



**WASSER
3.0**

**MICROPLASTIC SAMPLING &
DETECTION FOR WASTEWATER
TREATMENT PLANTS**

Wasser 3.0 offers a standardized service for microplastic detection at wastewater treatment plants.

MICROPLASTIC DETECTION TECHNOLOGY

Our detection technology is based on the selective fluorescent staining of microplastics, making it fast, reliable, and affordable.

- Validated and cross-validated method
- Approved in long-term studies on the effluent of wastewater treatment plants
- Approved in "4th cleaning stage *plus*" long-term studies (microplastic and micropollutant removal)
- Unit of measure: Microplastic Particles (MP)/Liter [MP/L]

FULL SAMPLING SERVICE

Required prerequisites:

- Access to the wastewater treatment plant
- Power supply
- Access to outlet shaft/outflow
- Access to tap water

request for quotation

order placement

scheduling
the sampling

on-site sampling
with Wasser 3.0 staff

sample transport
to laboratory

1 WORK DAY

analysis
for microplastics

1 WORK DAY

results/report

CURRENT DEMO-SITES & REFERENCE I:



- Wastewater treatment plant Landau / Germany (effluent)
- Process control for Wasser 3.0 PE-X®
- Rainwater overflow
- River Queich

CURRENT DEMO-SITES & REFERENCES II:



- Wastewater treatment plant Mykonos/Greece (effluent)
- Process control for Wasser 3.0 PE-X®

Related scientific publications (open-access)

- Sturm, M.T.; Horn, H.; Schuhen, K. Removal of Microplastics from Waters through Agglomeration-Fixation Using Organosilanes—Effects of Polymer Types, Water Composition and Temperature. *Water* 2021, 13, 675. doi: 10.3390/w13050675.
- Sturm, M.T.; Myers, E.; Schober, D.; Thege, C.; Korzin, A.; Schuhen, K. Adaptable Process Design as a Key for Sustainability Upgrades in Wastewater Treatment: Comparative Study on the Removal of Micropollutants by Advanced Oxidation and Granular Activated Carbon Processing at a German Municipal Wastewater Treatment Plant. *Sustainability* 2022, 14, 11605. doi: 10.3390/su141811605.
- Sturm, M.T.; Myers, E.; Schober, D.; Korzin, A.; Schuhen, K. Development of an Inexpensive and Comparable Microplastic Detection Method Using Fluorescent Staining with Novel Nile Red Derivatives. *Analytica* 2023, 4, 27-44. doi: 10.3390/analytica4010004.
- Sturm, M.T.; Myers, E.; Schober, D.; Korzin, A.; Thege, C.; Schuhen, K. Comparison of AOP, GAC, and Novel Organosilane-Based Process for the Removal of Microplastics at a Municipal Wastewater Treatment Plant. *Water* 2023, 15, 1164. doi: 10.3390/w15061164.



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