

acquray[®] TOC

The **acquray** TOC is a newly developed, highly sensitive, wet-chemical analyzer for the determination of organically and inorganically bound carbon in aqueous samples. The option to measure additionally also TP and TN makes the **acquray** TOC a unique instrument. The irradiation with UV light at two wavelengths (254 nm and 185 nm) in combination with chemical oxidation and heating is very powerful and guarantees a complete digestion of even most stable carbon compounds.



UV oxidation analyzer

Analyzer

Concentration analysis of	TOC, NPOC, TIC, TC in aqueous samples compliant with ISO 8245, EPA 415-3, ASTM D4839-03, SM 5310 C, and DIN EN 1484
Operating modes	Liquids, solids if the acquray solid module is used
Design	Compact benchtop with single power supply
Power supplies	One for acquray TOC, acquray autosampler, acquray TN, acquray TP (one additional for acquray solid option)
Sample introduction	Peristaltic pump controlled flow injection
Automatic acidification	Included as standard for NPOC analysis; controlled by a peristaltic pump
Detector type	Highly sensitive infrared detection
System control	Fully digital via external PC (no additional control panel required)

Sample Introduction

Sample feeding	Manual or fully automatic by an external autosampler (see below), automatic pre-acidification for NPOC determination as standard
Injection volume	2 - 40 ml (incl. reagents, < 10 ml for standard applications)

Detectors / Electronics

Type	Highly sensitive NDIR detector, linear over the entire range
Calibration	Multipoint, multirange, unlimited number of calibration sets
Analysis time**	~ 5/6 min per parameter
Electronics	Fully digital, fully integrated in unit, no external control panels
Security norms	EU machinery directive 2006/42/EG

Options and Accessories

acquray autosampler	External autosampler, variable configurations possible
acquray TN	Colorimetric nitrogen analysis compliant with ISO 29441
acquray TP	Colorimetric phosphorus analysis compliant with ISO 15681-1
acquray solid	Analysis of Total Organic Carbon (TOC ₄₀₀), Elemental Carbon (Residual Oxidizable Carbon, ROC), Total Inorganic Carbon (TIC ₉₀₀) in solids compliant with DIN 19539, DIN EN 15936, and DIN EN 13137
acquray syringe drive	Highly precise automatic pre-acidification for NPOC analysis controlled by a syringe in combination with acquray autosampler

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Software

Operating system	Windows [®] 10, Windows [®] 8, Windows [®] 7, minimum XP, other systems upon request
Analyzer software	Winvar proprietary software
Features	Leak check Error indicator Auto sleep and wake-up Statistical calculations Indication service cycle LIMS integration 21 CFR part 11 compliant* Comprehensive documentation for fast part identification
Data Storage	Non manipulated storage of experimental raw data and peak graphics

* requires optional configuration ** depending on sample type, analysis mode and configuration

Measuring Range and Technical Specifications

TOC/TC:	0-20,000 ppm, 2 ppb LOD**
Standard deviation:	typically < 1.5 % rel. for 10 ppm KHP standard
TP:	100 ppb LOD*,**
TN:	50 ppb LOD*,**
Dimensions:	42 × 53 × 54 cm (W × D × H)
Weight:	approx. 20 kg
Carrier gas consumption:	approx. 700 ml/min
Required gases:	nitrogen (synthetic air)
Electrical connections:	100/110/200/230 V, 50/60 Hz, 1.8 kW