



Microplastics in Water

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Advice for sampling microplastics in water

- 1) Avoid wearing clothes with plastic fibres while sampling the water
- 2) Water samples should be taken in glass bottles.
- 3) Flush the bottle and capsule 3-4 times with water from the sampling spot prior to taking the sample.
- 4) Sample should be 250 - 1000 ml. We recommend a full 1000ml per sample.
 - a. Clean water (drinking water) sample 1000 ml
 - b. Natural water 250 ml
 - c. Drain, sewer, industrial water 250 ml
- 5) Send the sample to the laboratory. If the sample has to be stored for several days, keep in fridge.

SEM Method

A scanning electron microscope is used to detect particles between 10 µm and 1 mm (on special request we can analyse particles as small as 1 µm). Any organic materials present in the sample are degraded prior to analysis.

FTIR Method

An FTIR instrument is used to both count and identify microplastic particles, something that cannot be done using the SEM method. Particles as small as 20 µm can be both detected and identified using this method. Any organic materials present in the sample are degraded prior to analysis. The method is outlined below:

- Pre-oxidation
- Enzyme treatment
- Oxidation
- Flotation
- Filtration
- Concentration
- Deposit
- µ-FTIR

Abbreviations

- PE - Polyethylene
- PP - Polypropylene
- PS - Polystyrene
- PMMA - Polymethyl methacrylate, plexiglass
- PUR - Polyurethane
- PET - Polyethylene terephthalate
- PVC - Polyvinylchloride, vinyl plastics

These methods are not accredited

* **Analysis on sediment, sludge, fish & mussel also available upon request, please contact your local ALS laboratory for more information and pricing**