

PRESS RELEASE

Making Biological Processes in Wastewater Treatment Plants Measurable

vermicon AG Presents Integrated Microbiology for Process Control and Wastewater Surveillance at the IFAT 2026

Hallbergmoos, Deutschland, 12.03.2026 – New regulations and rising energy costs are placing biological wastewater treatment plants under increasing pressure. Modern facilities must ensure optimal process control while operating cost- and energy-efficiently. At the same time, they are increasingly becoming an extended instrument for public health surveillance. As a result, microbiological processes are moving into focus and require detailed analysis and evaluation.

At IFAT 2026 (Hall C1, Booth 216), vermicon AG will present an integrated analytical concept addressing these requirements. At the center is the VIT® gene probe technology, which enables the direct identification and quantification of microorganisms in wastewater samples. This approach is complemented by methods for measuring living biomass and technologies for monitoring health-relevant viruses. Together, these methods provide a differentiated analysis of microbiological processes in wastewater treatment plants and deliver a reliable data basis for operational decisions as well as epidemiological assessments.

Direct Analysis of Microbial Communities

The core of the integrated monitoring concept is the VIT® gene probe technology, enabling highly specific analysis of microbial communities. Key functional groups, such as nitrifiers and filamentous bacteria, can therefore be analyzed and evaluated at an early stage. Changes within the biocenosis become visible early, enabling more biology-oriented process management.

Measuring Biological Activity

In addition to microbial community composition, the proportion and stability of total living biomass play an essential role in preventing process failures and identifying opportunities for optimization. For this purpose, vermicon presents the new VIT® ABM (Active Biomass Monitoring) system, which provides insights into the performance of the biological system, detects stress factors affecting biomass at an early stage, and can significantly reduce energy costs.

Wastewater as a Source of Information for Public Health

At the same time, the VIT® qPCR test kits from vermicon AG, specifically developed for complex wastewater matrices, enable the detection of relevant viruses and provide a reliable basis for epidemiological assessments. This is becoming particularly important considering EU Directive 2024/3019, which will require Europe-wide monitoring of selected pathogens in wastewater starting in 2027.

"Modern biological wastewater treatment is a complex interplay of various factors. The living biomass carries the key populations that enable the degradation of organic substances," explains Dr. Jiri Snaidr, founder and CEO of vermicon AG. *"At the same time, wastewater can provide important information for public health management. Both can only be meaningfully used when biological systems are considered in a data-driven, integrated way. This is exactly what our technologies enable."*

By combining highly specific microbiology, analysis of total living biomass, and virus analytics proven within the federal analytical framework of the AMELAG project, vermicon AG will present the latest developments in wastewater microbiology at IFAT 2026. The trade fair provides a platform for professional exchange on optimizing biological processes in wastewater treatment.

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About vermicon: vermicon AG is a global leader in the field of wastewater microbiology and sets new standards in microbiological wastewater monitoring. With more than 25 years of experience, the company offers pioneering solutions for the process optimisation of wastewater treatment plants and the wastewater-based epidemiological early warning system



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