

IL550/IL530 TOC-TN HIGH TEMP COMBUSTION ANALYZERS
IL500 TOC UV-PERSULFATE ANALYZER

*Providing the Most Reliable
TOC Analyzers on the
Market
Today!*



LACHAT
INSTRUMENTS
A Hach Company Brand

The Right Analyzer for Every Application!

Let Lachat support you in your regulatory testing and process monitoring with one of three reliable and robust TOC-TN Analyzers for most any application—including Drinking Water, Surface Water, Municipal and Industrial Wastewater, and Process Waters.



IL500 TOC UV-Persulfate Analyzer

Choose the IL550 or IL530 TOC-TN Analyzer when looking for a wide range—up to 30,000 mg/L—with long term calibration stability and the ability to handle complex matrices such as solids, particulates and high salts.

When greater sensitivity is required, opt for the IL500 TOC UV-Persulfate Analyzer that boasts a large injection volume (20 mL), low maintenance, and effective UV oxidation with a dynamic range up to 10,000 mg/L.

All Lachat TOC analyzers meet USEPA and ISO requirements for testing TOC in drinking water, wastewater, and solids.

	IL550 TOC-TN Combustion System	IL530 TOC-TN Combustion System	IL500 TOC UV Persulfate System
Drinking Water	•	•	•
Surface Water	•	•	•
Sea Water	•	•	
Wastewater	•	•	•
Wastewaters with particles	•	•	
Solids (soil, sludge, etc.)	•	•	
Solids (that require 1300°C)	•	•	

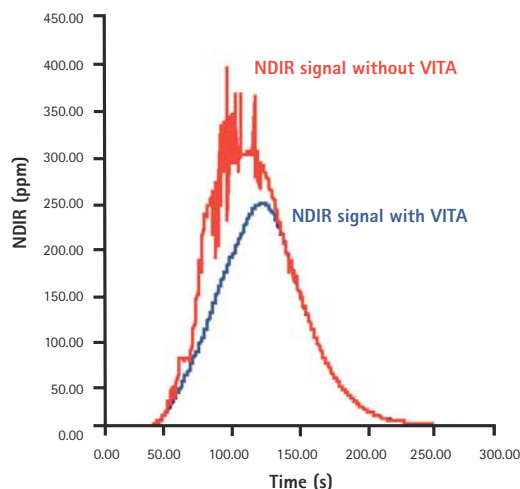
Lachat's Series of TOC-TN Analyzers are Proven Accurate, Easy to Use, and Versatile Enough to Handle Any Sample!



IL550 TOC-TN Combustion Analyzer

Exceptional design features of Lachat high temperature combustion analyzers ensure precision and accuracy of your results!

The unique combination of the following features of Lachat's IL550 and IL530 TOC-TN analyzers combine to ensure reliable and repeatable results, long term calibration stability, and unsurpassed confidence in your analysis!



PATENTED SIGNAL OPTIMIZATION

The IL550 TOC-TN analyzer uses a proprietary TOC signal optimization technology called VITA (retention time coupled integration in TOC analysis). VITA technology compensates for NDIR signal fluctuations that are caused by combustion surges in the carrier gas stream. The following are benefits attributed to VITA Technology.

- Smoothing of gas flow fluctuations resulting in a lower achievable MDL (proven by a comparison of Lachat TOC-TN analyzers against five other instruments that use EPA-approved methods).
- Long term calibration stability of up to 1 year.
- Proven system reliability with near perfect linearity and reproducibility of sample results.

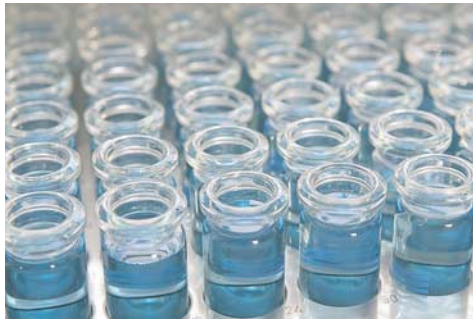
EFFICIENT SAMPLE OXIDATION

The High-Temperature IL550 and IL530 TOC-TN systems offer proven recovery and reproducibility with the following features:

- *VITA optimizes high-temperature combustion up to 950°C for complete and efficient breakdown of the most thermally stable carbon compounds (Limited to IL550).*
- *Optimized composition and long life platinum catalyst.*
- *The HSC 1300 Solids Module digests solids at 1300°C without a catalyst, with sample weights up to 3 g for assured sample homogeneity.*
- *The integrated DFS 950 Double Furnace Module combusts solids up to 950°C using a Cerium Catalyst—offering a less expensive alternative for customers who do not analyze solids frequently.*

DIRECT INJECTION SAMPLE INTRODUCTION

Lachat TOC-TN combustion analyzers offer direct injection, eliminating clogging issues associated with particulates. A pneumatic port hermetically seals the syringe, allowing for septum-free injection directly into the reactor, without tubes or valves.



AUTOMATION WITH THE ASX60 AUTOSAMPLER

- *60 sample positions with an optional tray for up to 112 sample positions.*
- *Fully automatic direction-variable backwash.*
- *Stirring of current sample position only to reduce loss of volatiles.*

HIGH PERFORMANCE NDIR

Lachat TOC-TN analyzers offer a unique, high performance NDIR detector.

- *Four-channel design for wide measuring ranges, up to 30,000 mg/L greatly reducing the need for dilution.*
- *Reference channel compensates for drift and interference.*
- *Temperature controlled detector for signal stability, eliminating the need for time consuming calibration of the detector.*

SIMULTANEOUS TOC AND TN ANALYSIS!

Lachat's High Temperature analyzers can be configured with one of two TN detector modules for simultaneous measurement of TOC and TN.

Two different detection techniques are available for TN determination. The CLD module is a reagent-free method and is based on ISO/TR 11905-2. The ECD module is less expensive option using an electrochemical nitrous oxide gas sensitive probe. Both are maintenance free and use the same catalyst as for TOC.



IL500 TOC UV-Persulfate Analyzer



ASX 49 Autosampler



HSC 1300 Solids Module

The IL500 UV-Persulfate Analyzer provides proven performance for those customers who do not require the high temperature combustion method.

OPTIMIZATION OF SAMPLE ANALYSIS

- *Mass Flow Controller- Regulates gas flow and smoothes out fluctuations, reducing noise and improving accuracy.*
- *Flow Injection- A 20mL sample injection volume increases sample homogeneity and accuracy of results.*
- *Direct contact between UV source and sample ensures highly effective persulfate oxidation.*
- *High Energy oxidation at 187nm and 254nm ensures complete sample breakdown.*

HIGH PRODUCTIVITY

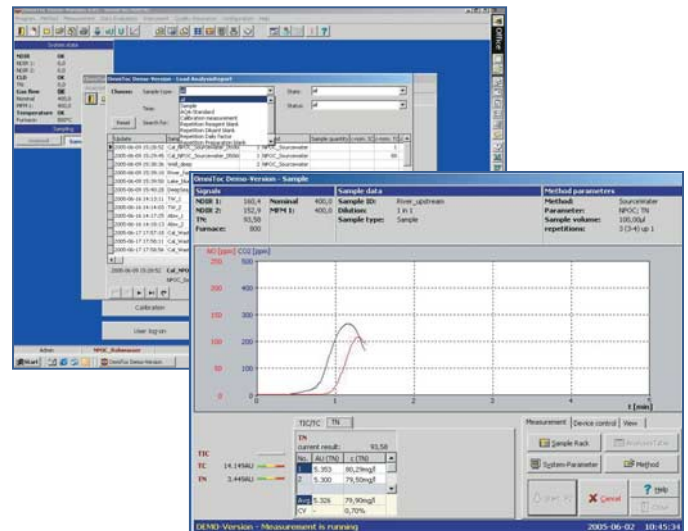
- *Multi-Channel NDIR detector automatically switches channels when the detection limit is exceeded, allowing a possible range of up to 10,000 mg/L without dilution.*
- *The ASX49 autosampler draws a sample while simultaneously sparging the next sample, saving time and increasing productivity.*

Rely on user-friendly software to carry you through your TOC analysis with ease.

EASY TO USE OMNITOC SOFTWARE!

All Lachat Systems incorporate the simple and logical menu guidance of OmniTOC control and analysis software. OmniTOC software logically guides the user while monitoring system parameters with clearly displayed measurement processes.

- *Save time and effort by storing at least 1000 methods and reloading them when needed.*
- *Choose linear or quadratic calibration data regression.*
- *Automatically set up calibration curves for various measuring ranges.*
- *Perform recalculation of individual results.*
- *All necessary statistical data of calibration and measurement is provided.*
- *Conforms to LIMS.*
- *Auto Check systems monitor all key instrument functions, including gas flow and detector response, and promptly displays warnings when necessary.*
- *21 CFR and GLP compliant*



EASY TO MAINTAIN!

Lachat Series TOC-TN analyzers are remarkably easy to use and need minimal maintenance.

- *Easy access of all system components.*
- *Easy exchange of components due to modular design.*
- *Easy removal and refill of system components.*
- *High quality and resistant materials.*
- *Electronic control of all critical parameters.*
- *Simple software explanations and troubleshooting.*

LACHAT TOC-TN SERIES ANALYZERS

Specifications*

	IL550 TOC-TN Combustion Analyzer with Auto-sampler, PC, and VITA Flow Regulation	IL530 TOC-TN Combustion Analyzer with Auto-sampler and PC	IL500 TOC UV Persulfate Analyzer with Auto-sampler and PC
Sample Oxidation			
High temperature combustion up to 950 °C	•	•	
UV/persulfate (Peak energy at 254 nm, 187 nm)			•
Sample Injection			
Flow injection			•
Direct injection	•	•	
Pneumatic injection head for particles	•		
Parameter			
TC/TOC/NPOC, TIC by difference or purge method	•	•	•
TIC	•	•	•
Signal Optimization			
VITA flow compensation	•		
Device Control			
PC-control	•	•	•
Solid Sample Analysis			
DFS 950 for TC liquid/solid	•	•	
TC in solid samples by HT 1300 (optional)	•	•	
Measurement Range** (mg/L)			
TC/TOC/NPOC/TIC	0.05 to 30,000	0.2 to 30,000	0.002 to 10,000
TN (ECD)	0.1 to 100	0.1 to 100	
TN (CLD)	0.1 to 200	0.1 to 200	
Conformity			
DIN-EN 1484 (TOC version)	•	•	
DIN-ENV 12260 (TN version)	•	•	
ISO 8245 (TOC version)	•	•	
Standard Method 5310 B	•	•	
Standard Method 5310 C			•
Standard Method 5310 D			•
USEPA 415 (TOC version)	•	•	•
USEPA 9060 (TOC version)	•	•	

*Subject to change without notice.

**Measuring range and detection limits depend on the selected injection volume, the purity of the vessels, chemicals and gases used, and the qualification of the operators.

Local Distributor:

For Technical Assistance, Price Information and Ordering

In the U.S.A.

Call toll-free (800) 247-7613.

Outside the U.S.A.

Contact the LACHAT office or distributor serving you.

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