



Wastewater Lab Analysis

DELIVERING TRUSTED RESULTS ON YOUR LAB BENCH



Water Testing on the Bench with Xylem Lab Solutions

Wastewater treatment facilities provide an essential service to their community and must jump over many hurdles to comply with strict regulatory requirements.

At Xylem, we understand the necessity of low-cost, user-friendly analysis platforms for water testing applications from sample preparation, to nutrient testing, to total organic carbon determination, to pH, ORD, DO/BOD. Gerhardt, OI Analytical, and YSI are just a few of the Xylem brands that produce analyzers equipped to measure the plethora of nutrients found in water.

Xylem Lab Solutions is committed to meeting the needs of laboratories of all sizes. Our products are GLP compliant and allow for easy data transfer between the device and LIMS software.



Benchtop Sample Preparation

What is Digestion?

Chemical digestion is an important step in many analytical methods, including Total Nitrogen and Phosphorous. Essentially, digestion is a form of oxidation (using acid and high heat) that is necessary to purify a sample matrix and remove potential interferences for subsequent analyses. Classical digestion methods are time-consuming and require a significant level of expertise to repeatedly obtain the same results.

Make Life Easier with Block Digestion



KJELDATHERM

The **KJELDATHERM** from Gerhardt simplifies and standardizes acid digestion. Quickly and accurately run 30 predefined, customizable methods on this aluminum, acid-resistant block digestion system. Digest 8, 20, or 40 samples simultaneously using 100, 250, or 400mL vials.



VACUSOG

Kjeldahl digestion is possible without corrosive and toxic vapors with the addition of the **VACUSOG** fume scrubber. This 4 stage scrubber reliably removes SO₂ and SO₃.

Kjeldahl System for Any Laboratory

Xylem Lab Solutions can help equip you with a safe, flexible, reliable and efficient system in your laboratory. From the **KJELDATHERM** precise block digestors to steam distillation in the **VAPODEST** with a variety of automation levels.



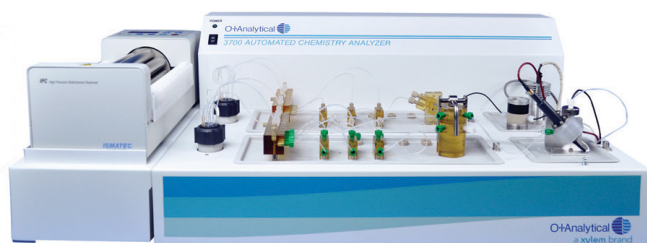


Benchtop Nutrient Testing

We offer a variety of instruments for the measurement of a multitude of parameters and our wide selection of sensors ensures that even the most challenging aqueous sample can be analyzed.

Automated Chemistry Analysis

Simultaneous flow injection analysis (FIA) and segmented flow analysis (SFA) is possible with the **FS3700**, the latest automated chemistry analyzer from OI Analytical. With over 30 years of continuous flow analyzer manufacturing and method development under its belt, OI offers the most cost-effective, modular system on the market.



FS3700

Say Goodbye to Manual Dilution

With the **ML600 Autodilutor**, OI has delivered what many labs have been asking for. Autogenerate calibration curves, make calibration standards from a single stock standard, and automatically dilute over range samples with this powerful addition to the Flow Solution platform.



ML600

FS3700 Automated Chemistry Analyzer Methods List

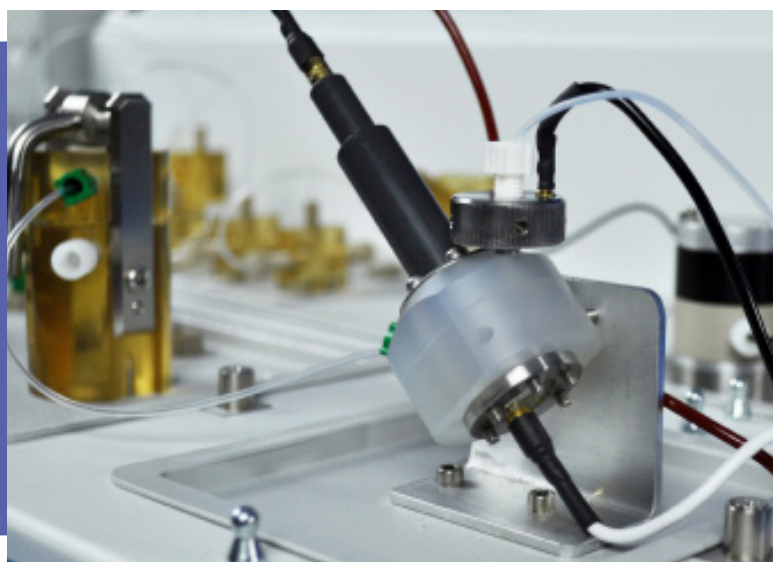
Analyte	Technique	Method	Throughput	Channel ² Part #	Cartridge Part #
Nitrate/Nitrite	FIA	USEPA Method 353.2	60 samples per hour	330108	330093
	SFA		40 samples per hour	331377	331376
Nitrate/Nitrite	FIA w/ In-line Dialysis	ISO 14673-3	30 samples per hour	331535CT	331534
Nitrogen (Total Dissolved)	SFA	USEPA Method 353.2	20 samples per hour	330955CT	330954
Phenol In-line distillation	SFA	USEPA Method 420.4	22 samples per hour	330363	330364
Phenol (Post-Distillation)	FIA	USEPA Method 420.4	90 samples per hour	330110	330083
Phosphorus (All Forms)	FIA	USEPA Method 365.1	60 samples per hour	330111	330096
Phosphorus All Forms - Low Level	FIA	USEPA Method 365.1	45 samples per hour	330112	330095
Phosphorus (Total)	FIA w/ In-line UV/Persulfate	Standard Method 4500-P-I	30 samples per hour	330958CT	330959
Silica	SFA	Standard Method 4500-SiO ₂ E	60 samples per hour	332386	332387
Sulfate	FIA Photometric	USEPA Method 375.2	40 samples per hour	331385	331386
TKN Total Kjeldahl Nitrogen	SFA, Gas Diffusion	USEPA Method 351.2	40 samples per hour	330109	330094

¹ Method Detection Limit (MDL) determined in accordance with 40 CFR Part 136 Appendix B

² Channels include the cartridge, detector, and valve (if required).

Lab Solution Tip

Combine the **Kjeldatherm** with the **FS3700** to rapidly determine TKN, Ammonia, and Total Cyanide with gas diffusion following EPA 351.2 and ASTM D7511. Increase throughput, limit interferences, and accurately reproduce every step of your desired analyses with this powerful combination.



Learn More:
[YSI.com/OI-Analytical](https://www.yi.com/OI-Analytical)

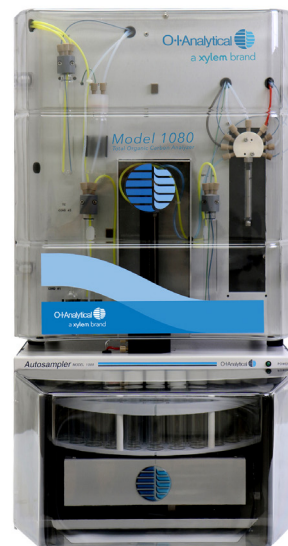


Benchtop TOC Determination

Wastewater treatment plants need a reliable way to monitor the efficacy of the processes they employ. Total Organic Carbon (TOC) analysis is the fastest, most cost-effective way to non-specifically determine organics concentration within a water sample.

In addition to being an industry standard for testing influent and effluent water, TOC analysis is increasingly being used as a substitute for Biological Oxygen Demand (BOD) or Chemical Oxygen Demand (COD) due to its versatility and rapid measurement time. The 1030W, a **TOC analyzer** that uses the wet chemical oxidation technique can analyze up to 300 samples per day. If the sample has high particulate matter, then the Model 1080 combustion analyzer may be preferred.

OI Analytical's TOC analyzers comply with USEPA, CEN, USP, EUP, ASTM, ISO, DIN, and STD methods, including ASTM 5310 A, B, and C.



1080 Combustion



1030W Wet Chemical Oxidation



Kjeldatherm

COD Digestion

Gerhardt also offers versions of the **Kjeldatherm** specifically designed for COD Digestion. These compact units come with a programmable controller unit, predefined methods, and an optional automatic lift for the loaded sample rack.



Benchtop Multiparameter and AutoTitrator Instruments

Industry-Leading Probes for pH, ORP, DO/BOD, and Conductivity

YSI's **ProOBOD** probes are the industry standard for BOD analysis. These self-stirring probes have a smart sensor (IDS) that retains calibration inside the probe, require very low maintenance to operate, and come with a 2-year warranty.

1, 2, or 3 Channels

The **Multilab** is the perfect benchtop controller for pH, ORP, DO/BOD, and/or conductivity analysis. There are different versions of this analyzer that allow for up to 3 channels of simultaneous analysis.



Multilab

Titration Solutions for Every Lab

YSI Titrators provide accuracy to wastewater labs and can analyze several key parameters such as alkalinity, TKN (Total Kjeldahl Nitrogen), and volatile fatty acids. The **TitroLine** automated titrators, **TITRONIC** manual titrators, autosamplers, and TitriSoft software make measurements easy, transparent, and repeatable. Regardless of budget, YSI has a titration solution for your lab!



TitroLine 7800



Resources



[YSI.com/customer-support](https://www.ysi.com/customer-support)

Customer Support

Xylem's analytical instruments are used in numerous applications worldwide. Browse our Customer Support Hub to get the most out of our products, or contact our superior customer support service team. customer service with any questions.

[YSI.com/Wastewater](https://www.ysi.com/Wastewater)

Applications

Learn more about Laboratory Wastewater Analysis and water testing applications.

[YSI.com/LabSolutions](https://www.ysi.com/LabSolutions)

Xylem Lab Solutions

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Online Store

Your one stop destination for your day-to-day supplies and standards.



Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.




Xylem Lab Solutions' global brands have been leaders in the laboratory instrumentation market for decades, and are relied upon every day across more than 150 countries. Working in true partnership with our clients, we listen, learn and adapt to individual needs, offering deep application expertise built upon our long history of innovation in instruments and services. Our solutions for analysis, measurement and monitoring help enable many of today's modern laboratories and industrial processes, and provide our customers the trusted and high performing solutions they need to succeed.

Xylem Lab Solutions is part of Xylem Inc., a global company focused on solving the world's most challenging and fundamental water issues. As accurate analysis is crucial to the water industry, Xylem Lab Solutions taps its diverse product brands for leadership in that field and beyond, providing the best laboratory and field monitoring instrumentation across a wide variety of industries.

For more information on how Xylem can help you, go to www.xylem.com



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