Supplementary Information

Determination of mass concentrations of airborne PET microplastics using liquid chromatography coupled to tandem mass spectrometer (LC-MS/MS)

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Table S1. Liquid chromatography parameters for identification of terephthalic acid

Time (min)	% of Mobile Phase A	% of Mobile Phase B	Flow rate (mL/min)
0	90	10	0.2
1	90	10	0.2
3	10	90	0.2
7	10	90	0.2
8	90	10	0.2
10	90	10	0.2

Mobile Phase A: 0.01% formic acid in water and Mobile phase B: Methanol

Table S2. Mass spectrometer parameters for the determination of terephthalic acid

Parameter	Value
Ion Source	Agilent Jest Stream Electrospray Ionization Source
Ionization mode	Negative mode
Source parameters	
Gas temperature	200 °C
Gas flow	14 L min^{-1}
Nebulizer pressure	20 psi
Sheath gas heater temperature	250 °C
Sheath gas flow	11 L min^{-1}
Capillary voltage	3000 V
MRM conditions	165.0 – 121.0 (Q1)
	165.0 – 77.0 (Q2)

Q1: Quantifier ion & Q2: Qualifier ion

Table S3. Concentrations of PET MPs in blank filters

Blanks	Concentration (ng m^{-3})
Blank -1	6.48
Blank -2	5.60
Blank -3	3.31
Blank -4	8.14
Blank -5	4.32
Blank -6	7.75

Table S4. Recovery rates of PET MPs using Quartz fiber and Teflon filters

Filter Substrate	Concentration of spike (ng)	Recovery (%)
Quartz Fiber filter	50	38.81
	100	33.96
Teflon filters	50	125.95
	100	116.32

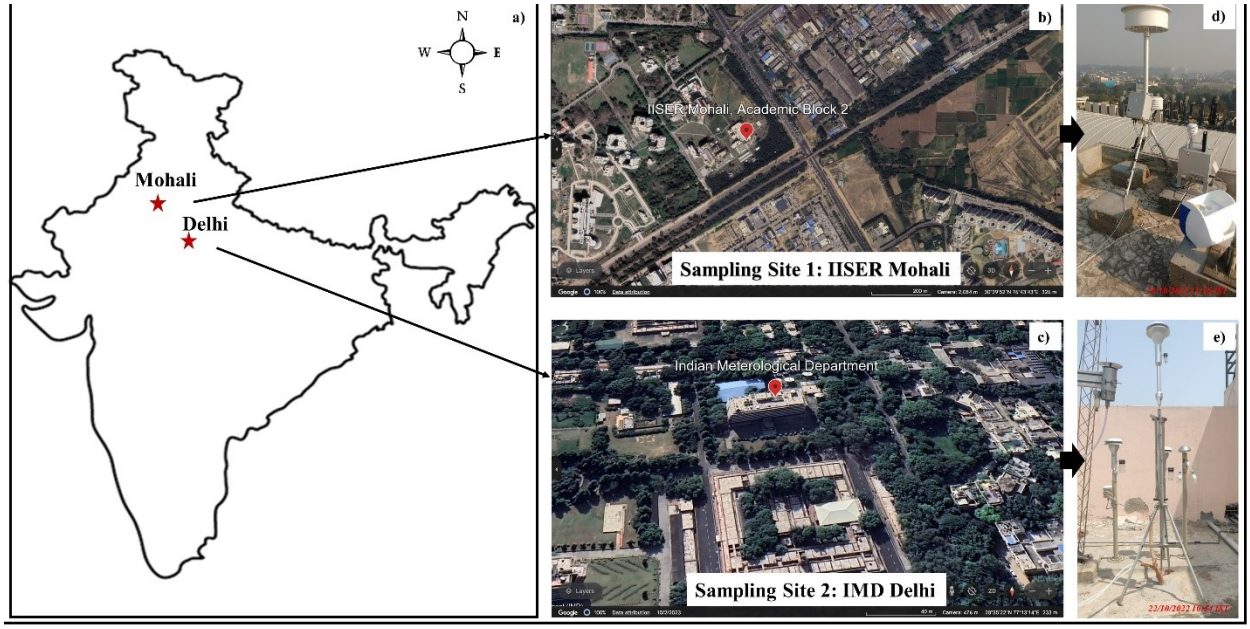

Figure S1. (a) Picture showing the sampling locations in this study, (b) Google map image of $PM_{2.5}$ sampling site at Mohali, India (c) Google map image of $PM_{2.5}$ sampling site at Delhi, India (d) Picture showing the Speciation aerosol sampling systems (SASS sampler) installed on the rooftop of IISER Mohali, India and (e) Picture showing the custom built $PM_{2.5}$ sampler installed on the rooftop of IMD Delhi.

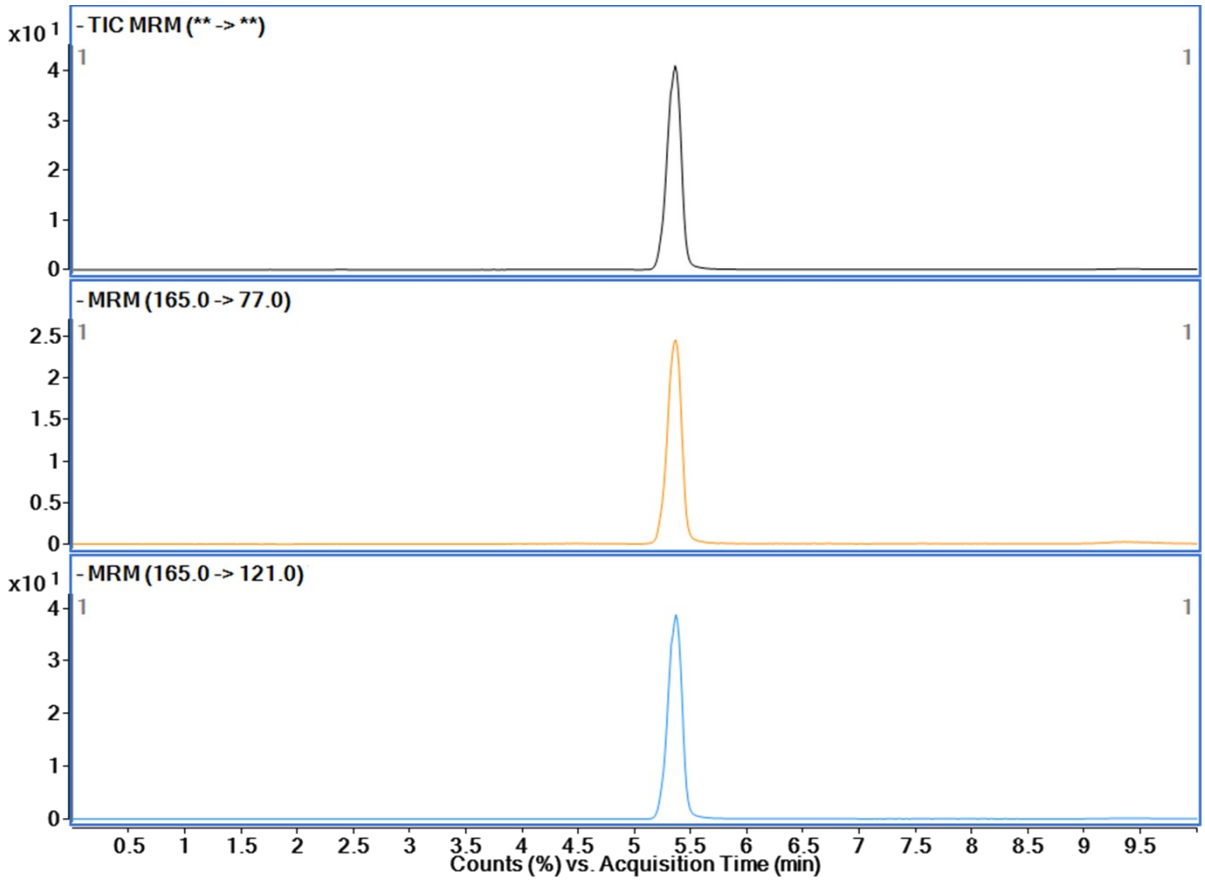

Figure S2. Total ion chromatogram and extracted ion chromatograms of standard terephthalic acid (TPA).

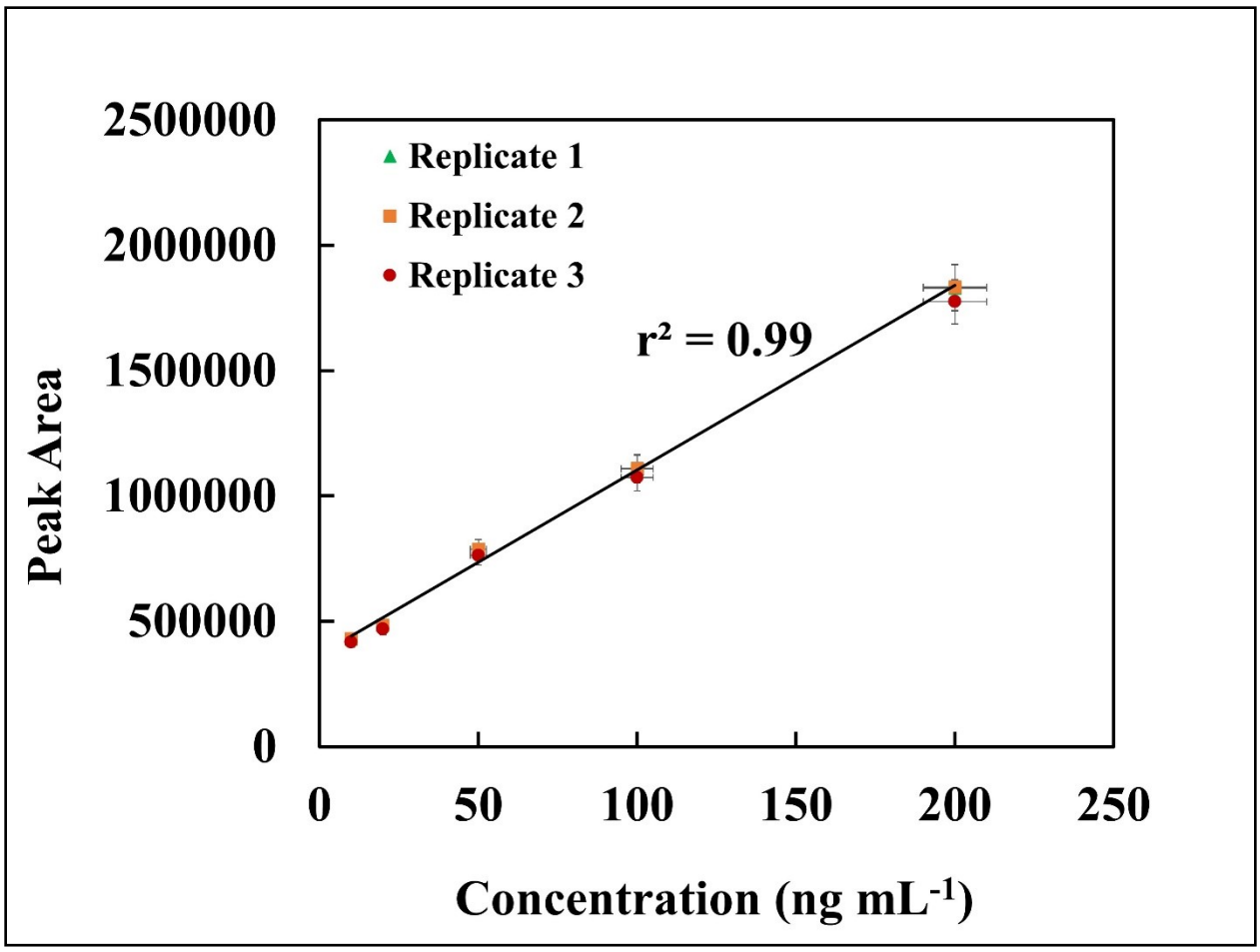

Figure S3. Linearity curve for terephthalic acid