

TOC_{eq} measurement in wastewater treatment

Even low values can be reliably captured with the CAS51D



Reliable wastewater treatment to ensure the safety of the environment.

Benefits at a glance:

- Reliable monitoring of the TOC value to protect the environment.
- Continuous recording of the measured values.
- Reduced operating costs through chemical-free application.
- No analyzer is required - implementation is possible with the Viomax CAS51D with the latest technology.

In wastewater treatment plants, the treated water must meet certain WHO specifications in order to be reused - whether as drinking water or for other processes. In any case, it must be ensured that the treated water poses no danger to humans or the environment. For this purpose, many different parameters are monitored and analyzed. One of these values is the total organic carbon (TOC).

Customer challenge

Various parameters are analyzed in the outlet of the wastewater treatment plant. One of them is TOC. The value shows how strong the contamination of the water in the outlet still is. Ideally, this value should be very low. The WHO requires a value between 3-6 ppm. However, the measurement of the TOC value is very complex because it is connected to many other parameters. Normally, the measurement is done with an analyzer. However, analyzers require various reagents to guarantee a safe

and accurate measurement.

Since the total organic carbon is measured in the outlet to avoid environmental pollution and protect people, there is the necessity to make the measured values available to the supervisory authorities. Both, the plant operator and the supervisors always need to be able to rely on the measured values.

Our solution

When measuring the TOC value, analyzers, that require expensive reagents, are often used. For the measurement of the low TOC values, however, a reagentless measurement with the optical UV254 technology can also be implemented. Compared to analyzers, the sensor can continuously record the measured values in a very tight interval. All you need is a transmitter of the Liquiline platform and the Viomax CAS51D sensor. The digital transmission of the measured values ensures highest availability of the measuring point and errors

can be detected very quickly at any time - thus the whole measurement becomes even more reliable.

With the Endress+Hauser solution, the plant operator benefits from consistent measurements that are stable between 3-6 ppm, which is the requirement of the supervisory authority.

Components

- Viomax CAS51D-AAC1A2
- Liquiline Transmitter CM442-AAM1A2F210A+AAH7



Benefits of CAS51D

- Extremely fast response time: Measured value processing in the sensor provides reliable real-time process information.
- Cost-effective: Easy, chemical-free handling is safe, environmentally friendly and saves on operational expenditure.
- Enables unattended plant operation: Intelligent design and automatic air-cleaning functionality maximize availability and minimize maintenance.



Viomax CAS51D to monitor TOC in wastewater treatments

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