



WORLD WIDE WEAVE

Microplastics: Reliable sampling with optimized dutch weaves

GKD has developed a sampling basket as part of the collaborative research project entitled Tire abrasion in the environment (RAU). With a defined fractionation of solids larger than six micrometers, it contributes to the targeted analysis of the amount, composition, and emergence of tire abrasion in street runoff water.

Microplastics are a global environmental problem: In Germany alone, 111,000 tons of tire abrasion are created in the form of secondary microplastics each year. Existing procedures are not efficient enough to reliably prevent it from getting into street runoff water. Based on the typical leaf traps used in street drains, GKD has developed a sampling basket. As part of the project Tire abrasion in the environment (RAU), it will be used to help study the amount and type of tire abrasion that spreads into drainage systems. Thanks to integrated online measurement, the entire street runoff from the very first second can be measured. Following extensive laboratory trials there are currently 60 in situ samplings underway at various sites. The filter cascade consists of up to six filter elements arranged as a stack of sieves and is integrated in the sampling basket to catch the tire particles from the street water runoff. The optimized dutch weave from GKD is a key element here. For example, OT6 separates out all solids larger than six micrometers. This guarantees that no spherical particles above this separating limit find their way into the water. In addition to a very precise separating limit, optimized dutch weaves also impress with an exceptionally high flow rate and excellent regenerability through backwashing. The design, which is oriented to conventional leaf traps, means that the sampling basket



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can easily be used anywhere. Its special construction also enables sampling of the entire rainwater runoff from a downpour – until now this was only possible for partial flows.



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