

Quantitative Microplastic Analysis

Determination of fibre release during textile care and in waste water

Every year, up to 500,000 tonnes of microplastic fibres end up in the sea. During the production of textiles, as well as through use and washing, fibre fragments are released from synthetic textiles. If these are not effectively removed by subsequent cleaning processes, they enter rivers, inland waters and oceans via waste water.

With our analytical methods, the fibre release from textile surfaces and the fibre content in process and waste water can be determined. We support you in making your textile input into the environment measurable, understanding it and reducing it in a targeted manner.



The test is suitable for

- Textiles of all kinds and at every stage of production
- Blended materials for the determination of the synthetic content of the fibre output
- Process and waste water from the textile industry and other sectors
- Comparative measurements
- Investigation of waters

Description

Hohenstein has developed a new innovative test method for evaluating fibre release during textile care, especially during washing.

Dynamic Image Analysis (DIA) can be used to determine the fibre count and the length distribution as well as the associated properties (diameter and shape). The analysis is non-destructive, which makes follow-up investigations possible. To distinguish abrasion in blended materials, the combination with a chemical treatment can be used to distinguish between cellulose-based and non-cellulose-based fibres.

The **gravimetric analysis** (University of Leeds / The Microfiber Consortium (UoL/TMC) method) can also be carried out. In this analysis, the waste water from textile laundering is filtered and then the entire residue (consisting of fibres and particles) is weighed.

Your benefit as a client

- Making textile inputs into the environment measurable, understandable and reduceable
- Analyses of textiles and waste water (various sample types from a single source)
- Amount, type and shape of released fibres by Hohenstein method **DIA**
- Objective measurement of fibre release
- Quality control of waste water, optimisation potential of existing processes and processing steps

Sample requirements

Textile

- Fabric by metre: at least 1 m²
- Ready-made goods: at least 1 m² (several test samples are also possible)

Waste water

- at least 1 l total volume

Test period

- Depending on the scope of testing, approx. 10-15 working days