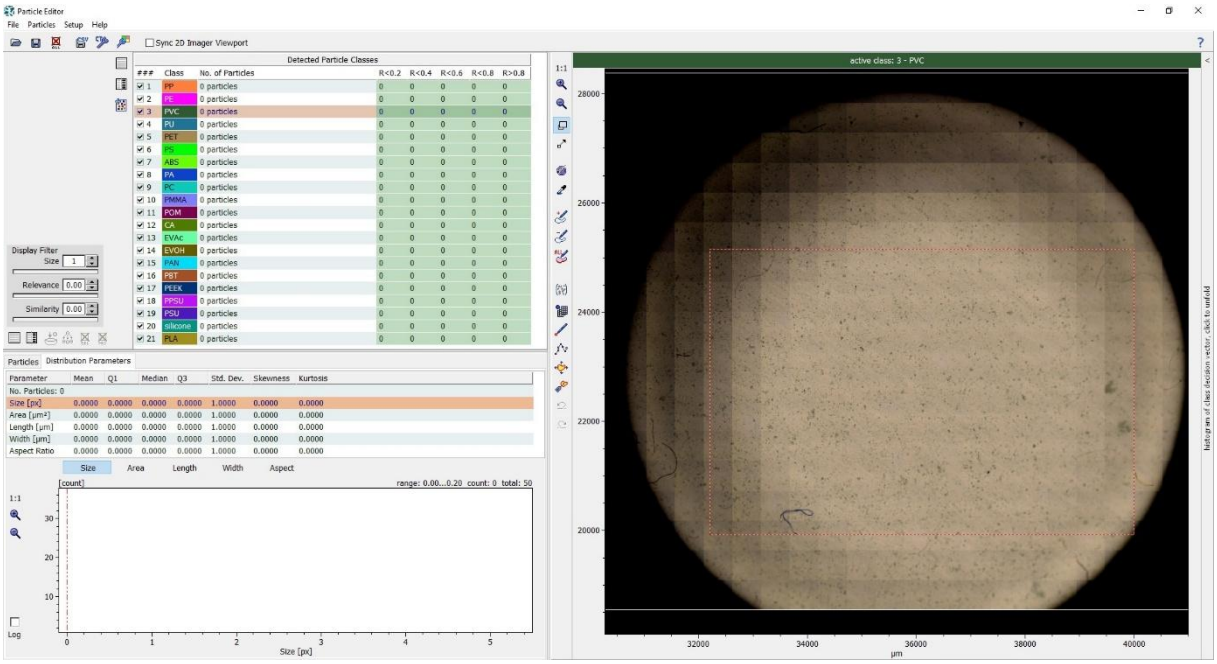
Supplementary Figure S2. Representative image of an airborne contamination control filter exposed during sample preparation. No particles morphologically consistent with the identified polymer types were detected

Supplementary Figure S3 – Blank µFTIR result



Supplementary Figure S3. Example of µFTIR analysis of a procedural blank showing the absence of spectra corresponding to identifiable polymer particles

Supplementary Figure S4 – Station S6 NaCl extract



Supplementary Figure S4. Representative µFTIR scan or software output for station S6 after NaCl extraction showing no confirmed particles in the analyzed filter area. Particles were, however, detected in the corresponding $MgCl_2$ extract from the same station