

Microparticles and Microplastics

Matrices

- Mineral water (single and multiple use, glass and plastic bottles)
- Process water (water from bottling plants, testing of modifications under operating conditions)
- Devices in contact with food (tea bags, electric kettles, coffee makers)
- Transparent beverages (energy drinks, soft drinks)
- Table salt
- Transparent, alcoholic beverages (beer, champagne)

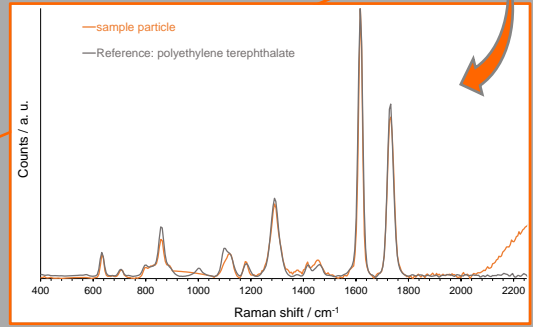
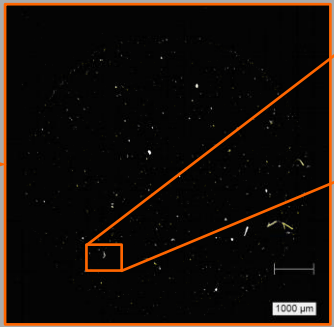
Preparation

- Chemical pre-treatment according to varying sample matrices
- Constant prevention of external contamination
 - Specially developed filtration unit
 - Filtration in Laminar-Flow-Box (DIN EN ISO 14644-1, ISO Class 5)
 - Exclusive use of glassware
- Substrate: perforated silicon (different pore sizes available)
- Documentation and declaration of blanks

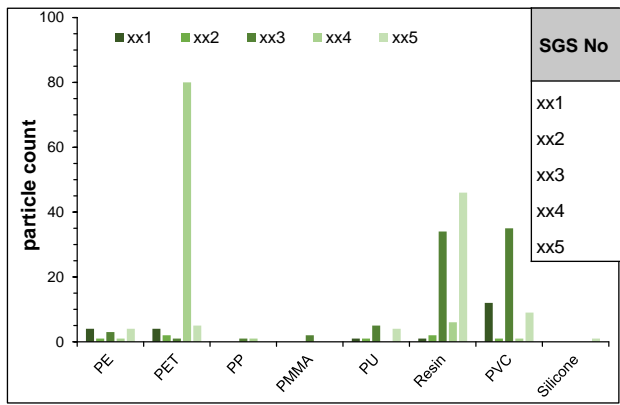


Particle Identification

- Method: Raman-spectroscopy (particle-based approach)
 - Optical microscopy and spectroscopy
- Results
 - Total particle count/particle size distribution ($L_{max} > 6 \mu m$)
 - Number of microplastics, polymer type, size



Test Report



SGS No	Number of MPs	Polymer type of identified MPs							
		PE	PET	PP	PMMA	PU	Resin	PVC	Silicone
xx1	22	4	4	0	0	1	1	12	0
xx2	7	1	2	0	0	1	2	1	0
xx3	81	3	1	1	2	5	34	35	0
xx4	89	1	80	1	0	0	6	1	0
xx5	69	4	5	0	0	4	46	9	1

