Table S1. Counting data of PET microplastics > 30 µm in reconstituted\(^1\) water samples or by direct analysis\(^2\) of salt carrier, reported per vial.

| Vial number | JRC-Ispra\(^{1,3}\) | JRC-Geel\(^2\) | External laboratory\(^1\) | Mass of NaCl, g |
|-------------|------------------|----------------|--------------------------|-----------------|
| 3           | 988              |                |                          | 0.284           |
| 27          |                  | 875            |                          |                 |
| 37          |                  | 765            |                          | 0.294           |
| 81          |                  | 831            |                          |                 |
| 101         | 784              |                |                          | 0.296           |
| 119         | 834              |                |                          | 0.292           |
| 123         |                  | 693            |                          | 0.295           |
| 143         |                  |                | 714                      |                 |
| 164         |                  | 826            |                          | 0.295           |
| 168         | 622              |                |                          | 0.263           |
| 204         |                  |                | 819                      | 0.285           |
| 243         | 625              |                |                          |                 |
| 252         |                  | 821            |                          |                 |
| 264         |                  | 778            |                          | 0.279           |
| 265         | 712              |                |                          | 0.281           |
| 280         |                  |                | 1106                     | 0.268           |
| 327         |                  | 887            |                          |                 |
| 342         | 629              |                |                          | 0.269           |
| 348         |                  | 801            |                          | 0.278           |
| 400         | 696              |                |                          |                 |
| 416         |                  | 683            |                          |                 |
| 436         |                  | 1167           |                          |                 |
| 445         | 783              |                |                          | 0.280           |
| 469         |                  | 792            |                          | 0.282           |
| 507         |                  | 835            |                          |                 |
| 508         | 625              |                |                          | 0.282           |
| 509         |                  | 816            |                          | 0.284           |

\(^3\)Reported result is the mean value of four different measurements of the same filter.
Table S2. Mass of PET microplastics in the NaCl-carrier per vial.

| Vial number | Mass of PET, µg | Expanded uncertainty, U, µg |
|-------------|-----------------|-----------------------------|
| 6           | 296.8           | 12                          |
| 15          | 349.7           | 12                          |
| 92          | 241.5           | 19                          |
| 132         | 319.6           | 8.9                         |
| 177         | 341.8           | 37\(^1\)                    |
| 222         | 260.5           | 8.4                         |
| 258         | 322.6           | 11                          |
| 288         | 340.8           | 15                          |
| 359         | 256.6           | 36\(^1\)                    |
| 389         | 237.1           | 11                          |
| 418         | 277.1           | 45\(^1\)                    |
| 434         | 314.7           | 9.3                         |
| 441         | 303.5           | 25                          |
| 466         | 238.2           | 10                          |

\(^1\)Increased uncertainty of the weighing due to possible loss of PET. More details about the substitution weighing are given in the experimental section and in results and discussion.
Table S3. Cumulative volume distributions of PET in the NaCl carrier using laser diffraction (LD) and dynamic image analysis (DIA). In both cases the average of three replicate measurements is reported for 15 or 30 samples of resuspended NaCl-carrier. Data in bold is relevant to the particle sizes >30 µm to be reported using counting methods.

| Size classes for LD, µm | Cumulative volume distribution using LD\(^1\), % | Size classes for DIA, µm | Cumulative volume distribution using DIA, % |
|------------------------|-----------------------------------------------|------------------------|-----------------------------------------------|
| 2.2                    | 0.85                                          | 2.07                   | 0.16                                          |
| 2.6                    | 0.98                                          | 2.36                   | 0.16                                          |
| 3.1                    | 1.13                                          | 3.05                   | 0.16                                          |
| 3.7                    | 1.28                                          | 3.93                   | 0.68                                          |
| 4.3                    | 1.4                                           | 5.07                   | 0.70                                          |
| 5                      | 1.53                                          | 6.53                   | 1.29                                          |
| 6                      | 1.68                                          | 8.42                   | 1.98                                          |
| 7.5                    | 1.89                                          | 10.86                  | 2.57                                          |
| 9                      | 2.08                                          | 14.00                  | 3.34                                          |
| 10.5                   | 2.27                                          | 18.05                  | 4.06                                          |
| 12.5                   | 2.51                                          | 23.28                  | 4.96                                          |
| 15                     | 2.8                                           | 30.02                  | 6.25                                          |
| 18                     | 3.15                                          | 38.70                  | 8.21                                          |
| 21                     | 3.54                                          | 49.90                  | 12.40                                         |
| 25                     | 4.12                                          | 64.34                  | 22.02                                         |
| 30                     | 4.97                                          | 82.96                  | 33.09                                         |
| 36                     | 6.04                                          | 106.96                 | 45.25                                         |
| 43                     | 7.4                                           | 137.92                 | 61.86                                         |
| 51                     | 9.43                                          | 177.83                 | 86.73                                         |
| 61                     | 13                                            | 229.28                 | 100.00                                        |
| 73                     | 18.61                                         | 295.63                 | 100.00                                        |
| 87                     | 26.12                                         |                        |                                               |
| 103                    | 35.05                                         |                        |                                               |
| 123                    | 46.01                                         |                        |                                               |
| 147                    | 58.32                                         |                        |                                               |
| 175                    | 70.68                                         |                        |                                               |
| 215                    | 83.75                                         |                        |                                               |
| 255                    | 91.61                                         |                        |                                               |
| 305                    | 96.57                                         |                        |                                               |
| 365                    | 99.05                                         |                        |                                               |
| 435                    | 99.89                                         |                        |                                               |

\(^1\) More data exists from 0.5 µm upwards, but was omitted to match the measurement range of DIA.
Fig. S1. Comparison of cumulative volume distributions for PET-particles using DIA and LD from 2 µm upwards, (also reported in Table S3).
Fig. S2. (A) Raman spectrum of the PET particles (black) and the reference polymer (Goodfellow in grey). (B) FT-IR spectra of PET particles (black) and reference spectrum of PET from spectral library (grey).