



Organic Pollution Monitor

UV4100TDO Photometer

Chemical Instrument

Ref: UV4120TDOIntE

- **Very low operating costs**
- **Simple Design__ Rugged and Less Maintenance**
- **Only Real Time Measurement Way for TDO/TOC/COD/BOD/OCA**

UV4100TDO is a new design instrument to monitor organic pollution in water and the principle is based on UV absorption performance of organics dissolved in water.

Principle of operation:

The **UV4120TDO** Organic Analyzer is simple to operate. Its corrosion-resistant, stainless steel probe features two windows separated by a 2 mm path length. The UV light projected across the gap is detected by a photometer. The controller then calculates the light absorbed by organics in the sample stream. Results are read directly off the alphanumeric or graphical display.

Method of analysis:

The **UV4120TDO** Organic Analyzer is based on the absorption of ultraviolet (UV) light by organic matter. The immersion probe consists of a dual-beam absorption photometer that provides efficient compensation for turbidity in the measured medium.

The photometer lays down a measurement beam at the UV wavelength of 254 nm and a second, reference beam at 550 nm. The attenuation of the measurement beam is due primarily to the presence of organic matter, while the attenuation of the reference beam is due primarily to the presence of suspended solids (turbidity).

The instrument measures spectral absorbance coefficient (SAC), a physical parameter, and correlates the SAC value to one of three organic parameters- COD, BOD or TOC. The analyzer can then be configured to read out directly in one of these parameters in units of mg/L or g/L.

Features

- Direct detector eliminates problems associated with sample pretreatment.
- Self-diagnostic functions continuously monitor analyzer operation.
- Compact and lightweight construction. This simplifies maintenance and allows the use of corrosion resistant reinforced plastic.
- Accurate calibration using stability check function and automatic temperature compensation.
- Simplified span check using built-in optical filter.
- Wide measurement range need not auto-range switching.
- Output can be converted to COD/TOC/BOD/OCA from UV-VIS value.
- Sample extraction style analysis can be performed by attaching a water tank receiver.

Advantages Over Conventional Instruments

Very low operating costs

The UV spectroscopy measuring principle requires no chemical reagent or calibration solutions resulting in very low operating and maintenance costs.

Simple Design__ Rugged and Less Maintenance

Thanks to simple, large bore tubing, turbid water with particles in suspension can be monitored without clogging risks.

An optical turbidity compensation maintains correct measurements.

Only Real Time Measurement Way

for TDO/TOC/COD/BOD/OCA

Automatic cleaning system

A fully automated cleaning system prevents the measurement flow cell from becoming dirty, giving the analyser autonomy for several weeks without maintenance.

The cleaning solution (5% sulphuric acid) should be renewed once a month.

This system is more reliable than falling-stream flow cells or in-medium probes.

Long life Xenon lamp

The xenon lamp has a lifetime of 10^9 flashes, equivalent to 10 years of use with one measurement every minute. Or continue measurement of 1 year.

Built-in datalogger

The measurements are dated and stored in a static memory with a capacity of more than 10,000 measurements.

Specifications for Dip-UV4120TDO Transducer Unit

Analyzer: UV Photometer for Total Dissolved Organics Monitor

Measurement: Organic pollution in effluent.

Measurement method: Dual wavelength absorption photometry

Measurement cell: Immersed parallel cell (6mm, 10mm, 25mm).

Measurement range: Absorbance 0~0.5/0~1.0/0~2.0/0~2.5) (auto or manual switching).

Ambient temperature: -5~40°C.

Sample temperature: 0~45°C (no freezing).

Built-in datalogger

The measurements are dated and stored in a static memory with a capacity of more than 10,000 measurements.

Products Model

- 1)Dip-TBD5-UV4100 TDO. for submersion application
- 2)CLA-TBD5-UV4100 TDO. for online pipe or pump sampling application
- 3)PLA-TBD5-UV4100 TDO. for process pipe or pump sampling application, self-calibration and auto-clearing function enhanced



BigDipper TechnoChem Institute, Phone:86-10-8264.9388; Fax: 86-10-6252.3517;62541653
P.o.Box 603 BDTI, Beijing,China 100080. <http://www.fullsense.com>