

# From Waste to Data

## PCR Analysis Workflow Solution

Wastewater-Based Epidemiology



## The entire solution from a single source

Your result within 3 hours - simple and automated

Together with Endress+Hauser, Analytik Jena developed a wastewater monitoring workflow for biological parameters. It covers the entire process chain – from sampling to scalable nucleic acid extraction and quantitative real-time PCR.

*"The workflow is easy to manage, especially concerning filtration – and this is crucial from the perspective of the routine laboratory."*

*Dr. Christina Meinert-Berning, Ruhrverband, Germany*

*"We are confident that we can form the basis for a wastewater-based monitoring system with our model project."*

*Dr. Jens Schoth, EGLV, Germany*



### Sample Collection

- Endress+Hauser Liquistation CSF48
- Fully automated collection of representative samples
- Complies with worldwide water regulations
- Menu-guided sample programming and tool-free maintenance



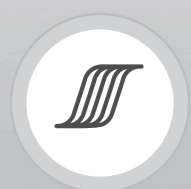
### Easy and Flexible Enrichment by Filtration

- Use the method which is most common (40% of users in Germany) and as efficient as the reference method (ultracentrifugation)
- Stay flexible and cost-efficient – **modular and transportable system**, no centrifuge needed
- Filter now and extract later – using **nucleic acid preservation** medium



### Efficient Automated Nucleic Acid Extraction


- Desorption of collected nucleic acids using the small-footprint **SpeedMill PLUS**
- **Reproducible results** and elimination of human errors using automated extraction on the **InnuPure C16 touch** or the **CyBio Felix eExtract**
- **Safe workspace** and reduced risk of contamination due to closed devices
- Extraction process **omitting hazardous chemicals**



### Data Acquisition using Gold Standard Analytics

- Quantitative real-time PCR, **reference method** for nucleic acid-based detection accepted by governmental bodies, performed on the **qTOWER<sup>3</sup>**
- The methodology includes calibration standards and all **process controls** for reliable quantitative analysis (positive, negative, no template, internal)
- A fully operational **software package** for data analysis included



Endress+Hauser 

### Liquistation CSF48

Fully automated sample collection (over individual period, e.g., 24 h) by automatic water sampler **Liquistation CSF48**.



### SpeedMill PLUS

The filter membrane is homogenized using the **SpeedMill PLUS**.



### InnuPure C16 touch or CyBio Felix eExtract

Reproducible extraction of DNA and/or RNA on the **InnuPure C16 touch** or on the **CyBio Felix eExtract**, depending on the throughput.



### qTOWER<sup>3</sup>

Highly sensitive target detection using real-time cycler from the **qTOWER<sup>3</sup>** family in combination with specific real-time qPCR assay (by third party).



Watch our video  
„From waste to data“



#### Headquarters

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Subjects to changes in design and scope of delivery as well as further technical development.