

enviro TOC

Revolutionary, newly designed analyzer for the determination of TOC, TIC, and TC in liquids, slurries and solids. The robust analyzer comes with a unique matrix separation system (SALTTRAP) and a high-performance furnace for uninterrupted and stable operation of even difficult samples like wastewater and liquids containing suspended particles. The unique autosampler concept guarantees a high throughput of liquid and solid samples and the opportunity for fast mode conversion. Optional TN_b analysis in liquids and the intuitive, user-friendly software completes the attractive instrument package.



Elemental combustion analyzer

Analyzer

Concentration analysis of	TOC, NPOC, TIC, TC, POC*, TN_b * in liquids, TOC, TIC, TC in solids*
Operating modes	Liquids, solids*, POC*, soliTIC*
Design	Compact benchtop with single power supply
Sample introduction	Stepper-motor controlled syringe for water, zero blank patented ball valve system for solids*
Furnace design	High temperature furnace, 10 years warranty
Detector type	Wide-range, 3-channel IR detection (CO_2), electrochemical* or chemiluminescence detection* (NO)
System control	Fully digital via external PC (no additional control panel required)

Sample Introduction

Liquid sample system	Manual or integrated autosampler with 60 positions for 40 ml EPA vials, automatic acidification and sparging
Solid sampling system*	Manual or automatic with 60, 80 or 120 positions
Injection volume	0.05 - 2 ml

Furnace

Type	Resistive heater element with 1200 °C maximum temperature
Electrical supply	48 volt safety design for entire instrument incl. furnace
Control	Automatic power output adjustment (no hardware change required)
Combustion reactor	Quartz tube long life design with separated combustion tube
Ash removal	Quartz easy removal ash finger
Reactor stability	No need for cooling down during routine maintenance
Carrier gas	Synthetic air or oxygen (do not use oxygen in solids mode)
Connections	Quick swap clamp connections for fast changing with no tools required
Recovery rate	100 % according to high combustion temperature (recommended working temperature for standard samples: 850 °C)

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Detectors / Electronics

Type	3-channel IR detector for wide CO ₂ measuring range electrochemical cell or chemiluminiscence for NO detection
Calibration	Multipoint, multirange, matrix-independent calibration, unlimited number of calibration sets
Analysis time**	~ 2.5 min per parameter (with a 10 ppm standard, higher concentrations may require longer analysis time)
Electronics	Fully digital, fully integrated in unit, no external control panels
Security norms	EU machinery directive 2006/42/EC

Software

Operating system	Windows® 10, Windows® 8, Windows® 7/ 32-bit or 64-bit
Features	Quick Tasks Clear Instrument Status (Traffic lights => Green, Orange, Red) Sample Loss Prevention Purpose built, Modern / Clean Customizable Methods / Dashboards (additional license required) Automatic Software Updates Multi-language
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

C in liquids:	up to 30,000 ppm C (0-100,000 ppm CO ₂), 50 ppb LOD
TN _x in liquids:	0-100 ppm NO with electrochemical detector, 100 ppb LOD 0-100 ppm NO with chemiluminiscence detector
C in solids:	max. 10 mg C abs.
Standard deviation:	< 1 % rel. for a 10 ppm KHP standard
Dimensions:	49 × 55 × 57 (W × D × H), with autosampler: 49 × 55 × 83 (W × D × H)
Weight:	approx. 50 kg
Electrical connections:	100/110/200/230 V, 50/60 Hz, 1.8 kW
Carrier gas consumption:	approx. 180 ml/min for analysis (+ optional gas consumption for purging in NPOC mode, TIC mode, and for the autosampler rinsing function: in total ~ 90 ml/min)
Required gases:	synthetic air or oxygen (do not use oxygen in solid mode)