**Supplementary Material**

**Mind the gap: Forest soils as a hidden hub for global micro- and nanoplastic pollution**

Collin J. Weber1\*, Matthias C. Rillig2, Moritz Bigalke1

**1**Soil Mineralogy and Soil Chemistry, Institute of Applied Geosciences, Technical University Darmstadt, Germany

2 Institute of Biology, Freie Universität Berlin, Germany

**\*** Corresponding author: Collin J. Weber, collin.weber@tu-darmstadt.de

**Content:**

Table S1 Details on microplastic extraction method and analytical approaches from studies conducted in forest areas.

**Table S1.** Details on microplastic extraction method and analytical approaches from studies conducted in forest areas.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ref** | **Publication** | **Target environmental matrix** | **Targeted MNP size range** | **Major extraction methoda** | **Analytical methodb** |
| 26 | Choi et al. (2021) | Forest soils (8 sites out of 100 sampled within the study)Republic of Korea  | 0.45 - 5000 µm (no size detection limit given) | ZnCl2 density separation (1.7 g cm-3) via stirring (300 rpm) and settling (24h) followed by organic matter digestion | Optical microscopy and FTIR analysis of selected samples |
| 27 | Xu et al. (2022) | Forest soils (8 sites of primary and secondary tropical forest)China | 5-5000 µm(no size detection limit given) | ZnCl2 density separation (1.6 g cm-3) via stirring and settling overnight followed by organic matter digestion | Optical microscopy and µFTIR |
| 39 | Materic et al. (2022) | Lake and stream water in remote forest areasSweden / Siberia  | >0.45 or >0.7 µm depending on sampling site  | Only filtration  | Desorptionproton transfer-reaction mass spectrometry (TD-PTR-MS)  |
| 44 | Klein & Fischer (2019) | Atmospheric deposition in beach/oak and douglas fir forestGermany | 50-5000 µm | Nile Red staining | Fluorescence microscopy |
| 49 | Allen et al. (2019) | Atmospheric deposition in remote maintain forestFrance  | 5-5000 µm(no size detection limit given) | ZnCl2 density separation (1.6 g cm-3) followed by organic matter digestion | Optical microscopy and µRaman |
| 50 | Leonard et al. (2023) | Tree leaves from five tree species urban environment (and soils)United States  | >20 µm | Leave washing with deionized water and Nile Red staining | µFTIR  |
| ***a*** *Details on sample pre-treatment and sample purification are not stated;* ***b*** *Details on spectroscopic analysis or image analysis are not stated* |