



# Tackle Diverse Parameter Challenges with Confidence

Water treatment requires accurate monitoring of diverse parameters to ensure compliance, efficiency, and water quality.

Our innovative instrumentation to measure critical indicators like UV254, nitrate, MLSS and turbidity enables operators to navigate the multifaceted problems associated with a range of parameters.

Our reliable, real-time solutions help optimize processes, reduce downtime, and support sustainable water management practices.

# Biological/Organic

- UV254 SUVA COD, BOD, DOC and TOC
- Dissolved Oxygen
- Nitrate (NO3)

## **Physical**

- Turbidity
- Suspended Solids
- MLSS (Mixed Liquor Suspended Solids)
- Particle Counter

### Electrochemical

- Conductivity
- ORP (Oxidation-Reduction Potential)
- pH

## Chemical

- Alkalinity Monitor
- Coagulant Dosing
- Chlorine Dioxide
- Free Chlorine
- Total Chlorine
- Ozone
- Peracetic Acid
- Hydrogen Peroxide

### **Process Control**

- Streaming Current
- Coagulant Dosing

# Photonic Megsurements

# **Definitions**

### Biological/Organic

- UV254 SUVA: Measures UV absorbance at 254 nm to estimate organic matter concentration.
- Nitrate (NO3): A nitrogen compound indicating nutrient loading and potential water quality issues.
- Dissolved Oxygen: Oxygen available in water for aquatic organisms.
- COD (Chemical Oxygen Demand): Oxygen needed to oxidize substances, indicating pollution levels.
- BOD (Biochemical Oxygen Demand): Oxygen consumed by microorganisms decomposing organic matte
- **DOC (Dissolved Organic Carbon):** Correlates with UVA absorbance, estimating the concentration of UVA-active compounds in the water.
- TOC (Total Organic Carbon): Total organic carbon in water, indicating pollution levels.

### **Physical**

- Turbidity: Cloudiness of water caused by suspended particles.
- Suspended Solids: Particles in suspension that indicate water quality.
- MLSS (Mixed Liquor Suspended Solids): Concentration of suspended solids in biological treatment, indicating efficiency.
- Particle Counter: Measures the number and size of particles in liquid for water quality assessment.

### Chemical

- Alkalinity Monitor: Measures water's capacity to neutralize acids.
- Chlorine Dioxide: A disinfectant that controls bacteria and pathogens in water.
- Free Chlorine: Chlorine available for disinfection, indicating treatment effectiveness.
- Total Chlorine: The total amount of free and combined chlorine in water.
- Ozone: A strong oxidant used for disinfection and odor control.
- Peracetic Acid: A fast-acting disinfectant effective against bacteria and fungi.
- Hydrogen Peroxide: An oxidizer used for disinfection and odor removal.

### Electrochemical

- Conductivity: Indicates the presence of dissolved ions and salts in water.
- ORP (Oxidation-Reduction Potential): Measures water's ability to oxidize or reduce substances.
- pH: Measures water acidity or alkalinity, affecting chemical reactions.

#### **Process Control**

- Streaming Current: Electrical charge of suspended particles, used in coagulation monitoring.
- Coagulant Dosing: Adding coagulants to remove suspended particles and improve clarity.

Contact us for further information about parameter measurement sales@photonicmeasurements.com