

# QBD1200 LABORATORY TOTAL ORGANIC CARBON ANALYSER

**LENNTECH**  
WATER TREATMENT SOLUTIONS



## Applications

- Drinking water
- Semiconductor
- Power
- Clear samples TOC <100 mg/L

**The Hach QBD1200 takes the pain out of TOC analysis and lowers your total cost of ownership.**

### Want to trust your TOC results?

Stop throwing away your first replicate. The QBD1200 has 95% less carryover. Inconsistent results? Trust 2% standard deviation at 50 mg/L and 3% at 100 µg/L.

### Want to lower your total cost?

Stop wasting money. Save 60% of your reagent costs. Say goodbye to frequent maintenance. Enjoy annual service vs. monthly.

### Want to simplify your analysis process?

Tired of complicated setup? Begin testing with 90% fewer steps.

### Want to save time?

Save time calibrating. Only 90 minutes for a calibration routine.

**LENNTECH**  
WATER TREATMENT SOLUTIONS

info@lennotech.com Tel. +31-152-610-900  
www.lennotech.com Fax. +31-152-616-289



## Technical Data\*

<b>Measuring range</b>	0.4 µg/L - 100 mg/L	<b>Display type</b>	10.4 inch high-res colour touch screen
<b>Precision</b>	3% or 3 µg/L, whichever is greater	<b>Calibration method</b>	Automated routine: 18 point calibration using KHP (6 concentrations, 3 replicates each)
<b>Accuracy</b>	± 2 %	<b>Calibration interval</b>	1 year; time to calibrate 90 minutes
<b>Sample to sample carryover</b>	< 0.2%	<b>Compliance certifications</b>	ISO 8245 and DIN EN 1484; USP <643> (including sterile water SST), JP-16 <2.59>, EP <2.2.44>, IP, CP, KP, US EPA 415.3 and Standard Method 5310c
<b>Particle size</b>	up to 100 µm	<b>Power requirements (Voltage)</b>	100/240 V AC
<b>Sample homogenisation</b>	Available with Autosampler	<b>Power requirements (Hz)</b>	47 - 63 Hz
<b>Overload recovery</b>	1 measurement	<b>Dimensions (H x W x D)</b>	410 mm x 320 mm x 507 mm
<b>Inorganic carbon handling</b>	No extra inorganic Carbon removal module needed		
<b>Oxidation method</b>	UV lamp + Hot Persulfate		
<b>Carrier gas options</b>	CO <sub>2</sub> free air, O <sub>2</sub> , or N <sub>2</sub>		
<b>Data logger</b>	PDF, CSV		

\*Subject to change without notice.

## Principle of Operation

### TIC

Acid is added to lower the pH so that inorganic carbon is sparged off as CO<sub>2</sub>. This is measured to ensure Total Inorganic Carbon (TIC) is not carried over into the TOC.

### Oxidation

Convert TOC into CO<sub>2</sub> gas. In presence of UV light and powerful oxidiser (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, organic carbon species are converted into CO<sub>2</sub> gas by oxidation. Carrier gas is blown through the reaction chamber to push all CO<sub>2</sub> gas through NDIR detector.

### TOC

CO<sub>2</sub> gas is detected as it goes through NDIR detector and TOC is quantified by integrating the area under the curve. TOC is then calculated, based on instrument calibration, by converting the CO<sub>2</sub> gas signal (area under the curve) into TOC.

## Order Information

### QBD1200 Instrument

**9450000** QBD1200 Laboratory TOC Analyser

### QBD1200 Autosampler

**9467100** QBD1200 Autosampler

### QBD1200 Reagent/Standards

**9459400** One reagent stock solution, 500 mL

**9459500** KHP calibration solution, 5 mg/L C

**9459600** SDBS Validation kit

**9459700** USP System suitability kit (500 µg/L)

**9459800** USP System suitability kit (8 mg/L)

**9459900** Specificity test kit

**9460000** Robustness test kit

**9460100** Validation protocol kit

### QBD1200 Instrument and Autosampler Replacement Items

**9449900** Syringe replacement kit

**9449300** Ozone destructor replacement kit

**9459100** Replacement tubing kit

**9449200** UV reactor replacement

**9464200** Reagent bottle/custom cap kit

**9454300** QBD1200 power supply

**9467200** Autosampler tray

**9454400** Extender Tool for QBD1200 Autosampler tube connection

**9467300** QBD1200 Autosampler power supply

**9467400** QBD1200 Autosampler needle sleeve

**SP6790** Autosampler septum piercing needle