

Drinking water monitoring

The main areas of drinking water monitoring are the following:

1. **Cyanobacteria**
2. **Coli bacteria**
3. **Dosing of coagulants and flocculants**
4. **Filtration and settling**
5. **Iron, aluminum, manganese + arsenic**
6. **Analysis of drinking water in pipes**
7. **Safety of drinking water systems**
8. **Water disinfection – by-products**
9. **Monitoring of flow in pipelines and identification of leaks**

1. Cyanobacteria

Cyanobacterial monitoring uses fluorescence method at selected wavelengths. Interpretation algorithms allow safe identification of cyanobacteria



2. Microbiological pollution

Conventional methods for determining water pollution by E.coli or general microbiological activity give results after 24-48 hours. Analyzers based on the monitoring of specific enzymatic activity detect microbiological activity within 15 minutes and thus enable the timely implementation of the necessary measures. The analyzer can be delivered in on-line, portative battery powered, or laboratory versions.



3. Dosing of coagulants and flocculants

The StreamingCurrent Monitor is used to optimize the dosing of coagulants and flocculants to eliminate turbidity and organic pollution for drinking water treating. The method uses the principle of particle charge monitoring.



4. Filtration and settling

In this application, it is necessary to monitor the particles in the filtered water. Coagulant dosing problems are dominated by fine particles, which are measured with light scattering turbidimeters. However, in order to control the filter rinsing and to monitor the settling technology, it is necessary to monitor particles of micrometric dimensions which are not detected by the turbidimeters. Optical particle counters are used for this, with the possibility of categorization by size. Sizing is important to identify technological problems.



5. Iron, aluminum, manganese + arsenic

Metals get to water from subsoil or may be the result of an overdose of coagulants. Specialized colorimetric or coulometric analyzers with suitable measuring ranges are designated for their monitoring.



6. Analysis of drinking water in pipes

The composition of drinking water in the distribution network may not be uniform. It is ideal to monitor it directly in the pipeline. Due to the limitations arising from the dimensions, the problem with the discharge of the analyzed sample, or the power requirements, conventional instruments are not suitable for this task. The ideal device for such measurements is pipe::scan. Pipe::scan is a modular sensor system for monitoring the quality of drinking water in pressurized pipes. This compact instrument measures up to 10 parameters: TOC, DOC, UV254, turbidity, color, chlorine, pH/redox, conductivity, temperature and pressure.



7. Safety of drinking water systems

Compact spectrometric probes are an ideal tools for monitoring of water composition, which can be supplemented with additional sensors to monitor additional components such as pH, conductivity, soluble oxygen, chlorine, chlorine dioxide and others.

However, due to unforeseen events, any toxic contaminants may enter the water. They can be immediately identified by using of spectrometric probes.



8. Water disinfection – by-products

An important step in the treatment of drinking water is its disinfection. Analytical Instruments for monitoring chlorine, chlorine dioxide or ozone are designed to monitor disinfection optimization.

Due to chemical reactions during the disinfection process, by-products are formed which can also be harmful and need to be monitored. These include trihalomethanes, which are suitable for continuous measurement using a specialized analyzer.



9. Monitoring of flow in pipelines and identification of leaks

Accurate measurement of water flow in pipes using clamp-on flowmeters allows balance determination of water leakage in critical nodes and sections.

The attached flow meters enable fast and non-invasive realization of measurements.



For detailed information on any solutions of your interest we are gladly available on our below contact:

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