



Fast, safe, and easy nutrient analysis of drinking water, wastewater, and soil samples

Gallery Discrete Analyzer—a must-have upgrade to replace flow injection analyzers, segmented flow analyzers, titrators and manual methods

Determining nutrient levels in drinking water, wastewater, and soil samples is critical for protecting aquatic habitats and maintaining clean and safe drinking water supplies.

Traditional wet chemistry techniques, including titrations and flow injection analysis, are slow, labor-intensive and often unreliable, involving large amounts of hazardous reagents that add substantial costs for waste disposal.

[Thermo Scientific™ Gallery™ and Thermo Scientific™ Gallery Plus discrete analyzers](#) are an integrated, automated, high-throughput platform for nutrient analysis.

Together with [ready-to-use system reagents](#), they provide a faster, safer, turnkey solution to traditional wet chemistry methods for the more reliable measurement of:

- Alkalinity
- Ammonia
- Chloride
- Cyanide*
- Hexavalent chromium
- Nitrate (NO₃ only automated calculation)
- Nitrate+Nitrite (TON) (Enzymatic, hydrazine, or vanadium reductions)
- Nitrite
- Orthophosphate
- Silica
- Sulfate
- Sulfide*
- Total hardness
- Total Kjeldahl nitrogen (TKN)
- Total phenol*
- Total phosphorous (TP)
- Urea

* Third party reagent

If your lab has an old wet chemistry instrument, such as a discontinued Lachat QuikChem™ Flow Injection Analyzer, it is time to consider upgrading to a discrete analyzer for full walkaway, multi-parameter water and nutrient analysis.



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Regulatory compliance with confidence

All Gallery and Gallery Plus system methods are compliant with United States Environmental Protection Agency (U.S. EPA), National Environmental Laboratories Accreditation Conference (NELAC), and recognized international standards. Thanks to automated calibration functionality, robust analytical performance, ready-to-use buffers, and National Institute of Standards and Technology (NIST) traceable standards, laboratories can be confident their tests comply with the latest regulatory requirements. Also, industrial organizations can be assured that wastewater streams meet permissible nutrient levels.

Gallery discrete analyzer

U.S. EPA wastewater reference methods			
Analyte	Regulatory method	Analyte	Regulatory method
Alkalinity	EPA 310.2 (Rev. 1974)	Nitrate+Nitrite (Hydrazine reduction)	SM 4500-NO3-H
Ammonia	EPA 350.1 (Rev. 2.0 1993)	Nitrate+Nitrite (Vanadium reduction)	NEMI (Nitrate via manual Vanadium (III) reduction)
	SM 4500-NH3-F		
	SM 4500-NH3-G		
COD*	EPA 410.4 (Rev. 2.0 1993)	Nitrite	N07-0003 (Bypass enzymatic reduction)
Chloride	SM 4500-Cl-E		SM 4500 NO2-B
Chlorine (Total residual)*	SM 4500-Cl-G	Orthophosphate	EPA 365.1 (Rev. 2.0 1993)
Conductivity	EPA 120.1 (Rev. 1982)		SM 4500-P-E
Copper*	SM 3500-Cu-C	pH	EPA 150.2 (Dec. 1982)
Cyanide (Amenable)*	SM 4500-CN-G	Silica	SM 4500 SiO2-C
Cyanide (Total)*	EPA 335.4 (Rev. 1.0 1993)		SM 4500 SiO2-D
		SM 4500-CN-E	Sulfate
Fluoride	SM 3500-F-D	ASTM D516-16	
Total hardness	EPA 130.1 (Issued 1971)	Sulfide*	SM 4500-S2-D
Chromium	SM 3500 Cr-B	Total Kjeldahl nitrogen (TKN)	EPA 351.2 (Rev. 2.0 1993)
Iron	SM 3500 Fe-B	Total phenol*	EPA 420.1 (Rev. 1978)
Nitrate+Nitrite (Enzymatic reduction)	N07-0003	Total phosphorous	EPA 365.1 (Rev. 2.0 1993)
	ASTM D7781-14		EPA 365.4 (Issued 1974)
	USGS I-2547-11		
	USGS I-2548-11		SM 4500-P-E

* Third party reagent

U.S. EPA drinking water reference methods	
Analyte	Regulatory method
Conductivity	SM 2510-B
Cyanide (Total)*	EPA 335.4
	SM 4500-E
Cyanide (Amenable)*	SM 4500-G
Fluoride	3500-F B, D
Nitrate+Nitrite (Enzymatic reduction)	NECi Nitrate-Reductase
Nitrite	NECi Nitrate-Reductase (Bypass enzyme)
	SM 4500-NO2-B
pH	EPA 150.2
Orthophosphate	EPA 365.1
	SM 4500 P-E
	SM 4500 P-F
Silica	SM 4500 SiO2-C
	SM 4500 SiO2-D

Learn more at thermofisher.com/discreteanalysis

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