

Supplementary materials

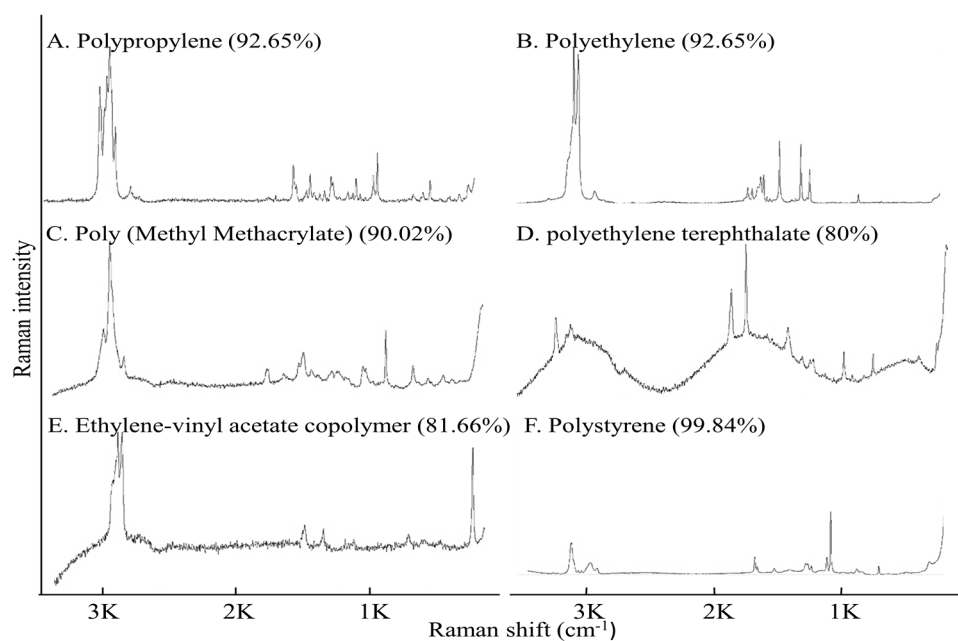


Figure S1. Composition of typical MPs identified by Raman spectroscopy.

Table S1. Body weight and body length information of commercial species collected from aquaculture farms in the Pearl River Estuary.

Species	Sample quantity	Length range (cm)	Average length (cm)	Weight range (g)	Average weight (g)
<i>Oreochromis mossambicus</i>	7	5.05 - 7.10	6.20 ± 0.71	1.78 - 6.14	4.12 ± 1.45
<i>Micropterus salmoides</i>	11	19.90 - 30.00	25.57 ± 2.81	156.82 - 526.24	328.86 ± 102.81
<i>Penaeus vannamei</i>	15	12.30 - 15.5	14.20 ± 1.12	9.64 - 22.10	16.09 ± 3.92
<i>Macrobrachium rosenbergii</i>	4	12 - 14.8	13.49 ± 1.19	11.2 - 16.98	14.13 ± 2.37

Table S2. The microplastic abundance of water and sediment in other studies compared with this study.

Sample type	Sampling site	Sampling method	Seperation method	Abundance (items/L)	Reference
Surface water	Yangtze River Estuary, China	screw pump	30% H ₂ O ₂	0.16 ± 0.07	[59]
	Small-scale estuaries, Shanghai	stainless steel apparatus	30% H ₂ O ₂	27.8 ± 11.81	[60]
	Charleston Harbor Estuary, USA	stainless steel and aluminum screen sampler	30% H ₂ O ₂	3-36	[81]
	Three estuaries in Zhejiang, China	Teflon pump	5% formalin solution	0.10-4.10	[34]
Sediment	Changjiang Estuary, China	precleaned bottles	sodium chloride	12.1 ± 0.9 particles per 100 g of dry sediment	[30]
	Mediterranean Sea	5 mL metal-capped glass bijoux jar	Saturated 348 g NaCl/L solutin	182.66 ± 27.32 649.33 ± 184.02 items/kg	[67]
	River Thames, UK	Stainless steel scoop	1.7-1.8 kg/L ZnCl ₂ solution	660 ± 77 items/kg	[66]

Table S3. The microplastic abundance of aquatic organisms in other studies compared with this study.

Species	Sampling site	Extraction method	Abundance (items/individual)	Reference
Fish				
6 marine fish	The Gulf Coast of Texas, US	–	0.5-1.4	[73]
5 fish species	Northeast Atlantic around Scotland	Dissection microscope	1.8 ± 1.7	[74]
5 marine fishes	the North and Baltic Sea	–	0.03 ± 0.18	[75]
<i>Squalus acanthias</i>	Adriatic Sea	30% H ₂ O ₂	1.25 ± 0.5	[76]
<i>Merluccius merluccius</i>	Adriatic Sea	30% H ₂ O ₂	1.33 ± 0.57	[76]
<i>Mullus barbatus</i>	Adriatic Sea	30% H ₂ O ₂	1.57 ± 0.78	[76]
<i>Chelidonichthys lucernus</i>	Adriatic Sea	30% H ₂ O ₂	1 ± 0	[76]
<i>Sardina pilchardus</i>	Adriatic Sea	30% H ₂ O ₂	1.78 ± 0.7	[76]
<i>Scylliorhinus canicula</i>	Cantabrian coast	NaOH	1.20 ± 0.45	[77]
<i>Mullus barbatus</i>	Spanish Coast	NaOH	1.75 ± 1.14	[77]
<i>Konosirus punctatus</i>	Xiangshan Bay	10% KOH 30% H ₂ O ₂	2.1 ± 0.38	[24]
<i>Larimichthys crocea</i>	Xiangshan Bay	10% KOH 30% H ₂ O ₂	1.8 ± 0.42	[24]
<i>Oreochromis mossambicus</i>	Pearl Rvier Estuary	10% KOH	6.14 ± 3.80	This study
<i>Micropterus salmoides</i>	Pearl Rvier Estuary	10% KOH	39.64 ± 23.38	This study
Crustaceans				
<i>Parapenaeopsis hardwickii</i>	Xiangshan Bay	10% KOH 30% H ₂ O ₂	0.95 ± 0.28	[24]
<i>Penaeus vanname</i>	Pearl Rvier Estuary	10% KOH	10.87 ± 4.94	This study
<i>Macrobrachium rosenbergii</i>	Pearl Rvier Estuary	10% KOH	9 ± 3.16	This study