

Measurement Technology and System for Water Treatment

Features

- Continuous chemical oxygen demand (COD) measurement in an ultraviolet (UV) method with no reagents used. (Ensures ease of wastewater treatment because no toxic reagents are used.)
- Incorporates a rotary cell, thus making it possible for a single unit to measure a wide concentration range (adjustable from 0 to 0.5 Abs or 0 to 5 Abs).
- Designed to clean the cell segment with a wiper, which enables continuous measurement for a long time with no maintenance required.

Overview

(Technical principles, actions, etc.)

HORIBA's OPSA-150 Organic Pollutant Monitor is an ultraviolet absorptiometer (UV meter) to monitor underwater organic matter, and has been used for many years as COD monitoring equipment in compliance with Japanese water quality restrictions.



Merit 1: UV absorption method

UV rays with a wavelength of 254 nm are applied to sample water to measure the UV absorption of the sample water to determine the concentration of organic matter in the sample water. There is a very good correlation between the concentration of organic matter and COD. Therefore, the OPSA-150 can be used as a COD meter, provided that the correlation coefficient is obtained before use.

Merit 2: Sensor utilizing HORIBA's proprietary rotary cell length modulation

A zero-point check is made on the influence of degraded water quality, thus preventing zero-point drifting. The multi-point measurement of indicated values, which vary as the cell length changes, makes it possible to obtain precise measurement values.



Introductory Track Record

- Total sales of over 5,000 units: Sewage treatment facilities, private enterprise plants, and others
- Total sales of over 500 units in China: Tianjin Toyota, Guangzhou Honda, Linyi's sewage disposal facilities, Sony's plant, Panasonic Beijing, and others
- Thailand: Mitsui Chemical's Thai plant

Effects

- Checks on the proper processing of the organic matter in the sewerage treatment water, in particular.
- Positively promotes environmental improvements in water quality.
- Contributes to environment tax collection with the measurement of COD concentration.