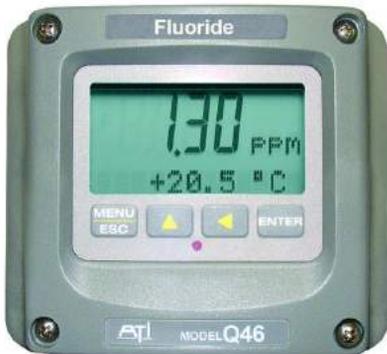


## Chemical Parameter Monitoring



### Description

The comprehensive liquid analysis portfolio for chemical parameters such as paracitic, permanganate, fluoride, sulphite, sulphide contents in potable water.

### Paracitic Acid Monitor

The Paracitic Acid Transmitter uses a direct sensing polarographic probe mounted in a flowcell to measure PAA residuals in a flowing water stream. A permeable diffusion membrane isolates the sensing electrodes from the measured sample, providing long-term stability without electrode fouling problems.

### Permanganate Monitor

Continuous water quality monitoring of permanganate in treated water presents sensor contamination issues. When permanganate reacts with organics or other reducing materials in solution, manganese dioxide (MnO<sub>2</sub>) is formed and readily plates out on sensing electrode surfaces. The resulting deposits degrade the measurement and can be difficult to clean. The monitor eliminates this problem by employing a measurement method in which the sensor never comes into contact with the sample. In operation, water containing permanganate is mixed with pH buffer and potassium iodide solutions. Permanganate oxidizes the iodide to iodine (I<sub>2</sub>), and the resulting I<sub>2</sub> is stripped out of solution and measured using an I<sub>2</sub> gas sensor. This “gas phase” measurement technique eliminates MnO<sub>2</sub> sensor fouling, resulting in a system capable of providing long term reliability.

### Fluoride Monitor

Dissolved Fluoride Monitor for drinking water and other clean water applications. This monitor also conditions the sample for stable measurement and provides automatic calibration using two fluoride standards & Provides continuous measurement of free fluoride concentration in potable water without sample conditioning.

## Sulphite Monitor

Dechlorination of wastewater effluent is common practice in many wastewater treatment facilities throughout the world. Strongly reducing sulfur compounds are used to eliminate chlorine residuals that might prove toxic to fish in the receiving stream. Because residual chlorine discharge limits are often very close to zero, water quality monitoring residual values to comply with regulations has become very difficult, and controlling residuals at values between zero and 10 or 20 parts-per-billion is often not achievable. To meet stringent discharge limits, the sulfite or bisulfite used for dechlorination is added in slight excess, providing a small sulfite residual to ensure complete dechlorination. This Monitor provides operators with a reliable tool for maintaining a small sulfite residual while reducing excess chemical consumption due to overfeed.

## Sulphide Monitor

Dissolved Sulfide Water Quality Monitor provides an improved method for measuring sulfides in solution. Sulfides can be found naturally in well water and can build up in wastewater collection systems due to anaerobic conditions frequently found there. In addition, sulfides are used in mercury removal processes and are frequently found in tanning wastes. In drinking water systems, sulfides cause taste and odor problems. In wastewater systems, sulfides cause damage to concrete structures in collection systems and contribute to odor problems in treatment facilities. Measurement of dissolved sulfide concentrations has been done primarily by the use of analyzers employing ion selective electrodes (ISE) for sensing. While providing adequate sensitivity, ISE based systems require frequent zero and span adjustments to maintain measurement accuracy. Because of this, most ISE based monitoring systems are relatively expensive and require frequent service.