Master Catalog

Comprehensive Water Analysis

www.newteclab.mx
Tel. 667 7161023, 7160188
email: ecommerce@newteclab.mx

New Product Announcements

Discover the Future of Water Management with Hach. Unlock the door to innovation and explore the latest advancements in water management solutions by Hach®. With a legacy of excellence spanning nearly a century, Hach remains at the forefront of the industry, continuously evolving to meet the demands of efficient and precise water management. Stay informed about our newest products and solutions that are shaping the future of water analysis.

LEARN MORE ABOUT NEW HACH PRODUCTS!

Promotions

Our current promotions are a splash of savings and innovation, designed to enhance your water analysis experience. From discounts on top-tier instruments to special offers on our chemical reagents, there's something for everyone. To discover the latest promotion that's making waves, simply scan the QR code. Stay current with Hach's dynamic deals and elevate your water management solutions today!

SEE THE LATEST SPECIAL OFFERS!

Gift of the Month Club

By referencing the Catalog Promo Code when placing your order, you'll be enrolled in our exclusive Gift of the Month Club, ensuring you receive a special free gift with each monthly purchase. It's our way of saying thank you for choosing Hach, and to add a little extra joy to your water analysis journey. Remember, each month brings a new surprise, so don't forget to use the promo code with every order!

USE THIS PROMO CODE WITH EVERY ORDER!

SurpriseME

Cover photo: Lake De Smet, Wyoming by Hach employee Jeramey Johnson

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Ensuring Water Quality for People Around the World

At Hach, we provide innovative solutions for water quality analysis.

With a rich history of more than 90 years, Hach has been at the forefront of developing reliable, easy-to-use products and services that ensure water quality for people around the world.

Our comprehensive range of instruments, chemistries, software, and services are designed to meet the needs of our customers in various industries, including municipal water, wastewater, food and beverage, and power.

Our commitment to excellence is reflected in our continuous investment in research and development, ensuring that we deliver cutting-edge technologies. As we make water analysis better, faster, and simpler, we empower our customers to make informed decisions with confidence and reach their water quality goals.

Join us in our mission to ensure water quality for everyone, everywhere.

Our Sustainability Commitment

Hach is dedicated to conducting our business in an environmentally responsible manner.

We comply with all applicable environmental, health, and safety laws and regulations. This commitment helps promote and protect the health and safety of associates, customers, and local communities worldwide.

Hach has been recognized globally for our sustainability efforts. We received a Silver Medal from EcoVadis, placing it in the top 15% of all companies in our sector rated by EcoVadis. This recognition highlights the depth and breadth of Hach's sustainability program globally.

Additionally, Hach encourages all associates to contribute to sustainability efforts, from simple actions like turning off lights to ensuring proper waste disposal.

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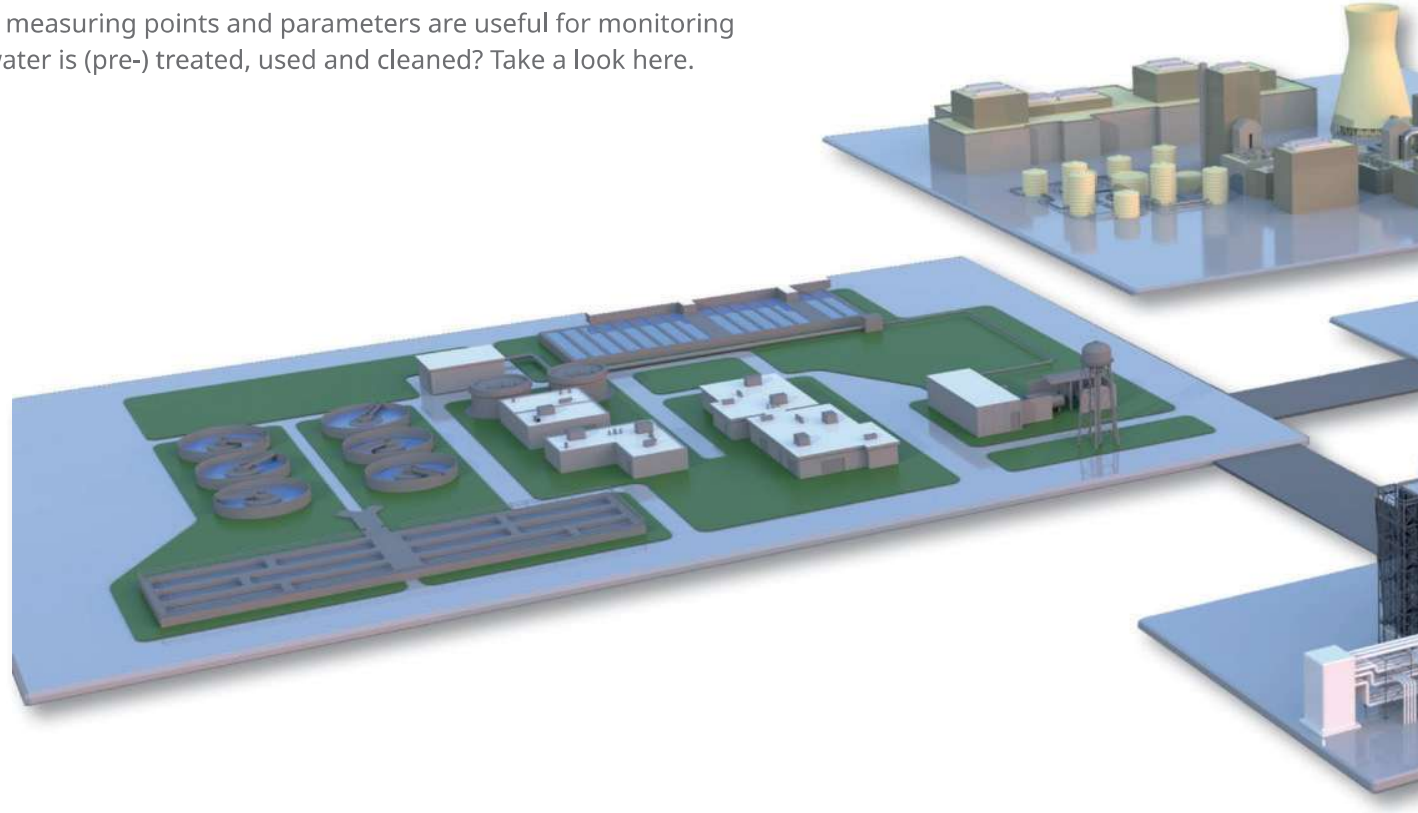
Hach Water Analysis Solutions

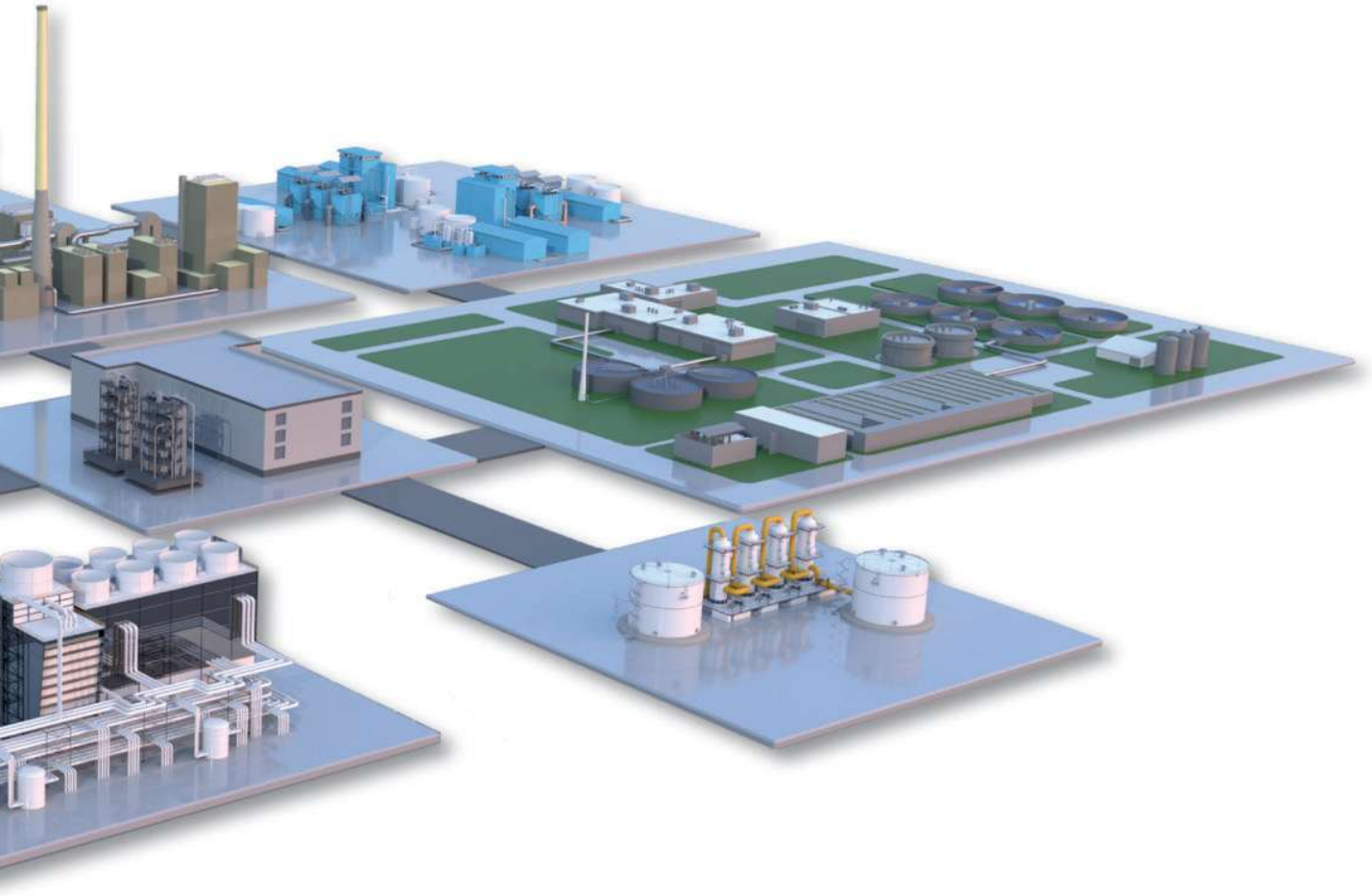
For Municipal Treatment & Industrial Water Cycles

Which measuring points and parameters are useful for monitoring how water is (pre-) treated, used and cleaned? Take a look here.



Parameter	Process Steps	Analysis
Absorption	5	
Alkalinity	1, 2, 3, 6, 11	
Aluminum	1, 2, 3	
Ammonium	1, 4, 11	
Ammonium/Monochloramine (only UK)	2	
Automatic Sampling	1, 7, 8, 11	
Chloride	3, 4, 6, 9, 10	
Chlorine	1, 2, 3, 6, 11	
Chlorine Dioxide	2	
COD Baseline Monitoring	7, 8	
Color	5, 7, 8	
Conductivity	2, 6, 7, 8, 9, 10, 11	
Corrosion Parameters (Iron, Copper)	3, 4	
Cyanide	9, 10	
Degassed Conductivity	3, 4	
Disinfectants (Chlorine, Chlorine Dioxide, Ozone)	7, 8	
Dissolved Hydrogen	3	
Dissolved Oxygen	1, 2, 3, 4, 6, 11	
Fluoride	9, 10	
Hardness	1, 3, 6	

Parameter	Process Steps	Analysis
Iron	1	
Manganese	1	
Microbial Load (ATP)	1, 2, 6, 7, 8	
Molybdenum	6	
Nitrate	1, 11	
Oil in Water	1, 3, 4, 7, 8	
Organic Acids	11	
ORP / Redox	1, 2, 4, 6, 11	
Oxygen Scavengers	3, 4, 6	
Ozone	2	
Permanganate	2	
pH / Temperature	1 - 11	
Phosphate	2, 3, 4,11	
Production plant specific contamina-tions: event / baseline monitoring	7, 8	
Production specific quality control parameters (e.g. salt, Bitter Units, own methods)	5	
SAC	1, 2	
Silica	3, 4, 6	
Sludge Level	1, 2, 11	
Sodium	3, 4,6	



Parameter	Process Steps	Analysis
Specific & Cationic Conductivity	3, 4, 6	
Specific Conductivity	1, 2, 3, 4, 6, 10	
Sulfate	10	
Sulfide	7, 8, 9, 10	
Suspended Solids	2, 11	
TOC	1, 2, 3, 4, 6, 9, 10, 11	
TOC / VOC baseline	7, 8	
TOC / COD / BOD	11	
TOC / SAC	11	
Total Nitrogen	11	
Total Phosphorus	6, 11	
Toxicity	7, 8, 11	
Trace Metals (Copper, Nickel, Aluminum...)	6, 7, 8, 10	
Turbidity	1, 2, 3, 4, 5, 6, 8, 9, 10, 11	
UV Transmission	2	
RTC-C/DC	2, 6	
RTC-CNP	11	
RTC-DAF	9	
RTC-N (for Ammonium)	11	
RTC-N/DN (for Nutrients)	11	

Parameter	Process Steps	Analysis
RTC-P (for Phosphate)	11	
RTC-SD (for Suspended Solids)	11	
RTC-ST (for Suspended Solids)	11	

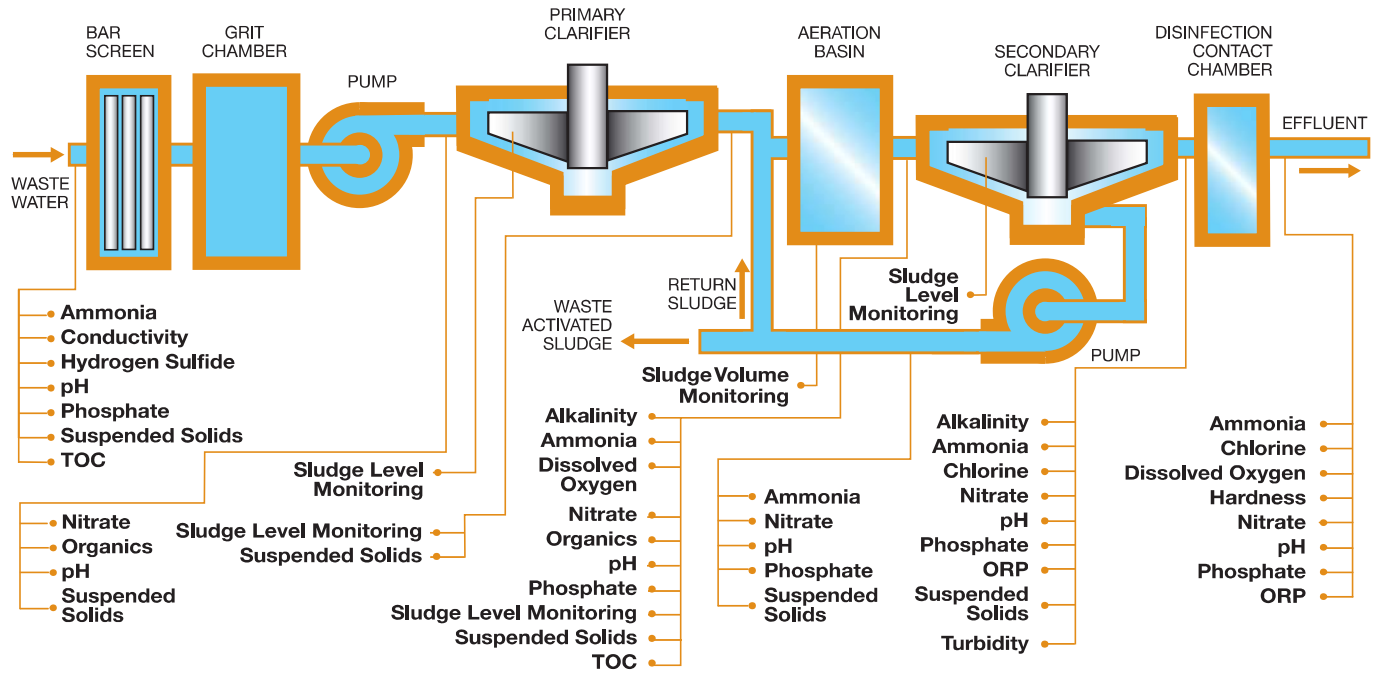
Process Steps

1 Source Water Intake
2 Source Water Processing & Treatment
3 Pure & Ultra-Pure Water Treatment & Polishing
4 Hot Water, Steam & Power Generation
5 Environmental, production line & Quality Control laboratories
6 Cooling Water Conditioning / Make Up Water
7 Cooling Water Return
8 Condensate Return
9 Production Wastewater Discharge & Wastewater Pretreatment
10 Sewer Management
11 Biological Wastewater Treatment Plant

Laboratory analysis solution

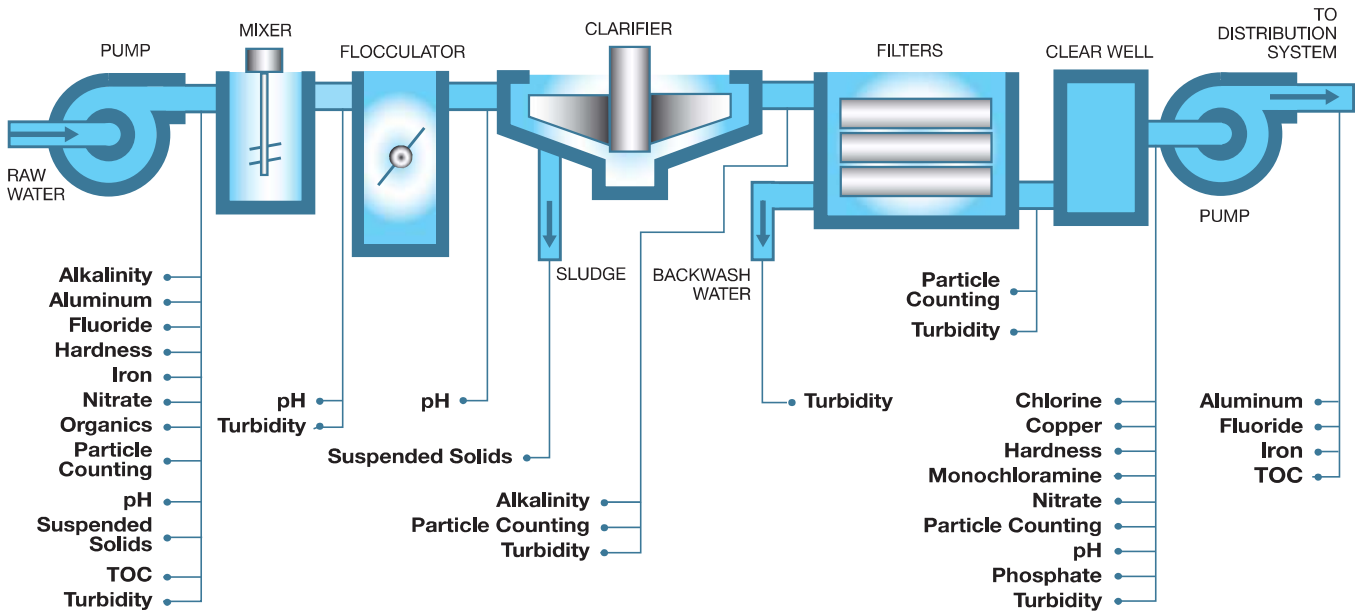
Online process analysis solution

Wastewater Treatment Flow Diagram



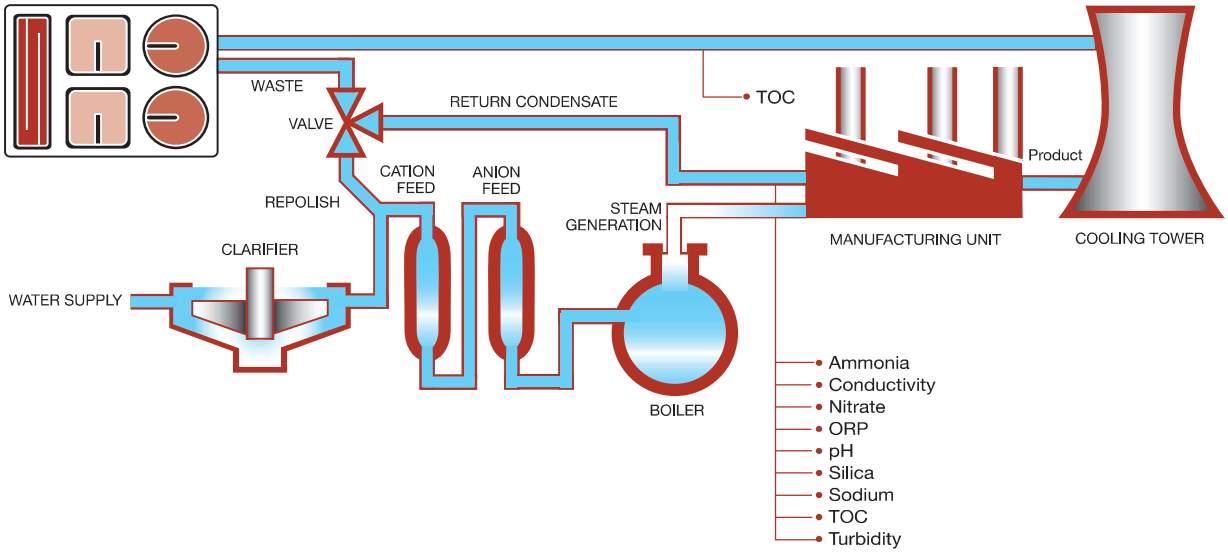
Parameters	Collection System	Influent	Primary Sedimentation Tank	Aeration Tank	Secondary Sedimentation Tank	Tertiary Treatment	Disinfection	Nutrients Removal	Digestion Tank	Sludge	Effluent	Online Analyzers & Instruments	Laboratory & Potable Instruments	Test Kits
Alkalinity		•	•	•	•			•		•	•		•	•
Ammonia		•	•	•	•	•	•	•			•	•	•	•
BOD		•		•							•		•	
Chlorine							•				•	•	•	•
COD		•									•		•	
Conductivity		•	•	•	•			•			•	•	•	
Dissolved Oxygen	•			•	•	•		•	•	•	•	•	•	
Total Coliform				•	•		•			•	•		•	•
Fecal Coliform				•	•		•			•	•		•	•
Flow Rate	•	•	•	•	•	•	•	•	•	•	•	•		
Hardness		•	•	•	•			•		•	•		•	•
Hydrogen Sulfide	•	•	•									•	•	
Nitrate				•	•	•		•			•	•	•	•
Nitrite													•	
Nitrogen				•	•	•		•			•		•	
Organics		•		•	•	•					•	•		
ORP	•		•	•		•	•	•	•		•	•	•	
Ozone						•	•					•	•	•
pH	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Phosphates								•				•	•	
Total Phosphorous											•		•	•
Suspended Solids	•	•	•	•	•	•		•	•	•	•	•	•	
Turbidity		•		•	•	•					•	•	•	

Drinking Water Treatment Flow Diagram



Parameter	Raw Water / Inlet	Particle Removal	Filter Inlet	Filter / Membrane Outlet	Clear Well	Outlet	Distribution	Online Sensors and Instruments	Laboratory and Portable Instruments	Test Kits
Alkalinity (P&T)	•		•			•	•	•	•	•
Aluminum	•		•	•		•	•		•	•
Ammonia	•					•	•	•	•	•
Chlorine	•			•	•	•	•	•	•	•
Conductivity	•					•	•	•	•	
Copper	•					•	•		•	•
Dissolved Oxygen	•		•				•	•	•	•
Fluoride	•						•	•	•	•
Hardness (T&Ca)	•					•	•	•	•	•
Iron	•				•	•	•		•	•
Manganese	•				•	•	•		•	•
MonoChloride	•				•	•	•	•	•	•
Nitrate	•			•	•	•		•	•	•
Organics (UV254)	•							•	•	•
ORP	•							•	•	•
Ozone	•	•	•	•				•	•	
Particle counter	•		•		•	•		•	•	
pH	•	•	•		•	•	•	•	•	•
Phosphate	•					•	•	•	•	•
Sludge	•							•		
Sulfate	•								•	•
Suspendid solids	•							•	•	
TOC	•					•	•	•		
Turbidity	•	•	•	•	•	•	•	•	•	

Industrial Water Flow Diagram



Parameter	Online Sensors and Analyzers	Laboratory and Portable Analyzers	Test Kits and Test Strips	Reagent
Alkalinity	•	•	•	•
Ammonia	•	•	•	•
BOD		•		•
COD		•	•	•
Chloride		•	•	•
Chlorine	•	•	•	•
Chlorine dioxide	•	•	•	•
Conductivity	•	•	•	•
Copper	•	•	•	•
Dissolved oxygen	•	•	•	•
Flow rate & Auto sampler	•			
Hardness	•	•	•	•
Iron		•	•	•
Aluminum		•	•	•
Germ culture		•	•	•
Molybdate		•	•	•
Monochloramine	•	•		•
Nitrate	•	•	•	•
Nitrite		•		•
Nitrogen		•	•	•
Organics (UV254)	•	•	•	
Ozone	•	•	•	•
pH/ORP	•	•	•	•
Deoxidant	•	•	•	•
Phosphorous	•	•	•	•
Silica	•	•	•	•
Sodium	•	•		•
Sulfate		•	•	•
TOC	•	•		•
Turbidity & Suspended solids	•	•	•	•

Lab Chemistries

Hach Prepared Reagents Overview
TNTplus Vial Chemistries
Powder Pillows
Chemkey Reagents
Hach TNT Vials
Swiftest Dispenser
Accuvacs
Hach Standard Solutions
Test Kits
Test Strips
Microbiological Products

HACH®
Be Right™

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Hach Prepared Reagents

TNTplus Vial Chemistries (13 mm)

Hach's DR6000 and DR3900 spectrophotometers read the vial barcode to automatically select and run the correct method, and check shelf life of the reagents, thus eliminating human error and speeding up analysis. No reagent blank necessary —this saves you time and money.

Powder Pillows

Prepackaged unit dose reagent with extended shelf life and tightly-controlled weight fill. Our most cost-conscious reagent platform.

Chemkey Reagents

Chemkey reagents execute the same process steps that you have trusted for decades — now delivered in a simple, self-contained package. All chemicals and processes are entirety contained inside the Chemkey. There is no zeroing, no mixing, no shaking, no chemicals or vials to handle. All you have to do is insert the Chemkey into the SL250/SL1000 PPA and let the instrument read you back the results.

TNT (Test 'N Tube) Vials (16 mm)

Vial chemistry platform that incorporates powder pillow technology for economical, easy-to-use methods. The right blend of simplicity and economy.

Swiftest Reagent Dispenser

The easy way to dispense reagents for high volume testing. No need to open individual packets - just squeeze! Reloading is simple with easy-to-use vials.

Accuvac Ampules

Optical-quality, vacuum-sealed glass ampules that contain the precise amount of reagent needed for a single test and can be used as the measurement cuvette. Quick, easy, and economical. Snap the tip and the ampule draws in the correct amount
of sample.

Learn More

TNTplus® Vial Chemistries

Expert water analysis made simple.

Reduce errors

A unique barcode label on each Hach® TNTplus Vial Chemistry is automatically read by the spectrophotometer when used with Hach's DR6000™ UV-VIS Spectrophotometer or DR3900™ Benchtop Spe-13-13ctrophotometer to identify the appropriate method and take the measurement. This significantly reduces errors as well as scratched, flawed or dirty glassware becomes non-issue as the instrument averages 10 readings and rejects outliers.

Lot after Lot - Be Right

Truecal™ with each vial includes the calibration data for each individual lot, reducing variation in results. This allows you to meet reporting standards and to perform proficiency testing with higher confidence.

Truecal supports many TNTplus vial test wastewater parameters such as ammonia, COD, nitrate, phosphate and Total N.

Documented shelf life and COA

The barcode details batch number and expiry date of reagents, which are documented along with the measurement result. An automatic warning is issued if expiry date has passed. Certificate of Analysis (COA) is available on RFID* tag on the box, which can be read out with the DR6000 or DR3900 spectrophotometer.

No reagent blank necessary

The high quality of TNTplus vials, tight reagent production controls, instrument calibration verification, and high instrument stability all combine to eliminate the need to run reagent blanks —saving you time and money!

Safe and easy handling

TNTplus vials use innovative Dosicaps that are easier to use than powder pillows or liquid reagents. There's no risk of spillage, no safety risk, or risk of contamination with Dosicaps because the reagents are completely contained within the vial cap. The glassware used assures the best precision and the vials have a flat bottom so they can stand on their own.

Packages of TNTplus vials are color-coded for fast and easy parameter and range recognition for the exact test you need. Step-by-step illustrated test methods are printed on the box for quick reference.

Order Information

Accessories

TNT890	Metals Prep Set (used for Cu, Fe, Pb, Cd, & Ni digestion), 50 digestions
TNT892	Calcium Separation Set (for Cadmium TNTplus Test TNT852), 24 separations
TNT919	Sample Blank Vials for TNTplus, 5/pk
BBP078	Pipet, Variable Volume, 0.1-1.0 mL
BBP065	Pipet, Variable Volume, 1.0-5.0 mL
BBP079	Pipet Tips for 0.1-1.0 mL Pipet (BBP078), 100/pk
BBP072	Pipet Tips for 1.0-5.0 mL Pipet (BBP065), 100/pk
LZP320	Pipet Set BBP065 & BBP078, with tips

Learn More

TNTplus Vial Tests*

Prod. No.	Parameter	Range	Method Name	Method Number	Truecal	EPA
TNT870	Alkalinity, Total	25 - 400 mg/L $CaCO_3$	Colorimetric	10239		
TNT848	Aluminium	0.02 - 0.50 mg/L Al	Chromazurol S	10215		
TNT830	Ammonia, Nitrogen	0.015 - 2.00 mg/L NH_3-N	Salicylate	10205	Yes	Yes
TNT829		0.50 - 5.00 mg/L NH_3-N	Salicylate	10205	Yes	
TNT831		1 - 12 mg/L NH_3-N	Salicylate	10205	Yes	Yes
TNT832		2 - 47 mg/L NH_3-N	Salicylate	10205	Yes	Yes
TNT837		10 - 100 mg/L NH_3-N	Salicylate	10205	Yes	
TNT833		47 - 130 mg/L NH_3-N	Salicylate	10205	Yes	Yes
TNT834		100 - 1800 mg/L NH_3-N	Salicylate	10301		Yes
TNT882KTO	Anammox Activity	0 - 1000 mAbs	Heme	10304		
TNT817	International Bitter Units	≥2 International Bitter Units	Analogous MEBAK and ASBC	10288		
TNT877	Boron	0.05 - 2.50 mg/L B	Azomethine-H	10274		
TNT852	Cadmium	0.02 - 0.30 mg/L Cd	Cadion	10217		
TNT879	Chloride	1 - 70 mg/L Cl 70 - 1000 mg/L Cl	Iron(III)-thiocyanate	10291		
TNT866	Chlorine, Free	0.05 - 2.00 mg/L Cl_2	DPD	10231		Yes
TNT867	Chlorine, Total	0.05 - 2.00 mg/L Cl_2	DPD	10231, 10232		Yes
TNT854	Chromium, Hexavalent Chromium, Total	0.03 - 1.00 mg/L Cr	1,5-Diphenylcarbohydrazide	10218 10219		Yes
TNT820	COD (Chemical Oxygen Demand)	1 - 60 mg/L COD	Reactor Digestion	10211	Yes	
TNT821		3 - 150 mg/L COD	Reactor Digestion	8000	Yes	Yes
TNT822		20 - 1500 mg/L COD	Reactor Digestion	8000	Yes	Yes
TNT823		250 - 15000 mg/L COD	Reactor Digestion	10212	Yes	
TNT824		5,000 - 60,000 mg/L	Reactor Digestion	10212	Yes	
TNT815	COD (for samples up to 20000 mg/L Chloride)	7 - 70 mg/L COD	Reactor Digestion	10299		
TNT816		70 - 1000 mg/L COD	Reactor Digestion	10299		
TNT825	COD (Chemical Oxygen Demand), Mercury-Free	25 - 1000 mg/L COD	Reactor Digestion	8000		
TNT860	Copper	0.1 - 8.0 mg/L Cu	Bathocuproin	10238		
TNT862	Cyanide	0.01 - 0.6 mg/L CN	Pyridine barbituric acid	10265		Yes
TNT878	Fluoride	0.1 - 2.5 mg/L F	SPADNS 2	10225		Yes
TNT871	Formaldehyde	0.5 - 10 mg/L H_2CO	Acetylacetone	10295		
TNT858	Iron, Ferrous Iron, Total	0.2 - 6.0 mg/L Fe	1, 10 Phenanthroline	10229		Yes
TNT850	Lead	0.1 - 2.0 mg/L Pb	PAR	10216		
TNT849	Magnesium	0.5 - 50 mg/L Mg	Metalphthalein	10292		
TNT856	Nickel	0.1 - 6.0 mg/L Ni	Dimethylglyoxime	10220		
TNT835	Nitrate, Nitrogen	0.23 - 13.50 mg/L NO_3-N	Dimethylphenol	10206	Yes	Yes
TNT836		5 - 35 mg/L NO_3-N	Dimethylphenol	10206	Yes	Yes
TNT838		15 - 150 mg/L NO_3-N	Dimethylphenol	10206	Yes	
TNT839	Nitrite, Nitrogen	0.015 - 0.600 mg/L NO_2-N	Diazotization	10207	Yes	Yes
TNT840		0.6 - 6.0 mg/L NO_2-N	Diazotization	10237	Yes	Yes
TNT841		2 - 90 mg/L NO_2-N	Diazotization	10296		
TNT880	Nitrogen, Simplified Total Kjeldahl	0 - 16 mg/L N	Simplified TKN (s-TKN™)	10242	Yes	Yes
TNT826	Nitrogen, Total	1 - 16 mg/L N	Persulfate Digestion	10208	Yes	
TNT827		5 - 40 mg/L N	Persulfate Digestion	10208	Yes	
TNT828		20 - 100 mg/L N	Persulfate Digestion	10208	Yes	
TNT818		100 - 250 mg/L N	Persulfate Digestion	10208	Yes	
TNT868	Phenols	5 - 150 mg/L	4-Aminoantipyrine	10266		Yes

TNTplus Vial Tests*

Prod. No.	Parameter	Range	Method Name	Method Number	Truecal	EPA
TNT846	Phosphorus, Reactive (Ortho)	1.6 - 30 mg/L PO_4-P; 5 - 90 mg/L PO_4	Molybdovanadate	10214		
TNT843	Phosphorus, Acid Hydrolyzable	0.05 - 1.5 mg/L PO_4-P; 0.15 - 4.5 mg/L PO_4	Ascorbic Acid	10209	Yes	Yes
TNT844	Phosphorus, Reactive (Ortho)	0.5 - 5.0 mg/L PO_4-P; 1.5 - 15.0 mg/L PO_4	Ascorbic Acid	10209	Yes	Yes
TNT845	Phosphorus, Total	2 - 20 mg/L PO_4-P; 6 - 60 mg/L PO_4	Ascorbic Acid	10209	Yes	Yes
TNT864	Sulfate	40 - 150 mg/L SO_4	Turbidimetric	10227		
TNT865	Sulfate	150 - 900 mg/L SO_4	Turbidimetric	10227		
TNT861	Sulfide	0.1 - 2.0 mg/L S^{2-}	Dimethyl-p-phenylenediamine	10294		Yes
TNT874	Surfactants, Anionic	0.1 - 4.0 mg/L	Methylene Blue (MBA)	10278		
TNT885	Surfactants, Cationic	0.2 - 2 mg/L as CTAB	Bromophenol Blue	10305		
TNT875	Surfactants, Nonionic	0.2 - 6.0 mg/L as Triton x 100	TBPE	10275		
TNT876	Surfactants, Nonionic	6 - 200 mg/L as Triton X-100	TBPE	10275		
TNT810	TOC (Total Organic Carbon)	1.5 - 30.0 mg/L C	Direct Method	10267		Yes
TNT811		30 - 300 mg/L C	Direct Method	10267		Yes
TNT819	Vicinal diketones (VDK)	0.015 - 0.5 mg/kg Diacetyl	Analogous MEBAK and ASBC	10276		
TNT872	Volatile Acids	50 - 2,500 mg/L Acetic Acid	Esterification	10240		
TNT869	Water Hardness	20 - 350 mg/L as $CaCO_3$ 5 - 100 mg/L Ca 3 - 50 mg/L Mg	Metalphthalein	10293		

See also DR3900, DR6000, and DR1900 spectrophotometer pages.

**Subject to change without notice.*

**Part numbers may vary by country.*

Powder Pillows

Low price per test methods with long shelf life

Powder Pillows are available for a large number of parameters and measuring ranges. Each powder pillow contains the exact amount of reagent needed for a single test, ensuring consistent and accurate measurements.

The multi-layer foil sealed packaging of powder pillows provides excellent shelf life, with some products lasting up to five years. The individual packaging prevents reagent contamination, maintaining the integrity of each test.

Powder pillows eliminate the need for measuring or weighing reagents, making the testing process simpler and more convenient. The compact, pre-measured packets are easy to transport and use in field testing situations.

Overview PermaChem® Powder Pillows*

Prod. No.	Parameter	Range	Method Name	Method Number	Number of tests	DR300	DR900	DR1900	DR3900	DR6000
2242000	Aluminum	0.008 - 0.800 mg/L Al	Aluminon	8012	100	•	•	•	•	•
2603700	Aluminum	0.002 - 0.250 mg/L Al	Eriochrome Cyanine R	8326	100			•	•	•
2668000	Ammonia	0.01 - 0.50 mg/L NH_3-N	Salicylate	8155	100	•	•	•	•	•
2459200	Quaternary Ammonium Compounds	0.2 - 5.0 mg/L as CTAB	Direct Binary Complex	8337	100			•	•	•
1206499	Barium	2 - 100 mg/L Ba	Turbidimetric	8014	100			•	•	•
2141299	Benzotriazole, Tolyltriazole	1.0 - 16.0 mg/L Benzotriazole 1.0 - 20.0 mg/L Tolyltriazole	UV Photolysis	8079	100		•	•	•	•
1417099	Boron	0.2 - 14.0 mg/L B	Carmine	8015	100			•	•	•
2105669	Total Chlorine, Bromine, Iodine	0.02 - 2.00 mg/L Cl_2	DPD	8167	100	•	•	•	•	•
2802246	Chloramine, Mono	0.04 - 4.50 mg/L Cl_2	Indophenol	10171	50	•	•	•	•	•
2105569	Free Chlorine, Chlorine Dioxide	0.02 - 2.00 mg/L Cl_2	DPD	8021	100	•	•	•	•	•
1407099	Chlorine, Free	0.1 - 10.0 mg/L Cl_2	DPD	8021	100	•	•	•	•	•
2105528	Free Chlorine, Chlorine Dioxide	0.02 - 2.00 mg/L Cl_2	DPD	8021	1000		•	•		•
2105628	Chlorine, Total	0.02 - 2.00 mg/L Cl_2	DPD	8167	1000		•	•		•
2770900	Chlorine Dioxide	0.04 - 5.00 mg/L ClO_2	DPD/Glycine	10126	100	•	•	•	•	•
1271099	Chromium	0.010 - 0.700 mg/L Cr^{6+}	1,5-Diphenylcarbohydrazide	8023	100		•	•	•	•
2242500	Chromium, total	0.01 - 0.70 mg/L Cr	Alkaline Hypobromite Oxidation	8024	100		•	•	•	•
2651600	Cobalt, Nickel	0.01 - 2.00 mg/L Co	PAN	8078	100			•	•	•
2105869	Copper	0.04 - 5.00 mg/L Cu	Bichinchoninate	8506	100		•	•	•	•

Overview PermaChem® Powder Pillows*

Prod. No.	Parameter	Range	Method Name	Method Number	Number of tests	DR300	DR900	DR1900	DR3900	DR6000
2603300	Copper	2 - 210 µg/L Cu	Porphyrin	8143	100		•	•	•	•
2430200	Cyanide	0.002 - 0.240 CN^-	Pyridine-Pyrazalone	8027	100		•	•	•	•
246066	Cyanuric Acid	5 - 50 mg/L	Turbidimetric	8139	50		•	•	•	
2544800	Iron	0.01 - 1.80 mg/L Fe	FerroMo	8365	100		•	•	•	•
2105769	Iron	0.02 - 3.00 mg/L Fe	FerroVer	8008	100	•	•	•	•	•
2608799	Iron	0.012 - 1.800 mg/L Fe	TPTZ	8112	100	•	•	•	•	•
230166	Iron	0.009 - 1.400 mg/L Fe	FerroZine	8147	50		•	•	•	•
103769	Iron, Ferrous	0.02 - 3.00 mg/L Fe^{2+}	1, 10 Phenanthroline	8146	100		•	•	•	•
2430000	Manganese	0.1 - 20.0 mg/L Mn	Periodate Oxidation	8034	100	•	•	•	•	•
2604100	Molybdenum	0.3 - 40.0 mg/L Mo	Mercaptoacetic Acid	8036	100		•	•	•	•
2449400	Molybdenum, Molybdate	0.02 - 3.00 mg/L Mo	Ternary Complex	8169	100	•	•	•	•	•
2243500	Nickel	0.02 - 1.80 mg/L Ni	Heptoxime	8037	50			•	•	•
2106169	Nitrate	0.3 - 30.0 mg/L NO_3-N	Cadmium Reduction	8039 HR	100		•	•	•	•
2429800	Nitrate, Nitrogen	0.01 - 0.50 mg/L NO_3-N	Cadmium Reduction	8192	100		•	•	•	•
2107169	Nitrite	0.002 - 0.300 mg/L NO_2^--N	Diazotization	8507	100		•	•	•	•
2107569	Nitrite	2 - 250 mg/L NO_2	Ferrous Sulfate	8153	100		•	•	•	•
2446600	Oxygen Scavengers	5 - 600 µg/L Carbohydrazide 3 - 450 µg/L DEHA 9 - 1000 µg/L Hydroquinone 13 - 1500 µg/L Iso-Ascorbic Acid 15 - 1000 µg/L Methylethylketoxime	Iron Reduction	8140	100		•	•	•	•
2243900	Phenols	0.002 - 0.200 mg/L	4-Aminoantipyrine	8047	100			•	•	•
2106028	Phosphate, Reactive	0.02 - 2.50 mg/L PO_4	Ascorbic Acid	8048	1000		•	•	•	•
2106069	Phosphorus, Reactive	0.02 - 2.50 mg/L PO_4	Ascorbic Acid	8048	100	•	•	•	•	•
2429700	Phosphonates	0.02 - 2.50 mg/L PO_4	Persulfate UV Oxidation	8007	100		•	•	•	•
2460000	Potassium	0.1 - 7.0 mg/L K	Tetraphenylborate	10321	100		•	•	•	•
2429600	Silica	1 - 100 mg/L SiO_2	Silicomolybdate	8185	100		•	•	•	•
2459300	Silica	0.010 - 1.600 mg/L SiO_2	Heteropoly Blue	8186	100		•	•	•	•
2296600	Silver	0.02 - 0.70 mg/L Ag	Colorimetric	8120	50			•	•	•
2106769	Sulfate	2 - 70 mg/L SO_4^{2-}	SulfaVer 4	8051	100		•	•	•	•
2429300	Zinc	0.01 - 3.00 mg/L Zn	Zincon	8009	100	•	•	•	•	•

**Subject to change without notice. Part numbers may vary by country.*

Additional Powder Pillows are available. Visit hach.com to learn more.

Learn More

Chemkey Reagents

Use innovative Chemkey® technology with the SL250 and SL1000 Portable Parallel Analysers (PPA) for dramatically streamlined water quality testing.

Same Trusted Technology

Chemkey reagents execute the same process steps that you have trusted for decades — now delivered in a simple, self-contained package. All chemicals and processes are entirety contained inside the Chemkey.

Less Hassle

There is no zeroing, no mixing, no shaking, no chemicals or vials to handle. All you have to do is insert the Chemkey and let the instrument read you back the results.

Increasing Portfolio

We continue to release new Chemkeys in order to expand the capability and functionality of your SL250 or SL1000 instrument.

Technical Specifications*

Prod. No.	Parameter	Range	Quantity	SL1000	SL250
8636200	Alkalinity, LR	20 - 200 mg/L $CaCO_3$	pk/25	•	•
8636100	Alkalinity, HR	200 - 700 mg/L $CaCO_3$	pk/25	•	•
9429500	Ammonia, Free	0.05 - 0.50 mg/L NH_3-N	pk/25	•	
9429600	Ammonia, Free; Monochloramine	Free Ammonia: 0.05 - 0.50 mg/L NH_3-N Monochloramine: 0.04 - 4.00 mg/L Cl_2	pk/50	•	
8791900	Ammonia, Free & Total; Monochloramine	Free Ammonia: 0.05 - 0.50 mg/L NH_3-N Total Ammonia: 0.05 - 1.50 mg/L NH_3-N Monochloramine: 0.04 - 4.00 mg/L Cl_2	pk/50	•	
9425200	Ammonia, Total	0.05 - 1.50 mg/L NH_3-N	pk/25	•	•
9429000	Chlorine, Free	0.04 - 4.00 mg/L Cl_2	pk/25	•	•
8499300	Chlorine, Free	0.04 - 4.00 mg/L Cl_2	pk/300	•	•
9429100	Chlorine, Total	0.04 - 10 mg/L Cl_2	pk/25	•	•
8499400	Chlorine, Total	0.04 - 10 mg/L Cl_2	pk/300	•	•
9429200	Copper	0.06 - 5.00 mg/L Cu	pk/25	•	•
8636000	Dissolved Iron	0.05 - 3.00 mg/L Fe	pk/25	•	•
9878000	Fluoride	0.10 - 4.0 mg/L F	pk/25	•	•
8636400	Hardness, LR	3 - 100 mg/L $CaCO_3$	pk/25	•	•
8636300	Hardness, HR	90 - 750 mg/L $CaCO_3$	pk/25	•	•
3007000	Manganese, HR	0.10 - 25.0 mg/L Mn	pk/25	•	•
9429400	Monochloramine	0.04 - 4.00 mg/L Cl_2	pk/25	•	•
9429300	Nitrite	0.005 - 0.600 mg/L NO_2-N	pk/25	•	•
8636500	Orthophosphate, HR	2.0 - 30.0 mg/L PO_4	pk/25	•	•
8636600	Orthophosphate, LR	0.20 - 4.00 mg/L PO_4	pk/25	•	•
8635200	Peracetic Acid	0.04 - 50.0 mg/L PAA	pk/25	•	•
9759000	pH	pH 6.3 - 9.0	pk/25	•	•
9879000	Zinc	0.10 - 6.0 mg/L Zn	pk/25	•	•

See also SL1000 and SL250 Portable Parallel Analyzer pages.

*Subject to change without notice.

Learn More

Hach TNT (Test 'N Tube) Vials (16 mm)

Vial chemistry platform that incorporates Permachem powder technology for economical, easy-to-use methods. The right blend of simplicity and economy.

Overview TNT Tests (16 mm)*

Prod. No.	Parameter	Range	Method Name	Method Number	Quality Control	Number of tests	DR300	DR900	DR1900	DR3900	DR6000
2604545	Ammonia	0.02 - 2.50 mg/L NH_3-N	Salicylate	10023	189149, 15349	25 - 50		•	•	•	•
2606945	Ammonia	0.4 - 50.0 mg/L NH_3-N	Salicylate	10031	189149, 15349	25 - 50		•	•	•	•
2125825	COD (Chemical Oxygen Demand)	3 - 150 mg/L	Reactor Digestion	8000		25		•	•	•	•
2125815	Chemical Oxygen Demand	3 - 150 mg/L	Reactor Digestion	8000		150		•	•	•	•
2125915	COD (Chemical Oxygen Demand)	20 - 1500 mg/L	Reactor Digestion	8000		150		•	•	•	•
2125925	COD (Chemical Oxygen Demand)	20 - 1500 mg/L	Reactor Digestion	8000		25		•	•	•	•
2415815	COD (Chemical Oxygen Demand)	0.7 - 40.0 mg/L	Reactor Digestion	8000		150		•	•	•	•
2415825	COD (Chemical Oxygen Demand)	0.7 - 40.0 mg/L	Reactor Digestion	8000		25			•	•	•
2415915	COD (Chemical Oxygen Demand)	200 - 15,000 mg/L	Reactor Digestion	8000		150		•	•	•	•
2415925	COD (Chemical Oxygen Demand)	200 - 15,000 mg/L	Reactor Digestion	8000		25		•	•	•	•
2565025	Chemical Oxygen Demand, Mercury-Free	3 - 150 mg/L	Reactor Digestion	8000		25		•	•	•	•
2565125	Chemical Oxygen Demand, Mercury-Free	20 - 1,500 mg/L	Reactor Digestion	8000		25		•	•	•	•
2565115	Chemical Oxygen Demand, Mercury-Free	20 - 1,500 mg/L	Reactor Digestion	8000		150		•	•	•	•
2834325	Chemical Oxygen Demand, Mercury-Free	200 - 15,000 mg/L	Reactor Digestion	8000		25		•	•	•	•
2623415	COD (Chemical Oxygen Demand)	30 - 1,000 mg/L	Manganese III Reactor Digestion	10067		150		•	•	•	•
2623425	COD (Chemical Oxygen Demand)	30 - 1000 mg/L	Manganese III Reactor Digestion	10067		25		•	•	•	•
2183825	Glycol	0 - 150 mg/L				25					
2605345	Nitrate	0.2 - 30.0 mg/L NO_3-N	Chromotropic Acid	10020	30749	50		•	•	•	•
2608345	Nitrite	0.003 - 0.500 mg/L NO_2-N	Diazotization	10019	2340249	50		•	•	•	•
2604945	Nitrogen	0.2 - 25.0 mg/L	Titanium Trichloride Reduction			25 - 50		•	•	•	•
2672245	Nitrogen, total	0.5 - 25.0 mg/L N	Persulfate Digestion	10071	189149, 15349, 2406549	25 - 50		•	•	•	•
2714100	Nitrogen, total	2 - 150 mg/L N	Persulfate Digestion	10072	15349, 2406549	25 - 50		•	•	•	•
2742545	Phosphate, ortho	0.06 - 5.00 mg/L PO_4	Ascorbic Acid	8048	2109210	25 - 50		•	•	•	•
2742645	Phosphate, total	0.06 - 3.50 mg/L PO_4	Ascorbic Acid	8190	2109210	25 - 50		•	•	•	•
2742745	Phosphate, ortho + total	0.06 - 5.00 mg/L PO_4	Ascorbic Acid	8180	2109210	25 - 50		•	•	•	•
2767245	Phosphate, total	1.0 - 100 mg/L PO_4	Molybdovanadate	10127	256949	25 - 50		•	•	•	•
2767345	Phosphate, ortho	1.0 - 100.0 mg/L PO_4	Molybdovanadate	8114	256949	25 - 50		•	•	•	•
2760345	TOC (Total Organic Carbon)	0.3 - 20.0 mg/L	Direct	10129		25 - 50		•	•	•	•
2760445	TOC (Total Organic Carbon)	100 - 700 mg/L	Direct	10128		25 - 50		•	•	•	•
2815945	TOC (Total Organic Carbon)	15 - 150 mg/L	Direct	10173		25 - 50		•	•	•	•

Learn More

**Subject to change without notice. Part numbers may vary by country.*

The Swiftest Dispenser

The right amount of DPD with the Swiftest

The Swiftest is a powder dispenser that releases the correct amount of DPD (N,N-diethyl-p-phenylenediamine) into 10 mL samples at the press of a button.

The dispenser contains enough reagent for approximately 250 chlorine tests (free or total chlorine). A practical and attractively priced alternative, the Swiftest provides fast, easy reagent addition. Swiftest is ideal for laboratories with high sample throughput, and for analysis in the field. No need to open powder pillows, resulting in less packaging waste.

The handle of the Swiftest dispenser is color-coded for easy parameter recognition. And Hach DPD reagents contain no boric acid!

Technical Specifications*

Prod. No.	Parameter	Range	Method Name	Method Number	Quality Control	Number of tests	DR300	DR900	DR1900	DR3900	DR6000
2802300	Chlorine, Free	0.02 - 2.00 mg/L Cl_2	DPD	8021	1426810, 2630020	Approximately 250	•	•	•	•	•
2105560**	Chlorine, Free	0.02 - 2.00 mg/L Cl_2	DPD	8021	1426810, 2630020	Approximately 250	•	•	•	•	•
2802400	Chlorine, Total	0.02 - 2.00 mg/L Cl_2	DPD	8167	1426810, 2630020	Approximately 250	•	•	•	•	•
2105660**	Chlorine, Total	0.02 - 2.00 mg/L Cl_2	DPD	8167	1426810, 2630020	Approximately 250	•	•	•	•	•

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***Refill Vial*

Learn More

Accuvacs

Analysis... with no pipetting!

Just snap, fill, and read. No need to measure sample or reagents. The secret of the Accuvac® is the vacuum-sealed glass cuvette which contains a pre-measured amount of reagent.

The test is carried out by immersing the tip of the Accuvac in the sample, then breaking it by applying moderate pressure or using the snapper (part number 2405200). The vacuum draws the sample into the cuvette, simultaneously producing thorough mixing. The resulting color is measured visually or photometrically.

Overview Accuvacs*

Prod. No.	Parameter	Range	Method Name	Method Number	Quality Control	Number of tests	DR300	DR900	DR1900	DR3900	DR6000
2502025	Free Chlorine, Chlorine Dioxide	0.02 - 2.00 mg/L Cl_2	DPD	8021	1426810, 2630020	25	•	•	•	•	•
2503025	Total Chlorine, Bromine, Iodine	0.02 - 2.00 mg/L Cl_2	DPD	8167 Chlorine	2630020	25	•	•	•	•	•
2527025	Fluoride	0.02 - 2.00 mg/L F^-	SPADNS 2	10225	29153	25		•	•	•	•
2510025	Iron	0.012 - 1.800 mg/L Fe	TPTZ	8112	1417542	25		•	•	•	•
2515025	Dissolved Oxygen	0.3 - 15.0 mg/L O_2	HRDO	8166		25	•	•	•	•	•
2516025	Ozone	0.01 - 0.25 mg/L O_3	Indigo	8311		25	•	•	•	•	•
2517025	Ozone	0.01 - 0.75 mg/L O_3	Indigo	8311		25	•	•	•	•	•
2518025	Ozone	0.01 - 1.50 mg/L O_3	Indigo	8311		25		•	•	•	•
2508025	Phosphate, Reactive	0.02 - 2.50 mg/L PO_4	Ascorbic Acid	8048	256949	25	•	•	•	•	•

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Hach Standard Solutions

Single Parameter Standards

Mixed Parameter Quality Control Standards

Spec√ Gel Secondary Standard Kits

Assure confidence in results

Stop questioning the results of laboratory tests. Regular use of standard solutions can ensure laboratory process control, increase analyst confidence, and help provide evidence of performance to inspectors, regulators, and clients.

What are Standards?

A standard solution can be used in place of a sample because it contains a known concentration of chemicals or analytes. The analyst can run through a testing process knowing what the final value should be. Standards can be used to establish calibration curves, to determine matrix interferences using standard additions, for control charting and troubleshooting.

Why use Standards?

When a value is questioned, troubleshooting with standards can quickly pinpoint if, and where, there is a problem. Whether a problem is suspected in the reagents, procedure, instrument, or the analyst, the cause of an inaccurate value can be determined and resolved—saving time and money. Regular use of standards can verify all aspects of a system, and alert an analyst to small problems before the entire process gets out of control.

Three Types of Standards

Single Parameter Standards
Available in a variety of analytes and concentrations, including Voluette and PourRite Ampule standards to support standard additions procedures for proof of accuracy.

Mixed Parameter Quality Control Standards
Packaged for specific applications and formulated to match the ranges of Hach Methods, so no dilution is necessary.

Spec√ Standards
Each set of Spec√ standards contains four vials filled with gels that simulate the test color at various concentrations. These standards provide a quick and easy way to confirm that instruments are operating properly. Standards are available for several popular methods.

Technical Support

Hach Company offers technical expertise on www.hach.com and through our technical consulting team. We will help you understand the best use of standards and how to develop a quality assurance program for your laboratory. Visit our website or call our technical consulting staff with questions.

Learn More

Single Parameter Standards

Technical Specifications*

Prod. No.	Parameter	Concentration	Quantity
212132	Acidity	0.500 N	100 mL
1427810	Alkalinity	0.5 N (25000 mg/L as $CaCO_3$)	16 x 10 mL ampules
2305842	Aluminium	10 mg/L	100 mL
1417442		100 mg/L	100 mL
1457142	Arsenic	1000 mg/L	100 mL
1461142	Barium	1000 mg/L	100 mL
2141342	Benzotriazole	500 mg/L	100 mL
1486510	BOD	300 mg/L	16 x 10 mL ampules
1486610		3000 mg/L	16 x 10 mL ampules
191442	Boron	1000 mg/L	100 mL
1402442	Cadmium	100 mg/L	100 mL
2305442	Calcium	10.00 mg/L ±0.14 mg/L Ca^{2+}	100 mL
4457649		100 mg/L ±1 mg/L Ca^{2+}	500 mL
2240349		1000 mg/L ±8 mg/L Ca^{2+}	500 mL
12153		1000 mg/L $CaCO_3$	1000 mL
218710		10000 mg/L	16 x 10 mL ampules
2370853	Chloride	100 mg/L ±1 mg/L Cl^-	1 L
18349		1000 mg/L ±10 mg/L Cl^-	500 mL
1425010		12500 mg/L Cl^-	16 x 10 mL ampules
2630020	Chlorine	25 - 30 mg/L Cl_2	20 x 2 mL ampules
1426820		50 - 75 mg/L Cl_2	20 x 2 mL ampules
1426810		50 - 75 mg/L Cl_2	16 x 10 mL ampules
2605620	Chromium, hexavalent	5 mg/L	2 mL
1425610		12.5 mg/L	10 mL
81042H		50 mg/L	100 mL
1466442		1000 mg/L	100 mL
1415142	Chromium, trivalent	50 mg/L	100 mL
2150342	Cobalt	1000 mg/L	100 mL
1218629	COD	300 mg/L O_2	200 mL
1218649		300 mg/L O_2	500 mL
2672629		800 mg/L O_2	200 mL
2253929		1000 mg/L O_2	200 mL
2602853	Color	15 Pt-Co units	1 L
141410		500 Pt-Co units	16 x 10 mL ampules
141453		500 Pt-Co units	1 L
12932	Copper	10 mg/L	100 mL
12842		100 mg/L	100 mL
259342		1000 mg/L	100 mL
1427110	Detergent as LAS	60 mg/L	16 x 10 mL ampules
40502	Fluoride	0.2 mg/L	500 mL
40505		0.5 mg/L	500 mL
40508		0.8 mg/L	500 mL
29149		1.00 mg/L	500 mL
29153		1.00 mg/L	1 L
40512		1.2 mg/L	500 mL
40515		1.5 mg/L	500 mL
40520		2.00 mg/L	500 mL
35949		10.0 mg/L	500 mL
23249		100 mg/L	500 mL
2257310	Formaldehyde	4000 mg/L	16 x 10 mL ampules
2058016	Hardness	0.50 mg/L	946 mL
47949		20 gpg (340 mg/L)	500 mL
13949	Iron	1 mg/L	500 mL
14049		10 mg/L	500 mL
1425310		25 mg/L	16 x 10 mL ampules
1417542		100 mg/L Fe	100 mL
227142		1000 mg/L	100 mL

Prod. No.	Parameter	Concentration	Quantity
2374820	Lead	10 mg/L	25 mL
1261742		100 mg/L	100 mL
2605820	Manganese	10 mg/L	20 x 2 mL ampules
2112820		25 mg/L	20 x 2 mL ampules
1279142		1000 mg/L	100 mL
1418742	Molybdenum	10 mg/L	100 mL
1418642		1000 mg/L	100 mL
1417642	Nickel	1000 mg/L	100 mL
2340249	Nitrite	250 mg/L NO_2-N	500 mL
189149	Nitrogen-Ammonia	1.00 mg/L NH_3-N	500 mL
15349		10.0 mg/L NH_3-N	500 mL
1479120		50 mg/L NH_3-N	20 x 2 mL ampules
1479110		50 mg/L NH_3-N	16 x 10 mL ampules
2406549		100 mg/L NH_3-N	500 mL
2128410		150 mg/L NH_3-N	16 x 10 mL ampules
2354153		1000 mg/L NH_3-N	1 L
204649	Nitrogen-Nitrate	1.00 mg/L NO_3-N	500 mL
30749		10 mg/L NO_3-N	500 mL
2415132		15 mg/L NO_3-N	100 mL
194749		100 mg/L NO_3-N	500 mL
1426010		500 mg/L NO_3-N	16 x 10 mL ampules
1279249		1000 mg/L NO_3-N	500 mL
256949	Phosphorus	1 mg/L PO_4	500 mL
1424342		15 mg/L PO_4	100 mL
1436716		30 mg/L PO_4	946 mL
17110		50 mg/L PO_4	16 x 10 mL ampules
17149		50 mg/L PO_4	500 mL
1436832		100 mg/L PO_4	100 mL
1424210		500 mg/L PO_4	16 x 10 mL ampules
1424232		500 mg/L PO_4	100 mL
2109210	Phosphorus	25 mg/L	16 x 10 mL ampules
2321142		1000 mg/L	100 mL
2351749	Potassium	100 mg/L	500 mL
1479010		250 mg/L	16 x 10 mL ampules
110649	Silica	1 mg/L SiO_2	500 mL
140349		10 mg/L SiO_2	500 mL
111729		50 mg/L SiO_2	200 mL
19449		1000 mg/L	500 mL
1461342	Silver	1000 mg/L	100 mL
257849	Sulfate	50 mg/L SO_4^{2-}	500 mL
89149		100 mg/L SO_4^{2-}	500 mL
2175749		1000 mg/L SO_4^{2-}	500 mL
1425249		2500 mg/L SO_4^{2-}	500 mL
2408449	Sulfite	15 mg/L SO_3^{2-}	500 mL
2267410		5000 mg/L SO_3^{2-}	16 x 10 mL ampules
1427010	Volatile Acids	62500 mg/L	16 x 10 mL ampules
1424610	Zinc	25 mg/L	16 x 10 mL ampules
237842		100 mg/L	100 mL
1417742		1000 mg/L	100 mL

Additional Standards are available on hach.com

**Subject to change without notice.*

**Part numbers may vary by country.*

Mixed Parameter Quality Control Standards

Technical Specifications*

Prod. No.	Parameter	Concentration	Volume
2833749	Copper Iron Manganese	1.0 mg/L Cu 0.3 mg/L Fe 0.1 mg/L Mn	500 mL
2833649	Copper Iron Manganese	2.5 mg/L Cu 1.5 mg/L Fe 5 mg/L Mn	500 mL
2833049	Fluoride Nitrate Phosphate Sulfate	1 mg/L F^- 2 mg/L NO_3-N 2 mg/L PO_4^{3-} 50 mg/L SO_4^{2-}	500 mL
2833449	Total Hardness, LR Calcium Hardness	100 mg/L as $CaCO_3$ 50 mg/L as $CaCO_3$	500 mL
2833349	Total Hardness, HR Calcium Hardness	1000 mg/L as $CaCO_3$ 500 mg/L as $CaCO_3$	500 mL
2833149	Ammonia Nitrate Phosphate COD Sulfate TOC	15 mg/L NH_3-N 10 mg/L NO_3-N 10 mg/L PO_4^{3-} 500 mg/L COD 400 mg/L SO_4^{2-} 161 mg/L TOC	500 mL
2833249	Ammonia Nitrate Phosphate COD Sulfate TOC	2 mg/L NH_3-N 4 mg/L NO_3-N 2 mg/L PO_4^{3-} 25 mg/L COD 50 mg/L SO_4^{2-} 8 mg/L TOC	500 mL
2833510	BOD COD TOC	396 mg/L BOD 613 mg/L COD 242 mg/L TOC	16 x 10 mL Voluette Ampules

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Spec√ Gel Secondary Standard Kits

Technical Specifications*

Prod. No.	Parameter	Concentration	Quantity
2635300	Chlorine	0 - 2.0 mg/L Cl_2	Set of 4 Vials
2980500	Chlorine, DPD MR	0 - 4.0 mg/L Cl_2	Set of 4 Vials
2893300	Chlorine, DPD HR	0 - 8.0 mg/L Cl_2	Set of 4 Vials
2712500	Fluoride	0 - 2.00 mg/L F^-	Set of 4 Vials
2507500	Monochloramine Free Ammonia	0.04 - 4.50 mg/L Cl_2 0.02 - 0.50 mg/L NH_3-N	Set of 4 Vials
2708000	Ozone, mid-range	0 - 0.75 mg/L O_3	Set of 4 vials

**Subject to change without notice.*

Turbidity Standard Solutions

Ready-to-use primary standards for calibration and/or verification

Stablcal® Stabilized Formazin Standards are true formazin dilutions developed for use in any turbidimeter. With proprietary manufacturing technology, Hach prepares Stablcal standards in precise concentrations for conventional turbidimeters. Stablcal standards are equivalent in performance to formazin primary standards, but require no special preparation, saving precious time.

Overview Stablcal Standards*

All Turbidimeters	
2659742	Stablcal Turbidity Standard, <0.1 NTU, 100 mL
2659749	Stablcal Turbidity Standard, <0.1 NTU, 500 mL
2659753	Stablcal Turbidity Standard, <0.1 NTU, 1000 mL
2723342	Stablcal Turbidity Standard, 0.10 NTU, 100 mL
2723353	Stablcal Turbidity Standard, 0.10 NTU, 1000 mL
2697942	Stablcal Turbidity Standard, 0.30 NTU, 100 mL
2697953	Stablcal Turbidity Standard, 0.30 NTU, 1000 mL
2698042	Stablcal Turbidity Standard, 0.50 NTU, 100 mL
2698049	Stablcal Turbidity Standard, 0.5 NTU, 500 mL
2659842	Stablcal Turbidity Standard 1.0 NTU, 100 mL
2659849	Stablcal Turbidity Standard 1.0 NTU, 500 mL
2659853	Stablcal Turbidity Standard, 1.0 NTU, 1000 mL
2659942	Stablcal Turbidity Standard, 10.0 NTU, 100 mL
2659949	Stablcal Turbidity Standard, 10.0 NTU, 500 mL
2659953	Stablcal Turbidity Standard, 10.0 NTU, 1000 mL
2660142	Stablcal Turbidity Standard, 20 NTU, 100 mL
2660149	Stablcal Turbidity Standard, 20 NTU, 500 mL
2660153	Stablcal Turbidity Standard, 20 NTU, 1000 mL
2746353	Stablcal Turbidity Standard, 40.0 NTU, 1000 mL
2746356	Stablcal Turbidity Standard, 40 NTU, 3.78 L
2660242	Stablcal Turbidity Standard, 100 NTU, 100 mL
2660249	Stablcal Turbidity Standard, 100 NTU, 500 mL
2660253	Stablcal Turbidity Standard, 100 NTU, 1000 mL
2660442	Stablcal Turbidity Standard, 200 NTU, 100 mL
2660449	Stablcal Turbidity Standard, 200 NTU, 500 mL
2660453	Stablcal Turbidity Standard, 200 NTU, 1000 mL
2660542	Stablcal Turbidity Standard, 800 NTU, 100 mL
2660549	Stablcal Turbidity Standard, 800 NTU, 500 mL
2660553	Stablcal Turbidity Standard, 800 NTU, 1000 mL
2660642	Stablcal Turbidity Standard, 1000 NTU, 1000 mL
2660653	Stablcal Turbidity Standard, 1000 NTU, 100 mL
2660649	Stablcal Turbidity Standard, 1000 NTU, 500 mL
246142	Formazin Turbidity Standard, 4000 NTU, 100 mL
246149	Formazin Turbidity Standard, 4000 NTU, 500 mL
2584202	Stablcal Turbidity Standard, 7500 NTU, Sealed Vial

2100Q	
2971205	Stablcal Calibration Kit, 10/20/100/800 NTU, Sealed Vials
2971210	Stablcal Calibration Kit, 10/20/100/800 NTU, 100 mL Bottles
2971200	Stablcal Calibration Kit, 10/20/100/800 NTU, 500 mL Bottles
TL2300 & TL2310	
2662105	Stablcal Calibration Kit, <0.1/20/200/1000/4000 NTU, Sealed Vials
2662110	Stablcal Calibration Kit, <0.1/20/200/1000/4000 NTU, 100 mL Bottles
2662100	Stablcal Calibration Kit, <0.1/20/200/1000/4000 NTU, 500 mL Bottles
TL2350 & TL2360	
2659505	Stablcal Calibration Kit, <0.1/20/200/1000/4000/7500 NTU, Sealed Vials
2659510	Stablcal Calibration Kit, <0.1/20/200/1000/4000/7500 NTU, 100 mL Bottles
2659500	Stablcal Calibration Kit, <0.1/20/200/1000/4000/7500 NTU, 500 mL Bottles
TU5 Series	
LZZ003	Stablcal Verification Vial, 1 NTU, with RFID
LZZ004	Stablcal Verification Vial, 1 NTU, without RFID
LZY877	Stablcal Verification Vial, 10 NTU, with RFID
LZY878	Stablcal Verification Vial, 10 NTU, without RFID
LZY837	Stablcal Calibration Vial, 20 NTU, with RFID
LZY899	Stablcal Calibration Vial, 20 NTU, without RFID
LZY838	Stablcal Calibration Vial, 600 NTU, with RFID
LZY900	Stablcal Calibration Vial, 600 NTU, without RFID
LZZ005	Stablcal Primary Turbidity Standards Set, 1/10/20 NTU, with RFID
LZZ006	Stablcal Primary Turbidity Standards Set, 1/10/20 NTU, without RFID
LZY835	Stablcal Primary Turbidity Standards Kit, 10/20/600 NTU, with RFID
LZY901	Glass Rod Secondary Turbidity Standard <0.1 NTU
Verification Kits	
2714600	Stablcal ULR Verification Kit, 0.1/0.3/0.5/1.0 NTU, 100 mL Bottles
2464105	Gelex Secondary Turbidity Verification Kit for 2100Q, Sealed Vials
2589200	Gelex Secondary Turbidity Verification Kit for TL2300, Sealed Vials
2589000	Gelex Secondary Turbidity Verification Kit for TL2350/TL2360, Sealed Vials
2620000	Gelex Secondary Turbidity Verification Kit for TL2310, Sealed Vials

See also 2100Q, TL23 and TU5200 Series turbidimeter pages.

**Subject to change without notice.*

Learn More

Multi-Parameter Test Kits

Simplify your testing with Hach Test Kits!

Test kits are convenient & portable - rugged for field testing with user-friendly, pre-measured reagents. Tests for a wide range of parameters in water are available. On-Site or Field Analysis eliminate the need for sample transportation to a Lab and reduce the need for expensive laboratory analyses. Visual, colorimetric, and titration (Drop Count and Digital Titration) methods alone and in combination are available in test kits.

Technical Specifications*

Prod. No.	Description	Measurement Technology	Parameter	Range
243002	Nine-Parameter Aquaculture Test Kit, Model FF-1A	Color Disc, Drop Count Titration	Alkalinity Ammonia Carbon Dioxide Chloride Dissolved Oxygen Total Hardness Nitrite pH Supersaturation	0 - 100 & 0 - 400 mg/L $CaCO_3$ 0 - mg/L NH_3 0 - 100 mg/L CO_2 0 - 100 mg/L Cl_2 0 - 150 & 0 - 600 mg/L O_2 0 - 20 gpg $CaCO_3$ 0.0 - 0.4 mg/L NO_2^- 4 - 10 pH units --
243003	Saltwater Aquaculture Test Kit, Model FF-3	Digital Titrator, Color Disc, Drop Count Titration	Acidity Alkalinity Ammonia Carbon Dioxide Dissolved Oxygen Hardness Nitrite pH Salinity Temperature	100 - 400 mg/L $CaCO_3$ 0 - 500 mg/L $CaCO_3$ 0 - 2 mg/L NH_3 10 - 100 mg/L CO_2 0 - 10 mg/L O_2 100 - 4000 mg/L $CaCO_3$ 0.0 - 0.4 mg/L NO_2^- 4 - 10 pH units 0 - 100 ppt -10 - 110 °C (1 - 220 °F)
243001	Ten-Parameter Aquaculture Test Kit, Model FF-2	Digital Titrator, Color Disc	Acidity Alkalinity Ammonia Carbon Dioxide Chloride Dissolved Oxygen Hardness Nitrite pH Temperature	100 - 4000 mg/L $CaCO_3$ 100 - 4000 mg/L $CaCO_3$ 0.1 - 3 mg/L NH_3 10 - 100 mg/L CO_2 10 - 100 mg/L Cl_2 0 - 10 mg/L O_2 100 - 4000 mg/L $CaCO_3$ 0.0 - 0.4 mg/L NO_2^- 4 - 10 pH units -10 - 110 °C (1 - 220 °F)
2882200	Nitrification Control Test Kit	Colorimeter	Free Ammonia Monochloramine Nitrite Total Chlorine (LR) Total Chlorine (HR)	0.02 - 0.50 mg/L NH_3-N 0.04 - 4.50 mg/L Cl_2 0 - 0.350 mg/L NO_2-N 0 - 2.00 mg/L Cl_2 0.1 - 10.0 mg/L Cl_2

Technical Specifications*

Prod. No.	Description	Measurement Technology	Parameter	Range
2559833	Surface Water Test Kit	Color Disc, Drop Count Titration	Ammonia Chlorine Free & Total Nitrate Dissolved Oxygen pH Phosphate Phosphorus	0.0 - 2.4 mg/L NH_3 0 - 3.4 mg/L Cl_2 0 - 40 mg/L NO_3 0.2 - 4 & 1 - 20 mg/L O_2 0 - 14 pH units 0 - 4.4 mg/L PO_4 0.02 - 1 & 0.1 - 5 & 1 - 40 mg/L PO_4-P
188703	Wastewater Treatment Plant Laboratory, Model STPL-WRT	Color Disc, Drop Count Titration	Total Chlorine Dissolved Oxygen pH	0 - 3.4 mg/L Cl_2 1 - 10 mg/L O_2 0 - 14 pH units
2481300	Storm Water Test Kit, Model SW-1	Color Disc, Drop Count Titration	Total Chlorine Copper Detergents pH Phenols	0 - 3.4 mg/L Cl_2 0 - 4 mg/L Cu 0 - 1.2 mg/L 0 - 14 pH units 0 - 4 & 0.02 - 1 mg/L
2350700	Professional Boiler and Cooling Water Test Kit, Model PBC-DT	Digital Titrator, Color Disc	Alkalinity Chloride Chlorine Hardness Iron Nitrite pH Phosphate Silica Sulfite	1 - 4000 mg/L $CaCO_3$ 10 - 8000 mg/L Cl^- 0 - 3.4 mg/L Cl_2 10 - 4000 mg/L $CaCO_3$ 0 - 0.2 & 0 - 2 mg/L Fe 0 - 80 & 40 - 2000 mg/L NO_2 5.6 - 8.4 & 7.4 - 9.6 pH units 0 - 4.4 & 0 - 40 mg/L PO_4 0 - 30 or 20 -600 mg/L SiO_2 40 - 800 mg/L SO_3^{2-}
2315001	Pool Master Test Kit, Model STPL-WRT	Color Disc, Drop Count Titration	Alkalinity Chlorine Free & Total Cyanuric Acid pH Calcium Hardness	0 - 400 mg/L $CaCO_3$ 0 - 3.4 mg/L Cl_2 20 - 100 mg/L CN^- 6.6 - 8.4 pH units 20 - 400 mg/L $CaCO_3$
183700	Hardness, Iron, and pH Test Kit, Models HA-62	Color Disc, Drop Count Titration	Hardness Iron pH	1 - 20 gpg $CaCO_3$ 0 - 4 mg/L Fe 6.6 - 8.4 pH units
183701	Hardness, Iron, and pH Test Kit, Models HA-62A	Color Disc, Drop Count Titration	Hardness Iron pH	1 - 20 gpg $CaCO_3$ 0 - 7 mg/L Fe 6.6 - 8.4 pH units
183702	Hardness, Iron, and pH Test Kit, Models HA-62B	Color Disc, Drop Count Titration	Hardness Iron pH	1 - 20 gpg $CaCO_3$ 0 - 7 mg/L Fe 4 - 10 pH units
202300	Hardness and Iron Test Kit, Model HA-77	Color Disc, Drop Count Titration	Hardness Iron	1 - 20 gpg $CaCO_3$ 0 - 4 mg/L Fe
146300	Iron and Manganese Test Kit, Model IR-20	Color Disc	Iron Manganese	0 - 4 mg/L Fe 0.1 - 3.0 mg/L Mn
256200	Iron and pH Test Kit, Model IR-23	Color Disc	Iron pH	0 - 7 mg/L Fe 4 - 10 pH units
1411100	Free & Total Chlorine and pH Test Kit, Model CN-67	Color Disc	Chlorine Free & Total pH	0.1 - 10 mg/L Cl_2 6.6 - 8.4 pH units
223002	Chlorine, Hardness, Iron, and pH Test Kit, Model CN39-WR	Color Disc, Drop Count Titration	Total Chlorine Hardness Iron pH	0 - 3.4 mg/L Cl_2 1 - 20 gpg $CaCO_3$ 0 - 4 mg/L Fe 4 - 10 pH units

Please visit hach.com for further Test Kit details.

**Subject to change without notice.*

Learn More

Single Parameter Test Kits

Single parameter test kits include simple yet effective methods for analyzing key parameters such as pH, chlorine levels, hardness, nitrate, nitrite, ammonia, and more. With user-friendly testing procedures and reliable results, Hach water testing kits empower users to make informed decisions about water safety and quality. Premeasured reagents save time and money, and kits contain everything you need for testing anywhere.

Learn More

Technical Specifications*

Prod. No.	Description	Measurement Technology	Parameter	Range
2063700	Alkalinity Test Kit, Model AL-DT	Digital Titrator	Alkalinity - (P) & Total (MO)	10 - 4,000 mg/L $CaCO_3$
2444301	Alkalinity Test Kit, Model AL-AP	Drop Count Titration	Alkalinity - (P) & Total (MO)	5 - 100 mg/L $CaCO_3$ / 20 - 400 mg/L $CaCO_3$
2064100	Carbon Dioxide Test Kit, Model CA-DT	Digital Titrator	Carbon Dioxide	10 - 1,000 mg/L CO_2
143601	Carbon Dioxide Test Kit, Model CA-23	Drop Count Titration	Carbon Dioxide	1.25 - 25 mg/L CO_2 / 2 - 40 mg/L CO_2 / 5 - 100 mg/L CO_2
34251000	ULR Free Chlorine Fluorescence Test Kit, 2-100 µg/L (ppb), 100 Tests	Fluorometer	Free Chlorine	2 - 100 µg/L (ppb) Cl_2 free
34252000	ULR Total Chlorine Fluorescence Test Kit, 3-100 µg/L (ppb), 100 Tests	Fluorometer	Total Chlorine	3 - 100 µg/L (ppb) Cl_2 total
1454200	Free & Total Chlorine Test Kit, Model CN-70	Color Disc	Chlorine Free & Total, LR	0.02 - 0.68 mg/L Cl_2 / 0 - 3.4 mg/L Cl_2
2129000	Free & Total Chlorine Test Kit, Model CN-80	Color Disc	Chlorine Free & Total, LR	0 - 0.68 mg/L Cl_2 / 0 - 3.4 mg/L Cl_2
223101	Free & Total Chlorine Test Kit, Model CN-66	Color Disc	Chlorine Free & Total, LR	0 - 3.4 mg/L Cl_2
223102	Free Chlorine Test Kit, Model CN-66F	Color Disc	Free Chlorine, LR	0 - 3.4 mg/L Cl_2
223103	Total Chlorine Test Kit, Model CN-66T	Color Disc	Total Chlorine, LR	0 - 3.4 mg/L Cl_2
2444400	Total Chlorine Test Kit, Model CN-21P	Drop Count Titration	Total Chlorine, MR & HR	10 - 200 mg/L Cl_2
2194100	Copper Test Kit, Model CU-6	Color Disc	Copper, Dissolved & Total	0 - 4 mg/L Cu
146900	Dissolved Oxygen Test Kit	Drop Count Titration	Dissolved Oxygen (DO)	0.2 - 4.0 mg/L & 1 - 20 mg/L O_2
145201	Total Hardness Test Kit, Model HA-71A	Drop Count Titration	Hardness, total - As $CaCO_3$	1 - 20 mg/L & 17 - 342 mg/L $CaCO_3$
145300	Total Hardness Test Kit, Model 5-B	Drop Count Titration	Hardness, total - As $CaCO_3$	1 - 30 gpg
145401	Total Hardness Test Kit, Model 5-EP MG-L	Drop Count Titration	Hardness, total - As $CaCO_3$	20 - 400 mg/L $CaCO_3$
223801	Hydrogen Sulfide Test Kit, Model HS-WR	Color Disc	Hydrogen Sulfide	0.01 - 0.55 & 0.05 - 2.25 & 0.25 - 11.25 mg/L S^{2-}
2537800	Hydrogen Sulfide Test Kit, Model HS-C	Color Chart	Hydrogen Sulfide	0 - 5 mg/L H_2S
146400	Iron Test Kit, Model IR-18	Color Disc	Iron, Dissolved, MR	0 - 4 mg/L Fe
146401	Iron Test Kit, Model IR-18B	Color Disc	Iron, Dissolved, MR	0.25 - 7 mg/L Fe
146500	Iron Test Kit, Model IR-18A	Color Disc	Iron, Dissolved, MR	0.02 - 1.00 mg/L Fe
146700	Manganese Test Kit, Model MN-5	Color Disc	Manganese - As Mn	0 - 3.0 mg/L Mn
2350800	Manganese Test Kit, Model MN-PAN	Color Disc	Manganese - As Mn	0 - 0.70 mg/L Mn
2359300	Molybdate Test Kit, Model MO-LR	Color Disc	Molybdate - as Molybdenum	0 - 3.0 mg/L Mo
2428700	Nitrogen-Ammonia Test Kit, Model NI-SA	Color Disc	Nitrogen-Ammonia, MR	0 - 2.4 mg/L NH_3-N
1416100	Nitrogen-Nitrate Test Kit, Model NI-14	Color Disc	Nitrogen-Nitrate	0 - 10 mg/L NO_3-N
146803	Nitrogen-Nitrate Test Kit, Model NI-11	Color Disc	Nitrogen-Nitrate	0 - 40 mg/L NO_3-N
2518050	Ozone Test Kit, Model HR-Accuvac	Accuvac®	Ozone - As O_3	0 - 1.50 mg/L O_3
2064400	Ozone Test Kit, Model OZ-2	Color Disc	Ozone - As O_3	0 - 2.2 mg/L O_3
147006	pH Test Kit, Model 17F	Color Disc	pH, mid range	5.6 - 8.4 pH
147008	pH Test Kit, Model 17H	Color Disc	pH, mid range	6.6 - 8.4 pH
147009	pH Test Kit, Model 17J	Color Disc	pH, mid range	7.4 - 9.6 pH
147011	pH Test Kit, Model 17N	Color Disc	pH, wide range	4 - 10 pH
224800	Orthophosphate Test Kit, Model PO-19	Color Disc	Orthophosphate	0 - 40 mg/L PO_4
224801	Orthophosphate Test Kit, Model PO-19A	Color Disc	Orthophosphate	0 - 40 mg/L PO_4
1455400	Silica Test Kit, Model SI-5	Color Disc	Silica, HR	0 - 30 mg/L SiO_2
34250000	ULR Sulfite Fluorescence Test Kit, 6-500 µg/L (ppb), 100 Tests	Fluorometer	Sulfite	6 - 500 µg/L (ppb) SO_3

Please visit hach.com for further Test Kit details.

**Subject to change without notice.*

Test Strips

Test strips in a variety of parameters.

High-quality Hach chemistry on an easy-to-use test strip. Simply dip the strip in sample and compare with colors printed on the bottle to find a reading. Test strips are accurate, portable, and low-cost. Applications include drinking water, wastewater, pool and spa, industrial process water, and more. Parameters available include chlorine, nitrate and nitrite, hardness, alkalinity, chloride, ammonia, and more. Hach offers a high-value 5 in 1 test strip, which measures free chlorine, total chlorine, hardness, alkalinity, and pH - all on one strip.

Technical Specifications*

Prod. No.	Parameter	Range	Units
2744850	Total Alkalinity - Phenolphthalein	0 - 240 mg/L	50 tests
2755325	Ammonia, Nitrogen, Low Range - as NH_3-N, for freshwater	0 - 6 ppm	25 tests
2744940	Chloride	30 - 600 mg/L Cl^-	40 tests
2751340	Chloride	300 - 6000 ppm Cl^-	40 tests
2745050	Free and Total Chlorine	0 - 10 mg/L Cl_2	50 tests
2793944	Free and Total Chlorine	0 - 10 mg/L Cl_2	250 tests (individually wrapped)
2890200	Free Chlorine, High Range	0 - 600 mg/L Cl_2	100 tests
2745125	Copper	0 - 3 ppm Cu	25 tests
2745250	Hardness, Total - as $CaCO_3$	0 - 425 ppm	50 tests
2793828	Hardness, Total - as $CaCO_3$	0 - 425 ppm	1000 tests (individually wrapped)
2793844	Hardness, Total - as $CaCO_3$	0 - 425 ppm	250 tests (individually wrapped)
2745325	Iron, medium range	0 - 5 ppm Fe	25 tests
2745425	Nitrate Nitrite	0 - 50 mg/L NO_3-N 0 - 3.0 mg/L NO_2-N	25 tests
2601300	pH	0 - 14 pH units	100 tests
2745650	pH	4 - 9 pH units	50 tests
2751000	pH	7.5 - 14 pH units	100 tests
2757150	Phosphorus, Orthophosphate (reactive) - as PO_4	0 - 50 ppm PO_4	50 tests
2755250	Free Chlorine Total Chlorine Total Hardness Total Alkalinity pH	0 - 10 mg/L Cl_2 free 0 - 10 mg/L Cl_2 total 0 - 25 gpg/0 - 425 mg/L $CaCO_3$ 0 - 240 mg/L $CaCO_3$ 6.2 - 8.4 pH units	50 tests

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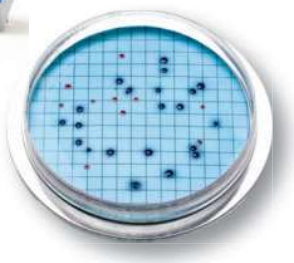
Learn More

Microbiological Products



LuminUltra ATP

LuminUltra ATP microbiological testing solutions provide feedback on contamination sooner for proactive control!

Most Popular Media

EPA-approved m-ColiBlue24 simultaneously detects total coliforms and E. coli in just 24 hours—no confirmation necessary!

Learn More

Whirl-Pak™ Sampling Bags

These bags feature a white, write-on strip for easy sample identification. Mark bags using an ordinary ballpoint pen, pencil, or felt-tip marker. The Dechlor bag meets National Environmental Laboratory Accreditation Conference (NELAC) standard for sampling wastewater treated with 15 mg/L of chlorination agent. Both bags have 100 mL and 4-oz. fill lines (approximate volume).

Prod. No.	Description
2233199	Bag, Sterile, WhirlPak, 207 mL, 100/pk
2075333	Bag, Sterile, Whirl-Pak with Dechlorinating Agent, 177 mL, 100/pk

Sterile Sampling Bottle with Dechlorinating Agent

Hach Modified Colitag Sterile 120 mL Sample Bottle

Prod. No.	Description
8888006	Hach Modified Colitag Sterile Sample Bottles, 120 mL, 100/pk

Sample Vial

Sample vial contains thiosulfate and custody tie. 120 mL sterile, hinged-cap vials meet all EPA requirements for microbiology sampling. Collection, incubation, and accurate reading can all be done in the vial without a transfer step. 100 mL raised fill line. Polypropylene.

Prod. No.	Description
2634001	Sample Vial with Thiosulfate and Custody Tie, 120 mL, 200/pk

Wire Innoculating Loop

Prod. No.	Description
2112100	Innoculating Wire Loop, 3" Nichrome V Wire, 1/pk
2749125	Inoculating Loop, Disposable, 10 µL, 10/pk

Millipore Microfil System Filters & Funnels

Convenient, easy to use system for well-accepted membrane filtration method conforms to international standards: CEN, Standard Methods, WHO. Disposable, stackable, light, recyclable plastic Microfil funnels eliminate autoclaving and minimize waste.

Prod. No.	Description
2586300	Microfil Funnels, 100 mL, 150/pk

Microfunnels

These funnels feature an integrated sample container and filter funnel designed to eliminate waste. 2831500 also includes the pad.

Prod. No.	Description
2831500	Microfunnel with Pad, 50/pk
2831600	Microfunnel Single-Place Manifold, 1/pk

Sartorius Biosart 100 Monitor

Sartorius Biosart 100 Monitors are incredibly unique and efficient. By drawing vacuum across the membrane, your sample is quickly and efficiently filtered through the included 0.45 µm filter. When you are done filtering, the monitor quickly converts into its own Petri dish, saving you time and money, while eliminating waste. Simply cap the bottom of the monitor, remove the cylinder side tube, add media, and cap the Petri dish.

Prod. No.	Description
2521101	Sartorius Biosart 100 Monitor, 100 mL, 48/pk

Long Wave UV Lamp

Mid-size (6 Watt) high intensity, hand-held. Intensity at 15.2 cm (6"), 750 µW/cm^2. Filters: Two 6 x 7.6 cm (2.34 x 3") in snap on/off frame.

Overall dimensions: 37.5 x 8.9 x 6.7 cm (14.8 x 3.5 x 2.3"). UL listed. Meets existing OSHA electrical standards. 352 nm.

Prod. No.	Description
2184300	Hand Held UV Lamp

Millipore ez Fit Manifold

EZ-Fit™ Manifold: Designed for Easy Cleaning and Decontamination

- Versatile Filtration Heads: Compatible with both reusable and disposable filtration devices.
- Quick-Fit Connectors: Simplify vacuum tubing connections.
- Low Profile: Ideal for use in laminar flow hoods.
- Biofilm Prevention: The innovative EZ-Fit™ Manifold design eliminates contamination sources that can lead to false positives. All internal areas are easily accessible for efficient cleaning.
- Autoclavable Components: All parts can be autoclaved, and components can be quickly and easily removed without additional tools.
- Integrated Check Valve: Prevents liquid back-flow from the vacuum system.
- 2-Way Valve: Ensures safe handling by preventing accidental contact with the filtration head during operation.

Prod. No.	Description
2586201	Millipore ez Fit Manifold Base, 1-Place, SS, 100 mL, 1/pk

Filter Holder, Glass, for Vacuum Filtration

Though not as robust as the stainless steel alternative, glass systems provide a longer life than the plastic option. Beaker-style funnel (300 mL) with 47 mm membrane support for filtration of aqueous samples. Fritted borosilicate glass membrane support for even filtration across surface of membrane. Funnel attaches evenly to base via aluminum clamp. Borosilicate glass funnel and base; anodized aluminum clamp; support screen (sintered glass); rubber stopper (No. 8) included. Filter flask sold separately (500 mL, PN 54649)

Prod. No.	Description
234000	Glass Filtration Apparatus

Polyphenylsulfone Reusable Filters and Funnels

Fully autoclavable for multiple uses, these funnels present the most economical solution for reusable systems.

Prod. No.	Description
1352900	Magnetic Polyphenylsulfone Filter Holder, 47 mm
2254400	Polysulfone Filter Holder

Millipore Membrane Filters

Prod. No.	Description
2916800	Millipore EZ Pak membranes; white, gridded, 0.45 µm pore size
2936100	Millipore gridded membranes, 0.45 µm, 47 mm, white, gridded, sterile, 150/pk
2936200	Millipore S-Pak type membrane filters, certified for fecal coliform analysis, 0.7 µm, 47 mm, pk/150

Petri Dishes

Prod. No.	Description
1471799	Polystyrene Petri Dish, with Pad, 100/pk
2936300	Petri Dish with Pad, 47 mm, 150/pk
25248000	EO Sterilized Petri Dish with Pad, 47 mm, 150/pk
1485299	Petri Dish, 9 x 50 mm, 100/pk

m-ColiBlue24® - EPA Approved

EPA approved m-ColiBlue24 simultaneously detects total coliforms and E. coli in just 24 hours—no confirmation step necessary! And with the lowest published false positive count, you can have full confidence in your results. Glass ampules (2608420), plastic ampules (26084500), 100mL bottles (2608442) of m-ColiBlue24 and agar plates (2805215), afford maximum shelf life and ease of use for pre-measured and prepared media. Use m-ColiBlue24 Broth to accurately monitor and evaluate total coliform and E. coli in drinking water; wastewater; bottled water; beverages; surface, ground, and well water; and ultrapure, chemical processing and pharmaceutical processing waters.

Prod. No.	Description
2608420	Total Coliforms and E. coli mCB24 Broth, Glass Ampules
2608450	Total Coliforms and E. coli mCB24 Broth, Plastic Ampules
2608442	Total Coliforms and E. coli mCB24 Broth, 100 mL Bottle

Presence-Absence Tests

Presence-absence tests are a convenient way to detect coliforms and E. coli in your water system. Conforms to Standard Methods 9221 D.

Prod. No.	Description
2401650	Presence Absence Test with MUG, 50/pk
32215	Brilliant Green Bile Broth Tubes, 15/pk
2495525	E.coli and total coliforms, 25/pk
2323250	Total Coliforms p-A Broth (sterile bottle), 50/pk

Paddle Testers (Dipslides) and Total Count Media

Dipslides, or paddle testers, are a versatile platform of products that can test for a variety of microbes including coliforms, yeasts, and molds.

Prod. No.	Description
2610810	Total Aerobic Bacteria/Yeast & Mold, 10/pk Tryptone Glucose Extract Agar/Sabouraud Dextrose Agar
2610910	Total Aerobic Bacteria/Total Coliform Red Bile Agar, 10/pk Tryptic Soy Agar (TSA)/Violet
2619510	Total Aerobic Bacteria/Disinfection Control, 10/pk TSA/DE Neutralizing Agar
2406720	HPC (heterotrophic Plate Count) Agar Tubes, 20/pk
2564325	Tryptic Soy Broth Bottles, 100 mL, 25/pk

Membrane Filtration Other Prepared Media

Hach's ready-to-use media eliminates measuring, mixing, and autoclaving steps necessary to prepare dehydrated media. Membrane filtration methods enable the isolation and counting of microorganisms by filtering a sample through a membrane and then culturing it on microbial media. This technique is useful for testing large liquid volumes, making it crucial for environmental monitoring and water quality assessment.

Compared to traditional methods, membrane filtration is faster and more efficient, delivering results within 24 hours. Using selective media, specific bacteria can be isolated, providing quantitative data on microbial load. This versatile technique is applicable to various samples, including water, beverages, and pharmaceuticals.

Prod. No.	Description	Application
Agar Products		
2724106	R2A-I-MF Agar, 14 mL, pk/6	For enumeration of heterotrophic bacteria in water, especially potable water
2805215	Prepared agar plates m-ColiBlue24, pk/15	For detection of total coliforms and E. coli
2811715	Prepared agar plates m-EI, pk/15	Detection of Enterococci in recreational water
2811615	Agar plates m-ENDO, pk/15	Detection of total coliform bacteria
2811515	Agar plates m-FC, pk/15	Detection of fecal coliforms
2811415	m-HPC Agar Plates, pk/15	Estimation of the number of live heterotrophic bacteria in water
2811815	m-TEC, modified, prepared agar plates, pk/15	Detection of E. coli in recreational waters
2812115	Nutrient agar w/ MUG plates, pk/15	For confirmation of E. coli
Plastic Ampules		
2608450	Total Coliforms and E. coli mCB24 Broth, Plastic Ampules	For detection of Total Coliform Bacteria and Escherichia coli
2373550	Total Coliform, m-Endo Broth, glass ampules	For detection of Total Coliform Bacteria and Escherichia coli
2373250	Ampules, plastic, m-FC 2 mL, pk/50	For detection of Fecal Coliform Bacteria
2428550	Ampules, m-FC w/rosolic acid, plastic, 2 mL, pk/50	For detection and enumeration of fecal coliforms in wastewater
2428350	Ampules, m-Green ym broth, plastic, pk/50	For detection and enumeration of fungi in beverages
2812450	Plastic ampules m-HPC Broth, pk/50	For estimation of the number of live heterotrophic bacteria in water
2517150	MI Broth, pk/50	For the simultaneous detection of coliforms and E. coli
2373850	Ampules, m-TGE broth, plastic, pk/50	For Heterotrophic Bacteria
2428450	Ampules, m-TGE/TTC broth, plastic, pk/50	For heterotrophic bacteria, contains a redox dye indicator to help visually detect growing bacteria
2924050	Pry plastic ampules, pk/50	For use primarily in beverage applications
2812250	Plastic ampules, pseudomonas broth, pk/50	For detection of Pseudomonas species
2812650	Tryptic Soy Broth Plastic Ampules, pk/50	To culture bacteria, yeasts, and molds, including aerobic gram-positive and gram-negative bacteria; in qualitative procedures for the sterility; and enrichment of aerobes

Biological Activity Reaction Test (BART)

BART Biodetectors are excellent diagnostic tools to help identify the presence of process disruptors. Find out if you have bacteria creating slime layers and limiting disinfection, or discover if iron reducing bacteria are eating your pipes. 11 varieties to choose from.

Prod. No.	Description
2434809	Combination Pack: Convenient multi-pack for detection 3 each of IRB/SRB/SLYM (COMB) of iron-related, sulfate reducing, and slime forming bacteria
2478409	Pool and Spa Bacteria (POOL); Problematic pool and spa bacteria; Pseudomonas strains, 9/pk
2432509	Slime Forming Bacteria (SLYM); Aerobic/Anaerobic slime producing bacteria; Pseudomonads, 9/pk
2432409	Sulfate-Reducing Bacteria (SRB); Anaerobic and aerobic hydrogen sulfide generating bacterial strains, 9/pk
2432309	Iron Related Bacteria (IRB), Iron-related baterial populations oxidizing, reducing, and "accumulating" strains, 9/pk
2490409	Heterotrophic Aerobic Bacteria (HAB); Broad spectrum of aerobic bacteria, 9/pk
2432709	Blue Green Algae (ALGE); Photosynthetic plant-like microorganisms; Cholorophyceae, Cyanobacteria, desmids, diatoms and euglenoids, 9/pk
2831409	Acid Producing Bacteria (APB); Bacterial strains capable of acid production under reductive (oxygen-deprived) conditions, 9/pk
2619309	Denitrifying Bacteria (DN); Nitrate reducing bacterial strains, 9/pk
2432609	Fluorescing Pseudomonads (FLOR); Fluorescing pseudomonad strains and related bacteria, 9/pk
2619407	Nitrifying Bacteria (NB); Ammonium oxidizing strains, 7/pk

Buffered Dilution Water

Buffered Dilution Water (required for testing non-potable water). Buffered Dilution Water Pillows, PN 2143166, contain 25 pillows each of magnesium chloride and potassium dihydrogen phosphate. Makes 25 L dilution water (1 liter per 1 magnesium chloride + 1 potassium dihydrogen phosphate pillow).

Prod. No.	Description
1430598	Buffered Dilution Water, 99 mL, 25/pk
2143166	Buffered Dilution Water Pillows, 25/pk

Multiple Tube Fermentation and Most Probable Number (MPN)

MPN tubes, or multiple tube fermentation, is an alternative way to test for coliforms and E. coli. Though it eliminates manual counting of colonies, all techniques based on statistical probability sacrifice accuracy and precision, as compared to membrane filtration.

Prod. No.	Description
2560915	A-1 Medium, 15/pk
32215	Brilliant Green Bile Broth Tubes, 15/pk
1410415	EC Medium Tubes, 15/pk
2471515	EC Medium with MUG Tubes w/o Durham Tubes, 15/pk
2282415	EC Medium with MUG Tubes with Durham Tubes, 15/pk
2162315	Lauryl Tryptose Broth Tubes, single strength, 15/pk
2101415	Lauryl Tryptose Broth Tubes, concentrated, 15/pk
2182115	Lauryl Tryptose with MUG Broth Tubes, concentrated, 15/pk
2217515	Lauryl Tryptose with MUG Broth Tubes, single strength, 15/pk
2277700	Total Bacteria Count Media Set
2564325	Tryptic Soy Broth Bottles, 100 mL, 25/pk

Incubators

All samples, regardless of preparation technique, require incubation. Hach carries incubators for lab or field use.

Prod. No.	Description
2619200	Model 153 Low-profile Culture Incubator, 110/120 VAC, 50/60 Hz
2569900	Portable Culture Incubator, Auto Cigarette Lighter powered (or customer supplied car power adapter, female. 100-240 VAC, 50/60 Hz to 12 VDC, 10 A)

Total Living Biomass Assessment (ATP)

The LuminUltra PhotonMaster is a rugged, low-cost and portable luminometer, which utilizes LuminUltra's 2nd Generation ATP test kits to measure total active microorganisms in any type of fluid or solid sample.

Total active microorganism levels indicate contamination risk and provide real-time, actionable data to keep your drinking water, wastewater, or industrial process running smoothly and efficiently. The PhotonMaster offers a substantial improvement over competitive platforms in both time and cost per test.

- Detect total active microorganisms in any type of sample
- Results in minutes—not hours or days—for real-time results
- Lightweight and compact—Lab or Field operable for maximum flexibility
- Simple and straightforward testing procedure to minimize errors and take action in real-time

See hach.com for more information and available products.

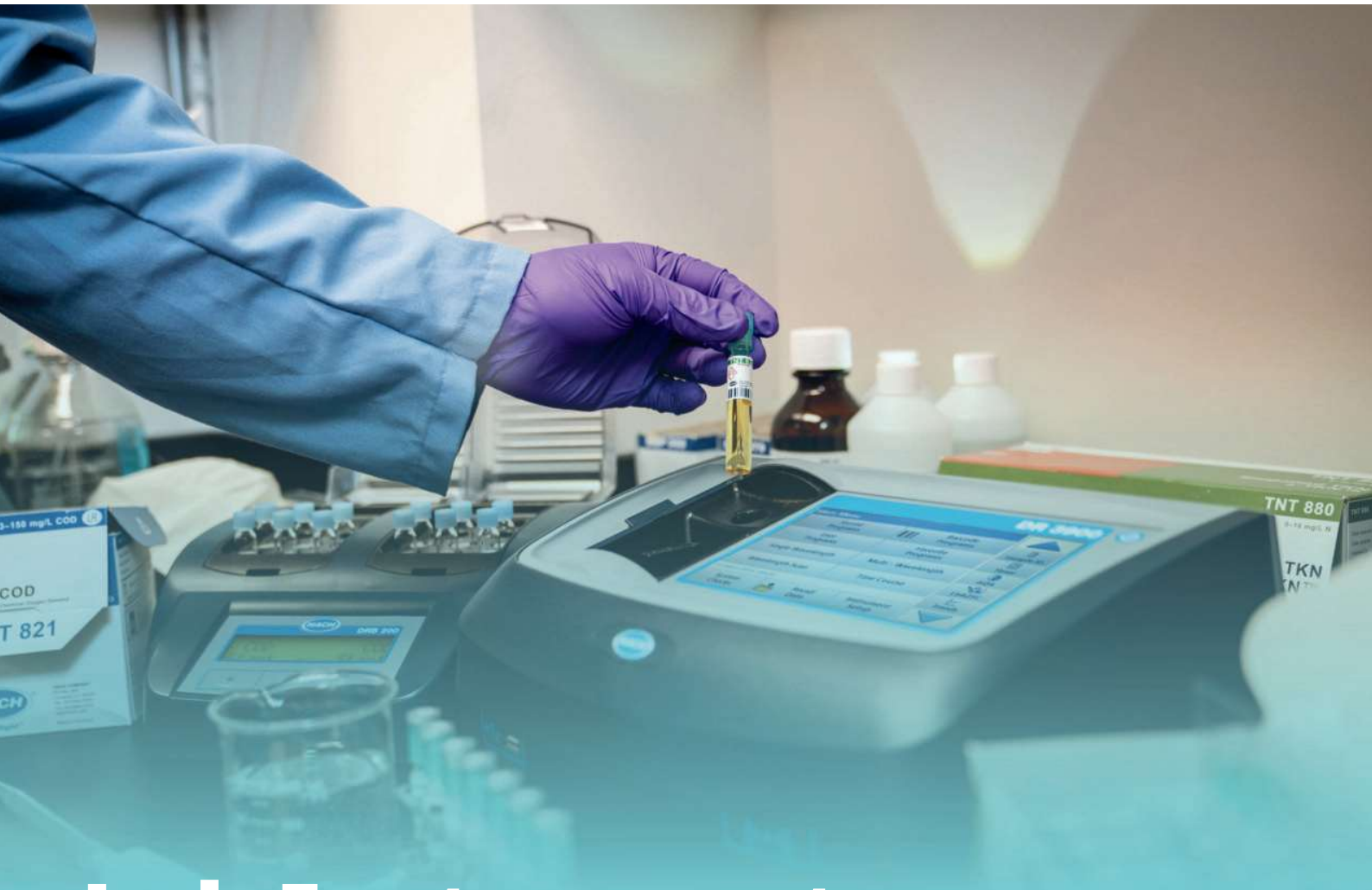
LuminUltra ATP Testing

LuminUltra test kits are available for a variety of applications, including Drinking water, Oil & Gas, Food and Beverage (CIP), Nitrification, Organics, Wastewater, and other industrial applications.

In addition to instruments and the free and total ATP test kits themselves, Hach carries individual reagents so replacing only what's needed it possible as well as instrument cleaning and maintenance items.

Learn More

See hach.com for available test kits and reagents.



Lab Instruments

Spectrophotometers

Colorimeters

Dry Thermostat Reactors

Laboratory TOC Analyzers

Portable Parallel Analyzers

Portable Fluorometer

Turbidimeters

Spectral Colorimeters

HACH®

Be Right™

www.newteclab.mx
Tel. 667 7161023, 7160188
email: ecommerce@newteclab.mx

Spectrophotometers

Quick Reference Guide - Choose your Spectrophotometer

Hach offers a perfectly coordinated system of photometers and reagents, required accessories and services. For all key parameters from Ammonia to Zirconium. Highest efficiency and accuracy guaranteed – starting with the individual components of the spectrophotometer and the ready-to-use chemistry up to the interaction with you and your laboratory equipment. Hach delivers to you a perfectly coordinated system – as a developer, manufacturer and sales & service partner.

	DR6000 UV VIS Spectrophotometer with RFID Technology	DR3900 Spectrophotometer with RFID technology, 110 - 240 V AC	DR1900 Portable Spectrophotometer
Operating Mode	Transmittance (%), absorbance and concentration (wavelength, time)	Transmittance (%), Absorbance and Concentration, Scanning	Transmittance (%), Absorbance and Concentration
Source Lamp	Tungsten (visible range), deuterium (UV range)	Gas-filled Tungsten (visible)	Xenon Flash
Optical System	Reference beam, spectral	Reference beam, spectral	Reference beam, spectral
Wavelength Range	190 - 1100 nm	320 - 1100 nm	340 - 800 nm
Wavelength Accuracy	± 1 nm	± 1.5 nm (wavelength range 340 - 900 nm)	± 2 nm (range 340 - 800nm)
Wavelength Reproducibility	< 0.1 nm	± 0.1 nm	± 0.1 nm
Wavelength Resolution	0.1 nm	1 nm	
Wavelength Selection	Automatic, based on method selection	Automatic, based on method selection	Automatic
Spectral Bandwidth	2 nm	5 nm	
Scanning Speed	900 nm/min (in 1 nm steps)	> 8 nm/S (in steps of 1 nm)	
Photometric Measuring Range	± 3 Abs	± 3.0 Abs (wavelength range 340 - 900 nm)	0 - 3 Abs (wavelength range 340 - 800 nm)
Photometric Accuracy	5 mAbs @ 0.0 - 0.5 Abs <1% @ 0.5 - 2.0 Abs @ 546 nm	5 mAbs @ 0.0 - 0.5 Abs 1 % at 0.50 - 2.0 Abs	± 0.003 Abs @ 0.0 - 0.5 Abs
Photometric Linearity	< 0.5 % - 2 Abs	< 0.5 % - 2 Abs	< 0.5 % (0.5 - 2.0 Abs)
Stray Light	KI-solution at 220 nm < 3.3 Abs/ < 0.05%	< 0.1% T at 340 nm with $NaNO_2$	< 0.5%T at 340 nm with $NaNO_2$
Display	TFT 7 inch WVGA color touch	7" TFT	Graphical display 240 x 160 pixel (LCD, b/w, backlit)
Data Logger	5000 data points (Result, Date, Time, Sample ID, User ID)	2000 measured values (Result, Date, Time, Sample ID, User ID)	500 measured values (Result, Date, Time, Sample ID, User ID acc. to GLP)
Preprogrammed Methods	> 240	> 240	>220
User Programs	200	100	50
Sample Cell Compatibility	Rectangular: 10, 20, 30, 50 mm, 1 inch; round: 13 mm, 16 mm, 1 inch Optional 100 mm rectangular cell with additional adapter	Rectangular: 10, 50 mm, 1 inch; round: 13 mm, 16 mm, 1 inch	13 / 16 mm and 1 inch round adapter, 10 x 10 mm 1 inch square and 10x10mm
Dimensions (H x W x D)	215 x 500 x 460 mm (8.5 x 19.7 x 18.1 in.)	151 x 350 x 255 mm (5.9 x 13.8 x 10.0 in.)	98 x 178 x 267 mm (3.9 x 7.0 x 10.5 in.)
Weight	11 kg (24.3 lbs)	4.2 kg (9.3 lbs)	1.5 kg (3.3 lbs)
Operating Conditions	10 - 40 °C (50 - 104 °F), max. 80% relative humidity (non-condensing)	10 - 40 °C (50 - 104 °F), max. 80% relative humidity (non-condensing)	10 - 40 °C (50 - 104 °F), max. 80% relative humidity (non-condensing)
Storage Conditions	-25 - 60 °C (-13 - 140 °F), max. 80% relative humidity (non-condensing)	-30 - 60 °C (-22 - 140 °F), max. 80% relative humidity (non-condensing)	-30 - 60 °C (-22 - 140 °F), max. 80% relative humidity (non-condensing)
Enclosure Rating	IP20 with closed lid	IP40	IP67
Power Requirements	110 - 240 VAC; 50/60 Hz	110 - 240 VAC; 50/60 Hz	Internal: 4 x AA size Alkaline or 4x NiMH rechargeable Battery* External: 110 - 240 VAC; 50/60 Hz* *(* optional Module required. May not be available in all regions.)*
Interfaces	USB type A (2), USB type B, Ethernet, RFID module	USB type A (2), USB type B, Ethernet, RFID module	USB type Mini IP67 (with optional Module)

DR6000™ UV VIS Spectrophotometer

Experience Superior Performance with the DR6000 UV VIS Spectrophotometer, the industry's most advanced lab spectrophotometer.

With UV and Visible Spectrum capabilities, over 250 pre-programmed methods including the most common testing methods used, guided procedures, and integrated quality assurance software, the DR 6000 ensures you are ready to handle your comprehensive water testing needs.

Your Water Testing Needs, All in One Spectrophotometer

The DR6000 has the most pre-programmed testing methods, including high-speed wavelength scanning across the UV and Visible Spectrum.

Accessories for High Volume and High Accuracy Testing Needs

A carousel sample changer allows up to seven sequential measurements. The Sipper Module, an instrument-controlled sample delivery system, increases precision by constant optical characteristics.

Advanced Quality Assurance at Your Fingertips

The DR6000 comes with integrated QA software for scheduling, documenting and interpreting all of your needed quality measurements.

Guided Procedures and Elimination of False Readings

The DR6000, when used with TNTplus® reagent vials, provides the accurate results you need by guiding you step-by-step through your testing procedures. With TNTplus, the instrument averages 10 readings and eliminates outliers, making scratched, flawed or dirty glassware a non-issue.

Automatically Avoids Errors

RFID* technology automatically updates the program calibration factors when you place a TNTplus reagent box near the DR6000. The instrument identifies chemistry expiration dates via a barcode on the vials, and detects chemistry coefficient factors to avoid errors that can occur in lot-to-lot variations in the chemistry.

**RFID technology currently available only in US, Anguilla, American Samoa, Australia, Bolivia, Canada, Cayman Islands, Columbia, Dominican Republic, El Salvador, Federated States of Micronesia, Guam, Guatemala, Marshall Islands, New Zealand, Northern Mariana Islands, Palau, Panama, Puerto Rico, and US Virgin Islands.*

Order Information

LPV441.99.00012	DR6000 UV VIS Spectrophotometer with RFID Technology
LPV441.99.00002	DR6000 UV VIS Spectrophotometer without RFID
Accessories	
LQV157.99.20002	SIP10 Sipper Set for pour-thru methods, 1 inch vial
LQV156.99.10012	LOC100 Kit for Radio Frequency ID (RFID*) based sample tracking
LZV537	Test Filter Set for DR Spectrophotometers
2763900	DR/Check Absorbance Standard Kit (Set of 4)
LZV902.99.00002	Carousel Holder 7 x 1 cm
LZV902.99.00012	Carousel Holder 5 x 1 inch
LZV943	Application Software Enzymatic Food Analysis
LZV942	Application Software Brewery Analysis
LZV941	Application Software Drinking Water Analysis

Learn More

DR3900™ VIS Spectrophotometer

Optimized for safe processes and consistent, quick and accurate water analysis results

Simplicity throughout: Hach's DR3900 provides the simplest way to perform lab tests. Used together with TNTplus chemistries testing steps are reduced. The potential for human error is mininimized.

Simple Preparation

TNTplus® vials use Dosicaps - freeze-dried reagents integrated into sealed cap - that are easier to use than Powder Pillows or Liquid Reagents, without any risk of contamination.

The boxes and vials are color-coded for a fast and easy parameter and range recognition of exactly the test you need.

Step-by-step illustrated test methods are printed on the box as a quick reference and can also be called up in the instrument menu.

Comprehensive Documentation

Measurement results are documented on the detailed level with timestamp, operator ID, absorbance reading, and calculated concentration. The 2D barcode delivers the lot number and expiry date, logged with every result.

For your accreditation the certificate of analysis can be called up just by wiping the reagent box towards the RFID* sensor.

**RFID technology currently available only in US, and certain other countries. Check the datasheet for country availability.*

Fast Execution

A 2D barcode on the TNTplus vial is automatically read by the Hach DR spectrophotometer to identify the appropriate method and take the measurement.

The vial spins to take 10-fold absorbance readings that will be averaged for result determination to exclude scratches and fingerprints. Instrument calibration verification and high instrument stability all combine to eliminate the need to run reagent blanks.

Customizable

With the ability to store hundreds of user-determined methods, operators are able to tailor the DR3900 to meet the everyday needs of the plant.

Being able to optimize and customize the method portfolio, combined with regular software updates and Smart Monitoring, makes the DR3900 the ultimate solution to water quality lab needs.

Order Information

LPV440.99.00012	DR3900 Laboratory VIS Spectrophotometer with RFID* Technology
LPV440.99.00002	DR3900 Laboratory Spectrophotometer without RFID Technology*

Accessories

LQV157.99.10002	SIP10 Sipper Kit with Tubing and Dual Path Length Cell
LQV156.99.10012	LOC100 Kit for Radio Frequency ID (RFID*) based sample tracking
LZV537	Test Filter Set for DR Spectrophotometers
2763900	DR/Check Absorbance Standard Kit (Set of 4)
LZV873	Ethernet cable, 2 m
LZV566	USB Barcode Scanner
LZV582	USB keyboard QWERTY
LZV874	Protective film for the DR3900/ DR6000 display

Learn More

DR1900 Portable Spectrophotometer

Lab methods in the palm of your hand

The DR1900 combines the ruggedness and portability of a field instrument with over 220 of the most commonly tested water methods.

Carry Anywhere

The lightest, most compact portable spectrophotometer available easily goes where you need to go.

Test What You Need

Analyze your water with more preprogrammed methods than any other portable spectrophotometer, or easily create your own methods to suit your unique needs.

Ensure Accuracy in the Field

Wavelength range of 340 to 800 nm provides accuracy typically seen only in laboratory instruments.

Make Testing Easier

Simple, easy-to-use interface plus the widest range of vial sizes makes testing flexible.

Take Into Field Environments

Rugged construction keeps the elements out, which means you can test in the most demanding conditions.

Order Information

DR1900-01H	DR1900 Portable Spectrophotometer
9624700	DR1900 Portable Spectrophotometer with USB + Power Module

Accessories

LZV804.99.00002	Power Module for 2100Q/2100Q IS and DR1900
LZV813.99.00002	USB + Power Module for 2100Q/2100Q IS & DR1900
2763900	DR/Check Absorbance Standard Kit (Set of 4)
LZV537	Test Filter Set for DR Spectrophotometers
2990700	Backpack for Portable Meters

Learn More

DR900 Handheld Colorimeter

Multi parameter handheld water testing with over 90 colorimetric parameters for use in the most demanding field environments

The portable DR900 allows quick and easy access to your most-used testing methods. This colorimeter is waterproof, dustproof and field durable. With an intuitive user interface, easy data transfer abilities, and the ability to test up to 90 of the most commonly tested water methods, the DR900 makes water testing in harsh field environments a little less challenging.

Your Favorites at Your Fingertips

Save time by storing your most standard methods for quick access in less than 4 clicks.

Field Ready in Every Way Possible

This portable, rugged colorimeter is waterproof and dustproof. Drop tested and shock resistant for greater quality assurance.

Intuitive User Interface

Improved user interface allows quick selections and easier testing.

Simple Data Communication

Stores data for up to 500 tests, and comes with a USB port for easily downloading or transferring information.

Satisfies Your Core Testing Needs

A single portable instrument provides access to 90 of the most common parameters.

Technical Data*

Source Lamp	Light Emitting Diode (LED)
Wavelength Range	420 nm, 520 nm, 560 nm, 610 nm
Sample Cell Compatibility	1 inch round or 16 mm round (with adapter)
Data Logger	500 measured values (Result, Date, Time, Sample ID, User ID)
Enclosure Rating	IP67 (vial cover closed)
Battery Requirements	4, AA size alkali cells
Battery Life	6 months (typical) @ 5 readings a day / 5 days / week without backlight**
	*** Backlight usage will decrease battery life.*
Display	Graphical display 240 x 160 pixels (Backlit)
Interface	USB type Mini IP67
Dimensions (H x W x D)	231 x 96 x 48 mm (9.1 x 3.8 x 1.9 in.)
Weight	0.6 kg (1.3 lbs) with battery

**Subject to change without notice.*

Order Information

9385100 DR900 Multiparameter Portable Colorimeter
Includes: DR900 instrument, USB cable with mini-USB connector, 4-AA alkaline batteries, 2 glass sample cells 1-inch (25 mm) round with 10, 20, 25-mL marks, 2 sample cells 1 cm/10 mL, sample cell adapter and multilingual user manual

Reagents and Accessories

4942500 Instrument Carrying Case for DR800 and DR900 Colorimeters, hard-sided
4943000 CEL Portable Laboratory Carrying Case
2763900 DR/Check Absorbance Standard Kit (Set of 4)
2635300 SpecCheck Secondary Gel Standard Kit, DPD Chlorine, 0-2.0 mg/L
2980500 SpecCheck Secondary Gel Standard Kit, DPD Chlorine, 0-4.0 mg/L
2893300 SpecCheck Secondary Gel Standard Kit, DPD Chlorine, 0-8.0 mg/L
2712500 SpecCheck Secondary Gel Standard Kit, Fluoride, 0-2.0 mg/L
2708000 SpecCheck Secondary Gel Standard Kit, Ozone, 0-0.75 mg/L
2507500 SpecCheck Secondary Gel Standard Kit, Monochloramine/Free Ammonium, 0-4.50 mg/L Cl_2/ 0-0.50 mg/L NH_3-N

Learn More

DR300 Pocket Colorimeter

Proven past. Accurate and Fast.

The DR300 maintains the Hach Pocket Colorimeter legacy of reliability with a more user friendly design.

Reliable

Since 1993, Hach has continued to provide premium chemistries and colorimetry instrumentation, providing dependable, accurate measurements.

Simple

Simple, intuitive operation reduces potential manual error, ensuring accurate measurement data you can trust, time after time. Larger display with improved backlight makes reading measurements in all conditions even easier.

Durable

Rugged, waterproof (IP67) design withstands whatever conditions you encounter in the field or on the road (drops, extreme temperatures, rain and dirt).

Order Information

DR300 Pocket Colorimeters

The DR300 Pocket Colorimeter includes manual, sample cells, and a carrying case. Reagents can be purchased by contacting Hach or your Hach distributor.

LPV445.97.00110	DR300 Pocket Colorimeter, Chlorine, Free + Total, LR/HR
LPV445.97.01110	DR300 Pocket Colorimeter, Bromine
LPV445.97.02110	DR300 Pocket Colorimeter, Nitrate
LPV445.97.03110	DR300 Pocket Colorimeter, Dissolved Oxygen
LPV445.97.04110	DR300 Pocket Colorimeter, Ozone
LPV445.97.06110	DR300 Pocket Colorimeter, Phosphate
LPV445.97.09110	DR300 Pocket Colorimeter, Zinc
LPV445.97.10110	DR300 Pocket Colorimeter, Molybdenum, LR/HR
LPV445.97.12110	DR300 Pocket Colorimeter, Chlorine, HR, & pH
LPV445.97.15110	DR300 Pocket Colorimeter, Manganese, HR
LPV445.97.16110	DR300 Pocket Colorimeter, Iron, TPTZ
LPV445.97.22110	DR300 Pocket Colorimeter, Iron, Ferrover
LPV445.97.25110	DR300 Pocket Colorimeter, Aluminium
LPV445.97.26110	DR300 Pocket Colorimeter, Monochloramine/Free Ammonium
LPV445.97.40110	DR300 Pocket Colorimeter, Ammonium
LPV445.97.51110	DR300 Pocket Colorimeter, Chlorine Dioxide
LPV445.97.62110	DR300 Pocket Colorimeter, Chlorine, Free + Total, MR/HR

Wavelength-specific DR300 Pocket Colorimeters

Program custom methods and calibrations on two channels.

LPV445.97.50110	DR300 Pocket Colorimeter, 500 nm
LPV445.97.52110	DR300 Pocket Colorimeter, 528 nm
LPV445.97.60110	DR300 Pocket Colorimeter, 600 nm
LPV445.97.65110	DR300 Pocket Colorimeter, 655 nm

Reagents and Accessories

2635300	SpecCheck Secondary Gel Standard Kit, DPD Chlorine, 0-2.0 mg/L
2893300	SpecCheck Secondary Gel Standard Kit, DPD Chlorine, 0-8.0 mg/L
2507500	SpecCheck Secondary Gel Standard Kit, Monochloramine/ Free Ammonium, 0-4.50 mg/L Cl_2/ 0-0.50 mg/L NH_3-N
2708000	SpecCheck Secondary Gel Standard Kit, Ozone, 0-0.75 mg/L
4674300	Batteries, AAA, Alkaline, 1.5 V, pk/4
4660200	MultiTest Kit Case (22 x 17 x 15 cm), blue, polypropylene
2427606	Sample Cell, 1 inch round glass, 6 pcs
4864302	Sample Cell, 1 inch round polystyrene, 2 pcs
2126102	Sample Cell, 1 cm round, pk/2 (unmatched, caps not included)

Technical Data*

Source Lamp	Light emitting diode (LED)
Detector	Silicon photodiode
Wavelength	As specified by model, ±2 nm
Sample Cell Compatibility	1 cm (10 mL), 25 mm (10 mL)
Data Logger	Last 50 measurements
Enclosure Rating	IP67, waterproof at 1 m for 30 minutes
Power Supply	Four AAA alkaline batteries; approximate life is 5000 tests
Display	LCD with backlight
Dimensions (H x W x D)	34 x 69 x 157 mm (1.3 x 2.7 x 6.2 in.)
Weight	0.25 kg (0.55 lbs.)

**Subject to change without notice.*

Learn More

DRB200 Dry Thermostat Reactors

The Hach DRB200 Dry Thermostat Reactor provides unique one-key operation. Programs for Hach procedures with digestion are preprogrammed into the instrument. And it's fast—the block heats from ambient to 150 °C (302 °F) in less than 10 minutes. Safe to operate.

The fully insulated heater block of the DRB200 reactor prevents skin contact with the heater block. Temperature safeguards are provided to prevent overheating. The reactor will emit an audible signal and automatically shutdown at the end of the run.

Optional dual block for simultaneous digestions is available. Two heater blocks in the DRB200 reactor give the operator independent control of two temperatures and durations. Use this option to run two programs at the same time.

13 mm vial wells are for TNTplus, 16 mm for traditional Test 'N Tube. 20 mm wells are for Total Nitrogen and Total Metals digestion.

Technical Data*

Temperature Range	37 - 165 °C (99 - 329 °F)
Operating Temperature Range	10 - 45 °C (50 - 113 °F)
Programmable Timer Range	0 - 480 minutes
Heating Rate	20 to 150 °C in 10 minutes
Temperature Stability	±2 °C
Application	COD: 150 °C | 120 minutes TOC: 105 °C | 120 minutes Metals: 100 °C | 60 minutes TN & TP: 100/105 °C | 60/30 minutes* ** Depends on test methods and reagents selected*
Power Requirements	100 - 240 VAC; 50/60 Hz, 600 VA
Dimensions (H x W x D)	145 x 250 x 310 mm (5.7 x 9.8 x 12.2 in.)
Weight	Single block: 2.0 kg (4.4 lbs) Dual block: 2.8 kg (6.2 lbs)

**Subject to change without notice.*

Order Information

LTV082.53.30001	DRB200 Digital Reactor Block: 9 x 16 mm vial wells, 2 x 20 mm vial wells, 115 VAC
LTV082.53.40001	DRB200 Digital Reactor Block, 15 x 16 mm vial wells, 115 VAC
LTV082.53.42001	DRB200 Digital Reactor Block, 21 x 16 mm vial wells, 4 x 20 mm vial wells, 115 VAC
LTV082.53.44001	DRB200 Digital Reactor Block, 30 x 16 mm vial wells, 115 VAC
DRB200-01	DRB200 Digital Reactor Block for TNTplus: 9x13mm vial wells, 2x20 mm vial wells, 115 VAC
DRB200-02	DRB200 Digital Reactor Block for TNTplus: 21x13mm vial wells, 4x20mm vial wells, 115 VAC
DRB200-03	DRB200 Digital Reactor Block for TNTplus: 30x13mm vial wells, 115 VAC
DRB200-04	DRB200 Digital Reactor Block for TNTplus: 12x13mm vial wells, 8x20 mm vial wells, 115 VAC

Reactor Adapters

These aluminum tubes are inserted into the 16mm vial wells of existing reactors, to adapt them to the 13 mm TNTplus vials. The adapters can be removed (once the heater block has cooled) if the customer needs to use 16 mm vial chemistries.

2895805	Reducing adapter, 16 mm to 13 mm vials, 5 pieces
HHA155	Reducing adapter for DRB200, 20 to 16 mm

Learn More

QP1680 TOC/TN_b High-Temperature Laboratory Analyzer

The QP1680 Analyzer measures Total Organic Carbon (TOC) and Total Nitrogen (TN_b) in one sample.

The QP1680 is available as a combined TOC and TN_b analyzer or for the individual parameters TOC or TN_b.

The most important features include:

- *Direct sample injection eliminates sample contact with valves and the built-in injection syringe, which minimizes the risk of sample carry-over.*
- *Large diameter sample aspiration tubing can handle particles up to 800 µm, expanding possible applications and reducing clogging.*
- *Integrated stirrer for each sample position homogenizes particle-containing samples before injection.*
- *Small footprint with integrated 65-position auto-sampler requires less space in the laboratory (an auto-sampler with 96 positions is also available as an alternative).*
- *Simple operation, data analysis and system diagnosis thanks to an intuitive software package.*

Order Information

LPV448.99.00001	QP1680 High-Temperature TOC Analyzer, with auto sampler, 65 positions
LPV448.99.00501	QP1680 High-Temperature TOC Analyzer, with auto sampler, 96 positions
LPV448.99.01001	QP1680 High-Temperature TOC/TN_b Analyzer, with auto sampler, 65 positions
LPV448.99.01501	QP1680 High-Temperature TOC/TN_b Analyzer, with auto sampler, 96 positions
LPV448.99.02001	QP1680 High-Temperature TN_b Analyzer, with auto sampler, 65 positions
LPV448.99.02501	QP1680 High-Temperature TN_b Analyzer, with auto sampler, 96 positions

Consumables & Spare Parts

SMKIT500000	QP1680 TOC/TN_b Starter Package
SMKIT501000	QP1680 Consumables Kit, 2500 analysis
SMKIT501100	QP1680 Consumables Kit, 5000 analysis
SMKIT501200	QP1680 Consumables Kit, 10000 analysis
SMSYS503000	Solids Module for QP1680 TOC/TN_b Analyzer
SMKIT503000	Solids Module Starter Package for QP1680 TOC/TN_b

Computer

SMCOM100700	LIMS License Key for TEIS Software

Learn More

Technical Data*

Model	QP1680-TOC	QP1680-TOC/TN_b	QP1680-TN_b
Parameter	TOC	TOC, TNb	TNb
Oxidation Method	Catalytic combustion at 680 °C	Catalytic combustion at 720 °C	Catalytic combustion at 720 °C
Measurement Method	NDIR (non-dispersive Infrared Detection)	TOC: NDIR (non-dispersive Infrared Detection) TN: Chemiluminescence	Chemiluminescence
Analysis time	Approx. 3 minutes	Approx. 4 minutes	Approx. 3 minutes
Gas consumption	150 mL/min*	200 mL/min*	200 mL/min
	**Sample preparation for NPOC determination requires additional 300-350 mL/min.*		
Gas specifications	Oxygen or synthetic air: minimum 99.998% (4.8) at 3 - 10 bar		
Temperature	Furnace temperature max. 1050 °C (1922 °F) (depending on configuration)		
Range	TC, TIC, NPOC, TN_b: 0 - 30000 mg/L		
Lower Limit of Detection (LOD)	TC, TIC, NPOC: 50 µg/L TNb: 20 µg/L		
Sample Volume	10 - 1000 µL		
Operating Conditions	20 - 30 °C (68 - 86 °F); 20 - 80% relative humidity (non-condensing)		
Norms and Standards	TOC / NPOC: ASTM D7573, EN 1484, EPA 415.1, EPA 9060A, ISO 8245, SM 5310B, NEN-ISO 20236 TN_b: ASTM D8083, EN 12260, ISO 11905-2, NEN-ISO 20236		
Power Supply	Analyzer: 100 - 240 VAC, 50/60 Hz, 16 A, with protective grounding PC: 100 - 240 VAC, 50/60 Hz, 1.6 A, with protective grounding Monitor: 100 - 240 VAC, 50/60 Hz, 1.6 A, with protective grounding		
Dimensions	440 x 380 x 700 mm / 17.3 x 15 x 27.6 in. (H x W x D)		
	**Subject to change without notice.*		

SL1000 Portable Parallel Analyzer (PPA)

Chloramination Testing Can Be Done 75% Faster

The new Hach® SL1000 Portable Parallel Analyzer (PPA) performs the same tests with less than half the manual steps. Get highly accurate results with less opportunity for errors in a fraction of the time. Up to six parameters tested simultaneously.

Perform multiple tests faster

Complete more tests on site, get the results you need faster, allowing you to visit more sites in each shift. Perform up to four colorimetric and two probe based measurements in parallel 75% faster than with other methods.

Less Variability

Automation and internal temperature control make the entire process consistent and repeatable, while applying the same processes as current Hach methods. Avoid manual steps that can introduce variability, even when performed by experienced testers.

Less Hassle

A single instrument combines colorimetric and probe testing in a field kit that requires fewer bulky accessories. All chemicals and processes are entirely contained inside the Chemkey. There are no powder pillows or glass vials to handle.

Order Information

9430000	SL1000 Portable Parallel Analyzer (PPA) Includes: SL1000 meter, carrying case, 1 instrument sample cup, 2 probe sample cups, rechargeable battery, battery charger, hand strap, instrument manual, and USB cable.
8499000	Full SL1000 Portable Parallel Analyzer (PPA) Kit Full kit includes basic instrument package plus: 1 pH probe, 1 conductivity probe and 1 box each of Free Cl, Total Cl, Monochloramine, Nitrite and Free Ammonia Chemkeys.
25632200	Full SL1000 Portable Parallel Analyzer (PPA) Nitrification Kit SL1000 meter, 1 pH probe, 1 nitrate probe, 1 box each of Free Cl, Total Cl, MonoCl, Free Ammonia and Nitrite Chemkeys, carrying case, 1 instrument sample cup, 2 probe sample cups, rechargeable battery, battery charger, handstrap, instrument manual, and USB cable.

Optional Accessories

9427900	Chlorine Verification Chemkey
9436800	System Verification Chemkey
9374200	Car Charger for SL1000/SL250 Portable Parallel Analyzer
9094900	Replacement Battery
9377700	Replacement Tray
9394900	Replacement Tray (Set of four)
2522905	Cotton-Tipped Applicator

Technical Data*

Battery Requirements	Rechargeable Lithium-Ion battery pack, 7.4 V, 5.0 Ah (5000 mAh)
Battery Life	>200 Chemkey tests per full battery charge
Certifications	CE, UKCA, FCC, ISED, RCM, KC
Detector	Silicon photodiode
Measurement Modes	Transmittance (%), Absorbance (abs) and Concentration (Conc)
Interfaces	Mini USB
Connector	5-Pin Input Connector: Two M12 connectors for Intellical probes
Chemkey Slots	4
Operating Temperature Range	Discharging: 5 - 50 °C (41 to 122 °F) 7 maximum 85% relative humidity (non-condensing) Charging: 5 - 45 °C (41 to 113 °F) / maximum 85% relative humidity (non-condensing)
Enclosure Rating	IP54
Dimensions (H x W x D)	258.3 x 130.8 x 58.9 mm (10.2 x 5.1 x 2.3 in.)
Weight	2.65 lbs. (1.2 kg)

**Subject to change without notice.*

Chemkey® Reagents

Learn More

SL250 Single-Port Portable Parallel Analyzer (PPA)

One portable instrument—all the key parameters you need

Hach®'s SL250 Portable Parallel Analyzer (PPA) is an innovative multiparameter water quality meter that allows you to simultaneously perform colorimetric and probe-based measurements. The instrument and corresponding Chemkey® reagents are easy to use regardless of technical expertise.

Compared to traditional powder or liquid reagent methods, Chemkeys use a simplified testing method that requires no sample preparation, making the process significantly easier, faster, and safer while drastically reducing variability in results.

In addition to the many colorimetric measurements, you can measure pH, dissolved oxygen, conductivity, and more on one device.

Technical Data*

Battery Requirements	Lithium-ion polymer rechargeable battery, 7.4 V, 5.0 Ah (5000 mAh)
Battery Life	>200 Chemkey tests per full battery charge
Certifications	CE, UKCA, FCC, ISED, RCM, KC
Detector	Silicon photodiode
Measurement Modes	Transmittance (%), Absorbance (abs) and Concentration (Conc)
Data Memory	Memory: 1000 measured values (result, date, time, site ID, user ID)
Interfaces	Mini USB port
Connector	5-Pin Input Connector: Two M12 connectors for Intellical probes
Chemkey Slots	1
Operating Temperature Range	Discharging: 5 - 50 °C (41 - 122 °F), maximum 85% relative humidity (non-condensing) Charging: 5 - 45 °C (41 - 113 °F), maximum 85% relative humidity (non-condensing)
Enclosure Rating	IP54
Dimensions	(HxWxD) 258.3 x 130.8 x 58.9 mm (10.2 x 5.1 x 2.3 in.)
Weight	1.0 kg (2.2 lbs)

Subject to change without notice.

Accuracy and repeatability at your fingertips

Automatic parameter selection and measurement processes make results consistent and repeatable while using the same trusted chemistries as current Hach methods. Avoid manual steps that can introduce variability between users.

Perform your tests faster

With sample prep eliminated, get the results you need faster. You have the ability to perform up to three simultaneous tests.

No need to handle chemicals

A single instrument combines colorimetric and probe-based testing in a field kit that requires fewer accessories. All chemicals and processes are entirely contained inside the Chemkey. There are no powder pillows or glass vials to handle.

Order Information

9430250	SL250 Single-Port Portable Parallel Analyzer (PPA)

Optional Accessories

9427900	Chlorine Verification Chemkey
9436800	System Verification Chemkey
9374200	Car Charger for SL1000/SL250 Portable Parallel Analyzer
9094900	Replacement Battery
9377700	Replacement Tray
9394900	Replacement Tray (Set of four)
2522905	Cotton-Tipped Applicator

Learn More

DR1300 FL Portable Fluorometer

Portable lab meter for ultra low range chlorine and sulfite detection

Protect Your Assets

DR1300 FL offers simple methods, with increased accuracy over other traditional methods, to deliver confident results that chlorine has been removed or reduced to meet your process specifications. Accuracy in your water analysis protects your assets, and now you have the control to consistently measure down to 2 ppb chlorine and 6 ppb sulfite with industry-first fluorescence testing methods.

Monitor and Optimize Your Dechlorination Process

Monitor that you have removed or reduced chlorine or optimize and control by verifying low levels of residual chlorine and sulfite with the DR1300 FL. Reduce biofouling potential and save on dechlorination costs by testing for sulfite and chlorine at ultra-low levels. You will be able to adjust your bisulfite feed or GAC process and keep a low chlorine presence to avoid downtime and corrective measures.

Depend on Direct Measurements

The DR1300 FL provides portable tests for free and total chlorine as low as 2 ppb and sulfite down to 6 ppb. It works with your monitoring and control tools to improve your current process. You will get quick and easy direct measurements to help ensure product quality.

New Fluorescence Technology

Groundbreaking ultra-low range fluorescence tests from Hach offer easy-to-perform ultra-low range solutions for free or total chlorine and sulfite. The DR1300 FL and fluorescence methods overcome many common interferences as well. You get the precision and accuracy you need.

Technical Data*

Parameter	Chlorine free & total, Sulfite
Measurement Range 2	Free Chlorine: 2 - 100 µg/L (ppb)
	Total Chlorine: 3 - 100 µg/L (ppb)
	Sulfite: 6 - 500 µg/L (ppb)
Enclosure Rating	IP65
Light Source	UV LED, 365 nm
Detector	Silicon photodiode
Display	Graphical LCD with backlight, 160 x 240 pixels
Application	Indoor or outdoor use
Operating Temperature Range	4 - 49 °C (40 - 120 °F), 0 - 85% relative humidity (non-condensing)
Data Storage	16 GB SD Card or 60,000,000 data points
Power Supply	Four AA alkaline batteries
Dimensions	(W x H x D) 26.5 x 8.8 x 6.2 cm (10.43 x 3.46 x 2.44 inches)
Weight	0.6 kg (1.32 lb) without batteries

**Subject to change without notice.*

Order Information

LPV449.97.01002	DR1300 FL Portable Fluorometer with Bluetooth

Reagents

34252000	ULR Total Chlorine Fluorescence Test Kit, 3-100 µg/L (ppb), 100 Tests
34251000	ULR Free Chlorine Fluorescence Test Kit, 2-100 µg/L (ppb), 100 Tests
34250000	ULR Sulfite Fluorescence Test Kit, 6-500 µg/L (ppb), 100 Tests
34630000	Fluorescence Standards Kit

Accessories

LPZ449.99.00001	16 mm Sample Cell Adapter & Cover
LPZ449.99.00002	DR1300 FL Bluetooth Dongle
100866	16 mm Sample Vials, pk/6
3563500	Sample Vial Holder for 16 mm Fluorescence Test Sample Cells

Learn More

TU5200 Benchtop Laser Turbidimeters

The next standard in the evolution of turbidity

Only the new TU 5 Series Lab & Process Turbidimeters with 360° x 90° Detection deliver unprecedented confidence that a change in your reading is a change in your water.

Groundbreaking 360° x 90° Detection Technology

The TU5 Series employs a unique optical design that sees more of your sample than any other turbidimeter, delivering the best low level precision and sensitivity while minimising variability from test to test.

Matching lab and online results

For the first time you will be able to remove the uncertainty of which measurement to trust, thanks to identical 360° x 90° Detection Technology in both instruments.

Everything about turbidity – faster

The TU5 Series dramatically reduces the time needed to get a turbidity measurement you can rely on, with 98% less online sample surface area to clean, sealed vials for calibration, and the elimination of the need for indexing and silicone oil in the lab. Not to mention, a smaller online sample volume means you will detect events almost immediately.

Order Information

LPV442.99.03012	TU5200 Benchtop Laser Turbidimeter with RFID, EPA Version
LPV442.99.01012	TU5200 Benchtop Laser Turbidimeter without RFID, EPA Version
LPV442.99.03022	TU5200 Benchtop Laser Turbidimeter with RFID, ISO Version
LPV442.99.01022	TU5200 Benchtop Laser Turbidimeter without RFID, ISO Version

Hach TU5200 benchtop turbidimeters are supplied with StablCal kit (10, 20 and 600 NTU), 2 sample vials, power supply, dust cover, vial stand, and user manual.

Accessories and Consumables

LZY835	StablCal Primary Turbidity Standards Kit, 10/20/600 NTU, with RFID
LZY898	StablCal Primary Turbidity Standards Kit without RFID (10 NTU, 20 NTU, 600 NTU)
LZY901	Glass Rod Secondary Turbidity Standard <0.1 NTU
LZV946	Sample Vials for TU5200
LQV157.99.50002	SIP10 Sipper Unit for TU5200
LZY903	Manual Vial Wiper for TU5200, TU5300sc, and TU5400sc
LZZ003	StablCal Verification Vial, 1 NTU, with RFID
LZZ004	StablCal Verification Vial, 1 NTU, without RFID
LZZ005	StablCal Primary Turbidity Standards Set, 1/10/20 NTU, with RFID
LZZ006	StablCal Primary Turbidity Standards Set, 1/10/20 NTU, without RFID

See also Process Instruments section for TU5 Series Online Turbidimeters.

Learn More

TL23 Series Laboratory Turbidimeter

Trusted measurement for high range turbidity applications; simplified.

The TL23 Series laboratory turbidimeters blend trusted technology and improved features to simplify testing in the most demanding industrial and wastewater applications.

Improved and intuitive design

The TL23 Series' large full color touch screen display and intuitive user interface accelerate setup, calibration and measurement. An easy interface and guided procedures give you confidence in your results.

A smart device for more reliable measurements

The TL23 Series ensures stable readings and accurate analysis by capturing turbidity readings once the device detects sample stability. This quality step removes subjectivity and the need for repeated measurements.

Easy to use. Easy to Be Right

The TL23 Series provides everything you need at your fingertips. With a USB port for easy data export, sample identification for traceability, and self-diagnostics for quality assurance, Hach® makes it easy toBe Right.

Order Information

LPV444.99.00210	TL2300 Tungsten Lamp Turbidimeter, EPA, 0 - 4000 NTU
LPV444.99.00120	TL2310 LED Turbidimeter, ISO, 0 - 1000 NTU
LPV444.99.00310	TL2350 Tungsten Lamp Turbidimeter, EPA, 0 - 10000 NTU
LPV444.99.00320	TL2360 LED Turbidimeter, ISO, 0 - 10000 NTU

Hach TL23 Series turbidimeters are supplied with 6x 1-inch sample cells with caps (30 mL), StablCal calibration kit, Gelex secondary turbidity standarization kit, power supply, power cord, dust cover, silicone oil, oiling cloth, and user manual.

Replacement Parts

9647700	Cover, lamp access
9649100	Dust cover
9653500	Colour filter module for EPA compliance
4708900	Lamp replacement kit
4707600	Polishing cloth
126936	Silicone Oil, 15 mL

Accessories

4397500	Sample Degassing Kit
4397510	Sample Filtration and Degassing Kit
2662110	StablCal Calibration Kit, <0.1/20/200/1000/4000 NTU, 100 mL Bottles
2662100	StablCal Calibration Kit, <0.1/20/200/1000/4000 NTU, 500 mL Bottles
2723342	StablCal Turbidity Standard, 0.10 NTU, 100 mL
2697942	StablCal Turbidity Standard, 0.30 NTU, 100 mL
2698042	StablCal Turbidity Standard, 0.50 NTU, 100 mL
246142	Formazin Turbidity Standard, 4000 NTU, 100 mL
246149	Formazin Turbidity Standard, 4000 NTU, 500 mL

Learn More

2100Q & 2100Q IS Portable Turbidimeters

Easiest calibration and verification with accurate results every time.

The Hach 2100Q and 2100Q IS Portable Turbidimeters offer unsurpassed ease of use and accuracy in turbidity measurement. Only Hach offers this combination of advanced features including assisted calibration, simplified data transfer, and innovative measurement techniques that give you accurate results every time.

Easy on-screen assisted calibration and verification

Save time and get accurate results with an easy-to-follow interface that eliminates the need for complicated manuals to perform routine calibrations. Single-standard Rapidcal™ calibration offers a simplified solution for low level measurements, while ensuring you meet reporting requirements.

Simple data transfer

Data transfer with the optional USB+Power Module is simple, flexible, and doesn't require additional software. All data can be transferred to the module in XML format and easily downloaded to your computer with a USB connection, providing superior data integrity and availability.

Accurate for rapidly settling samples

The innovative Rapidly Settling Turbidity™ mode provides accurate measurements for difficult to measure, rapidly settling samples. An exclusive algorithm that calculates turbidity based on a series of automatic readings eliminates redundant measurements and estimating.

Convenient data logging

Up to 500 measurements are automatically stored in the instrument for easy access and backup. Stored information includes: date and time, operator ID, reading mode, sample ID, sample number, units, calibration time, calibration status, error messages, and the result.

Optical system for precision in the field

The two-detector optical system compensates for color in the sample, light fluctuation, and stray light, enabling analysts to achieve laboratory-grade performance on a wide range of samples, even under difficult site conditions.

Order Information

2100Q01	2100Q Portable Turbidimeter (EPA), 0-1000 NTU
2100QIS01	2100Q IS Portable Turbidimeter (LED), 0-1000 FNU
2100Q01USB	2100Q Portable Turbidimeter Kit (EPA), 0-1000 NTU, with USB and Power Module
2100QIS01USB	2100Q IS Portable Turbidimeter (LED), 0-1000 FNU, with USB and Power Module

Hach 2100Q portable turbidimeters are supplied with four AA alkaline batteries, a carrying case with insert, StablCal primary calibration standards in 1" sealed vials (20, 100, 800 NTU), 10 NTU primary verification standard, 6 sample cells with screw-tops, instrument manual (printed), quick start guide, silicone oil and oiling cloth.

Optional Accessories

LZV813.99.00002	USB + Power Module for 2100Q/2100Q IS & DR1900
LZV804.99.00002	Power Module for 2100Q/2100Q IS and DR1900
2971304	Battery, NiMH AA, pk/4
4397500	Sample Degassing Kit
2971210	StablCal® Turbidity Standards Calibration Set, 2100Q Portable Turbidimeter, 100 mL bottles
2971200	StablCal® Turbidity Standards Calibration Kit, 2100Q Portable Turbidimeter, 500 mL bottles
2464105	Gelex Secondary Standards Kit, 2100 Series Portable Turbidimeters

Replacement Parts

2971205	StablCal® Turbidity Standards Calibration Kit, 2100Q/QIS Portable Turbidimeter, Sealed Vials
2961701	StablCal® Verification Standard for 2100Q 10 NTU
126936	Silicone Oil, 15 mL SCDB
4707600	Sample Cell Oiling Cloth
2971500	2100Q Carrying Case
2971507	Insert, Molded Bottom, 2100Q Carrying Case
2434706	Portable Turbidimeter Sample Cells, pack of 6
4653900	Replacement lamp assembly for 2100 Series Portable Turbidimeters
1938004	Battery, AA, 1.5 VDC, Alkaline, pk/4
2697942	StablCal® Turbidity Standard, 0.30 NTU, 100 mL
2698042	StablCal® Turbidity Standard, 0.50 NTU, 100 mL

Learn More

Lab Turbidimeters

Quick Reference Guide

Model	TL2300 EPA	TL2310 ISO	TL2350 EPA	TL2360 ISO
Regulatory	Meets EPA Method 180.1	Meets ISO 7027, DIN EN 27027, DIN 38404 and NFT 9033	Meets EPA Method 180.1	Meets ISO 7027, DIN EN 27027, DIN 38404 and NFT 9033
Light Source	Tungsten filament lamp	Light-emitting diode (LED) at 860 ± 30 nm	Tungsten filament lamp	Light-emitting diode (LED) at 860 ± 30 nm
Units	NTU and EBC	FNU and NTU	NTU, EBC, Abs (absorbance), %T (% transmittance) and mg/L	FNU, FAU, NTU, EBC, Abs (absorbance), %T (% transmittance) and mg/L
Range	0 - 4000 NTU	0 - 1000 NTU	0 - 10000 NTU	0 - 10000 NTU
Accuracy	Ratio on: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU based on formazin primary standard Ratio off: ±2% of reading plus 0.01 NTU from 0 - 40 NTU	±2% of reading plus 0.01 FNU/NTU from 0 - 1000 FNU/NTU	Ratio on: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU ±10 % of reading from 4000 - 10000 NTU Ratio off: ±2% of reading plus 0.01 NTU from 0 - 40 NTU	FNU: ±2% of reading plus 0.01 FNU from 0 - 1000 FNU FAU: ±10% of reading from 20 - 10000 NTU NTU: ±2% of reading plus 0.01 NTU from 0 - 1000 NTU, ±5% of reading from 1000 - 4000 NTU, ±10% of reading from 4000 - 10000 NTU
Repeatability	±1% of reading or 0.01 NTU, whichever is greater (under reference conditions)			
Response Time	Signal averaging off: 6.8 seconds / Signal averaging on: 14 seconds (when 10 measurements are used to calculate the average)			
Stabilization Time	Ratio on: 30 minutes after start-up Ratio off: 60 minutes after start-up	Immediately	Ratio on: 30 minutes after start-up Ratio off: 60 minutes after start-up	Immediately
Reading Modes	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off, ratio on or off	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off	Single, continuous, Rapidly Settling Turbidity™, signal averaging on or off, ratio on or off	Manual or auto range, signal averaging on and adjustable or off, ratio on or off
Display	17.8 mm (7 in.) color touch screen			
Communication	USB			
Interface	2 USB-A ports for USB flash drive, external thermal printer, keyboard and barcode scanner			
Data Logging	2000 total logs, includes reading log, verification log and calibration log			
Air Purge	Dry nitrogen or instrument grade air (ANSI MC 11.1, 1975) 0.1 scfm at 69 kPa (10 psig); 138 kPa (20 psig) max Hose barb connection for 1/8-inch tubing			
Sample Cell Compatibility	Round cells 95 x 25 mm (3.74 x 1 in.) borosilicate glass with rubber-lined screw caps			
Sample Requirements	25 mm sample cell: 20 mL minimum 0 to 70 °C (32 to 158 °F)			
Certifications	CE, KC, RCM			
Power requirements	100 - 240 V AC, 50/60 Hz, 3.4 A			
What's included?	TL2300 Turbidimeter, silicone oil, oiling cloth, USEPA filter assembly, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, StablCal calibration kit, power supply, power cord, dust cover	TL2310 Turbidimeter, silicone oil, oiling cloth, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, StablCal calibration kit, power supply, power cord, dust cover	TL2350 Turbidimeter, silicone oil, oiling cloth, USEPA filter assembly, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, StablCal calibration kit, power supply, power cord, dust cover	TL2360 Turbidimeter, silicone oil, oiling cloth, 1-inch sample cells (30 mL) with caps (6x), Gelex secondary turbidity standardization kit, StablCal calibration kit, power supply, power cord, dust cover

**Subject to change without notice.*

Lab Turbidimeters

Quick Reference Guide

Model	2100Q	2100Q IS	TU5200 EPA	TU5200 ISO
Regulatory	EPA Method 180.1		EPA	DIN EN ISO 7027
Light Source	Tungsten Filament Lamp	LED	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)	Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Range	0 - 1000 NTU	0 - 1000 FNU	0 - 700 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 175 EBC	0 - 1000 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 250 EBC
Accuracy	± 2 % of reading plus stray light		±2 % plus 0.01 NTU from 0 - 40 NTU; ±10 % of reading from 40 - 1000 NTU based on Formazin primary standard (at 25 °C)	
Response Time	6 s in normal reading mode		Signal averaging off: 7 seconds Signal averaging on: 10 seconds (when averaging time is 5 seconds)	
Power Supply	4 NiMH 1.2 V AA batteries or 4 alkaline 1.5 V AA batteries or 100 - 240 VAC; 50/60 Hz (with optional Power or USB + Power module)		100 - 240 VAC; 50/60 Hz	
Operating Temperature Range	0 - 50 °C (32 - 122 °F)		10 - 40 °C (50 - 104 °F)	
Storage Conditions	-40 - 60 °C (-40 - 140 °F)		-30 - 60 °C (-22 - 140 °F)	
Enclosure Rating	IP67		IP20	
Sample Volume	15 mL			
Sample Cell Compatibility	60 x 25 mm (2.36 x 1 in.) borosilicate glass with screw cap			
Dimensions (H x W x D)	77 x 107 x 229 mm (3.0 x 4.2 x 9.0 in.)		195 x 409 x 278 mm (7.7 x 16.1 x 10.9 in.)	
Weight	0.53 kg (1.2 lbs) without batteries		2.4 kg (5.29 lbs.)	

Lico Spectral Colorimeters

Competence in Color

The spectral color measurement of clear liquids is indispensable in many fields and serves as a quality assurance method for solvents, paints and pharmaceuticals. The highest measuring reliability is essential. Hach® ensures simple, fast measurements for the user. More than 25 years of expertise in the development of colorimeters have gone into the Lico line of instruments.

All important color scales included in one instrument

The Lico 620 with up to 5 color scales is designed for fast routine measurements in the laboratory and in production facilities. It is already in use in a wide variety of areas in the chemical industries for quality and production control, e.g. to assess surfactants, oils, fats, resins and synthetic resins.

The Lico 690 Spectral Colorimeter is flexible to use and works with many applications, such as chemical, pharmaceuticals, oil industries and the food and beverage industry. 26 color scales are directly integrated in the instrument: conventional scales like iodine, Hazen (Pt Co), Gardner, EP, USP and ChP Pharmacopoeias as well as specific scales like Saybolt or ASTM.

Simple integration into the laboratory network through Ethernet connection

Lico instruments can be easily integrated to existing laboratory networks through an Ethernet interface.

High level of measurement reliability through a comprehensive set of test aids

Certified test filters, reproducible standard color solutions and an integrated implementation of AQA (Analytical Quality Assurance) ensure optimum measurement reliability. Measured values can be evaluated in all scales, even post-measurement with archived spectral data.

Easy handling

The measurement process starts automatically when the sample cell is inserted, and the measurement vial is identified by the instrument. The easy-to-change cell compartment facilitates cleaning and/or replacement. The operation of the Lico colorimeters requires only minimum training effort thanks to clear instructions on the color touch-screen.

Technical Data*

Model	Lico 620	Lico 690
Color Scales	DIN 6162 iodine; ISO 6271 Hazen (Pt/Co, APHA, ASTM D1209, D5386); ISO 4630 Gardner (ASTM D1544, D6045); ASTM D 156 Saybolt; ASTM D 1500 mineral oil	European, US and Chinese Pharmacopoeia (EP, USP, CP); DIN 6162 Iodine; ISO 6271 Hazen (Pt/Co, APHA, ASTM D1209, D5386); ISO 4630 Gardner (ASTM D1544, D6045, D6166); ISO 27608 Animal and Vegetable Fats and Oils; ISO 11664 Colorimetry; ASTM E308 CIE Color; ASTM D156 Saybolt; ASTM D1500 Mineral Oil (ISO 2049); ASTM D848 Acid Wash Test; ASTM D1925 Yellowness Index (ASTM D5386); AOCS Cc13e, BS 684 Ly/Lr; ADMI, ICUMSA, EBC, ASBC, Hess-Ives
Memory	400 color readings	100 color references; 1000 photometric values; 20 wavelength scans; 20 time scans; 3000 color readings
Spectral scan	No	Yes (320 nm - 1100 nm)
Sipper (optional)	No	Yes
Display	TFT WVGA color graphic touch-screen	
Display Size	17.8 cm (7 in.)	
Optical System	0° / 180° rectilinear	
Source Lamp	Tungsten halogen lamp	
Wavelength Range	380 nm - 720 nm used for colorimetric calculations	
Dimensions (H x W x D)	151 x 350 x 255 mm (5.9 x 13.8 x 10.0 in.)	
Power Requirements (Voltage)	100 - 240 VAC	

Subject to change without notice.

Order Information

LMV187.53.20001	Lico 620 Colorimeter for up to five color scales
LMV187.53.40001	Lico 690 Professional Spectral Colorimeter with more than 25 color scales included

Each Lico instrument comes with a power supply, a printed basic user manual, a 10 mm cell adapter, and a dust cover.

Accessories & Replacement Parts

LZM282-US	Set of 6 certified standard color solutions
LZM339	Lico test filter set
LZM369	Adapter for cuvettes Z (Lico 6xx)
LYY214	Disposable sample cells, 10 x 10 mm, plastic, pk/1000
LYY621	Disposable sample cells, round, 11 mm, pk/560
LZM130	Sample cells, rectangular, 50 x 10 mm, plastic, pk/50

Learn More

Lab Electrochemistry

Introduction

Buffer & Standard Solutions

HQD Benchtop Meters

HQ Series Portable Meters

Intellical Probes

LBOD Probe

BODTrak II Apparatus

Titralab Automatic Titrators

Pocket Pro Testers

HACH®

Be Right™

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Electrochemistry - Lab and Field

Meters, probes and calibration solutions for laboratory and field use

The Hach electrochemistry portfolio provides the right solution for your testing needs, backed by years of innovation and technical support. Whether you require a simple, dedicated pH meter and electrode or an advanced, expandable, multi-parameter system, Hach has your answer.

Smart Intellical Probes

Standard lab probes and rugged field probes are available to measure a wide variety of parameters such as pH, Dissolved Oxygen (DO), Conductivity, Fluoride, Sodium, etc.

All Intellical probes are automatically recognized by HQ/HQD meters and maintain calibration data on the probe itself – eliminating the need of recalibration when switching probes between meters.

Red Rod Technology

For high volume labs or applications where performance is critical, Intellical Red Rod pH electrodes incorporate proven technology to deliver superior accuracy and response times, even when measuring challenging samples over a wide temperature range. Several probes use speciality designs for specific measurement applications.

ISO 17034 Standards

Hach Lange GmbH is accredited by the German accreditation authority DAkkS as registered reference material producer according to DIN EN ISO 17034:2017. Compared to ISO 17025, ISO 17034 has an additional requirement for reliable and traceable manufacturing of products. With that, those standards deliver the highest level of quality assurance possible to provide full confidence to the user.

Learn More

Certified Buffer and Standard Solutions

ISO reference materials to achieve your standards

DIN EN ISO 17034:2017 is the internationally most recognized accreditation to produce Certified Reference Materials (CRM). Since 2022 Hach provides ISO 17034 certified standards for pH and Conductivity.

The requirements included in the accreditation, guarantee to have control throughout the complete product life cycle. From raw materials, to production planning and control, traceability, stability studies, as well as packaging and documentation management—we care.

With that, those standards deliver the highest level of quality assurance possible to provide full confidence to the user.

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Be confident in your analysis

Hach's certified analytical standards are made in a way that they are completely reliable to ensure that your instruments are perfectly calibrated and deliver the most accurate results. A team of dedicated experts is ready to support your analysis and toprovide technical documentation. You can save valuable time by using already prepared standard solutions that are produced and qualified on the highest level.

Quality assured

Hach standard solutions are certified for consistency, in accordance to the high standards in production, materials and quality control.

Order Information

S11M001	pH 1.679 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M002	pH 4.005 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M003	pH 6.865 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M004	pH 7.000 Certified Reference Material CRM Buffer Standard Solution, 500 mL
S11M005	pH 7.413 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M006-US	pH 9.180 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M007	pH 10.012 Certified Reference Material CRM Buffer Standard Solution, IUPAC, 500 mL
S11M008	pH 12.45 Certified Reference Material CRM B uffer Standard Solution, IUPAC, 500 mL
S51M001	111.3 mS/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 1D, 500 mL
S51M002	12.85 mS/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 0.1D, 500 mL
S51M003	1408 µS/cm Certified Reference Material CRM OIML Conductivity Standard Solution, KCl 0.01D, 500 mL
S51M004	1015 µS/cm Certified Reference Material CRM Conductivity Standard Solution, 0.05% NaCl, 500 mL
S51M013	25 µS/cm Certified Reference Material CRM Conductivity Standard Solution, NaCl, 250 mL

Each 500 mL standard is delivered in an airtight aluminum bag package ensuring safe storage. Until first opening the certified value is guaranteed for 2 years from the date of issue of the certificate. The 250 mL standard comes in a glass bottle with 1 year shelf-life until opening.

Learn More

pH Buffers and Standard Solutions

pH Buffer Pillows

Buffers with pH values of 4.01, 7.00, and 10.01 are color-coded for added convenience. pH is ±0.02 at 25 °C. Buffer pillows assure freshness and eliminate the possibility of contamination. Simply open the pillow and add the contents to 50 mL of deionized or demineralized water. Powder buffers assure accuracy (±0.02 pH units) and are NIST traceable.

Prod. No.	Color-Coded	pH Value(s)	Quantity
2226995	Red	4.01 ±0.02 pH at 25°C	15 pcs
2226966	Red	4.01 ±0.02 pH at 25°C	50 pcs
2226964	Red	4.01 ±0.02 pH at 25°C	250 pcs
2227095	Yellow	7.00 ±0.02 pH at 25°C	15 pcs
2227066	Yellow	7.00 ±0.02 pH at 25°C	50 pcs
2227064	Yellow	7.00 ±0.02 pH at 25°C	250 pcs
2227195	Blue	10.01 ±0.02 pH at 25°C	15 pcs
2227166	Blue	10.01 ±0.02 pH at 25°C	50 pcs
2227164	Blue	10.01 ±0.02 pH at 25°C	250 pcs
2299264	Red & Yellow	4.01 & 7.00 ±0.02 pH at 25°C	30 pcs
1405566	Colorless	6.00 ±0.02 pH at 25°C	50 pcs
1409895	Colorless	6.86 ±0.02 pH at 25°C	15 pcs
1407995	Colorless	8.00 ±0.02 pH at 25°C	15 pcs
1410766	Colorless	9.00 ±0.02 pH at 25°C	50 pcs
2657364	pH Storage Solution Pillows		20 pcs

pH Buffer Solutions

Prod. No.	Color-Coded	pH Value(s)	Quantity
2283436	Red	4.01 ±0.02 pH at 25°C	15 mL
2283426	Red	4.01 ±0.02 pH at 25°C	50 mL
2283449	Red	4.01 ±0.02 pH at 25°C	500 mL
2283456	Red	4.01 ±0.02 pH at 25°C	4 L
2283461	Red	4.01 ±0.02 pH at 25°C	20 L
2283536	Yellow	7.00 ±0.02 pH at 25°C	15 mL
2283526	Yellow	7.00 ±0.02 pH at 25°C	50 mL
2283549	Yellow	7.00 ±0.02 pH at 25°C	500 mL
2283556	Yellow	7.00 ±0.02 pH at 25°C	4 L
2283561	Yellow	7.00 ±0.02 pH at 25°C	20 L
2283636	Blue	10.01 ±0.02 pH at 25°C	15 mL
2283626	Blue	10.01 ±0.02 pH at 25°C	50 mL
2283649	Blue	10.01 ±0.02 pH at 25°C	500 mL
2283656	Blue	10.01 ±0.02 pH at 25°C	4 L
2283661	Blue	10.01 ±0.02 pH at 25°C	20 L
1222336	Colorless	4.01 ±0.02 pH at 25°C	15 mL
1222349	Colorless	4.01 ±0.02 pH at 25°C	500 mL
1222356	Colorless	4.01 ±0.02 pH at 25°C	4 L
1222249	Colorless	7.00 ±0.02 pH at 25°C	500 mL
1222256	Colorless	7.00 ±0.02 pH at 25°C	4 L
1222149	Colorless	10.01 ±0.02 pH at 25°C	500 mL
1222156	Colorless	10.01 ±0.02 pH at 25°C	4 L
S11M009	Colorless	1.09 ±0.02 pH at 25°C	500 mL
S11M010	Colorless	4.65 ±0.02 pH at 25°C	500 mL
S11M011	Colorless	9.23 ±0.02 pH at 25°C	500 mL

Save when you purchase pH Buffer 3-Packs!

2507300	Red, Yellow & Blue	4.01, 7.00 & 10.01 ±0.02 pH at 25°C	3 pk of 20 L
2507200	Red, Yellow & Blue	4.01, 7.00 & 10.01 ±0.02 pH at 25°C	3 pk of 4 L
2947600	Red, Yellow & Blue	4.01, 7.00 & 10.01 ±0.02 pH at 25°C	3 pk of 500 mL

Singlet pH Solution Packs

Singlet single-use standard solutions are ideal for on-site analysis, eliminating the need to prepare standardized buffer solutions for pH and conductivity buffers or standard solutions without having to purchase and carry deionized or demineralized water. The convenient foil-pouch packaging maintains freshness, and keeps the solutions contaminant-free and ready to travel with you anywhere. pH is ±0.02 at 25 °C.

2769820	Yellow & Blue	7.00 & 10.01 ±0.02 pH at 25°C	20 pcs
2769920	Red & Yellow	4.01 & 7.00 ±0.02 pH at 25°C	2 pks of 10 pcs
2770020	Red	4.01 ±0.02 pH at 25°C	20 pcs
2770120	Yellow	7.00 ±0.02 pH at 25°C	20 pcs
2770220	Blue	10.01 ±0.02 pH at 25°C	20 pcs

Beakers

SM5010	Beaker for Electrode/Sensor Calibration, colourless, 30 mL, pk/80
SM5011	Beaker for pH Electrode Calibration, Red, 30 mL, pk/80
SM5012	Beaker for pH Electrode Calibration, Yellow, 30 mL, pk/80
SM5013	Beaker for pH Electrode Calibration, Blue, 30 mL, pk/80
SM5014	Beaker for pH Electrode Calibration, Green, 30 mL, pk/80

Learn More

Standard Solutions & Reagents

Storage and Cleaning Solutions

2756559	pH Storage Solution (3M Potassium Chloride), 50 mL
2756549	pH Storage Solution (3M Potassium Chloride), 500 mL
2965249	Electrode Cleaning Solution, 500 mL
2964349	ISFET Probe Cleaning Solution for proteins, 500 mL
2756526	pH Electrode Storage Solution, 50 mL pour-top
2964449	pH Electrode Rinse Solution, Non-ionic Surfactant, 500 mL
2975149	Acid Electrode Cleaning Solution, 500 mL
S16M001	Electrode Cleaning solution, RENOVO.N, for Clean Water Samples, 250 mL
S16M002	Electrode Cleaning solution, RENOVO.X extra strong, 250 mL
C20C370	Electrode Cleaning Solution for Proteins/Organics Samples, 250 mL
C20C380	Electrode Cleaning Solution for Porous Pin/Diaphragm Junction, 250 mL

BOD Nutrients and Seed Inoculum

1416066	BOD Nutrient Buffer Pillows, prepares 300 mL, 50/pk
1486166	BOD Nutrient Buffer Pillows, prepares 3 L, 50/pk
1486266	BOD Nutrient Buffer Pillows, prepares 6 L, 50/pk
1486398	BOD Nutrient Buffer Pillows, prepares 19 L, 25/pk
253335	Nitrification Inhibitor for BOD, formula 2533, TCMP, 35 g
253334	Nitrification Inhibitor for BOD, formula 2533, TCMP, 500 g
2918700	BOD Seed Inoculum, Polyseed, 50 capsules

KCl Conductivity Standards

50 mL

2974226	74.55 mg/L (0.0001M) KCl (146.9 µS/cm), 50 mL pour-top
2974326	745.5 mg/L (0.01M) KCl (1412 µS/cm), 50 mL pour-top
2974426	7455 mg/L (0.1M) KCl (12.89 mS/cm), 50 mL pour-top

500 mL

C20C250	12.88 mS/cm ±1% KCl (0.1M), 500 mL
C20C270	1413 µS/cm ±1% KCl (0.01M), 500 mL
C20C280	146.9 µS/cm ±2.5% KCl (0.001M), 500 mL
2974249	74.55 mg/L (0.001M) KCl (146.9 µS/cm), 500 mL
2974349	745.5 mg/L (0.01M) KCl (1412 µS/cm), 500 mL
2974449	7455 mg/L (0.1M) KCl (12.89 mS/cm), 500 mL
2714349	35 g/L KCl (53.0 mS/cm), 35 ppt Salinity, 500 mL

NaCl Conductivity Standards

50 mL

2971826	49 mg/L NaCl (100 µS/cm), 50 mL pour-top
1440026	491 mg/L NaCl (1000 µS/cm), 50 mL pour-top
2972226	5.37 g/L NaCl (10,000 µS/cm), 50 mL pour-top
2307426	10,246 mg/L NaCl (18,000 µS/cm), 50 mL pour-top

100 mL

210542	1990 µS/cm, NaCl, 100 mL
2307542	85.47 mg/L NaCl, (180 µS/cm), 100 mL
1440042	491 mg/L NaCl, (1000 µS/cm), 100 mL
2307442	10,246 mg/L NaCl, (18,000 µS/cm), 100 mL

500 mL

2971849	49 mg/L NaCl, (100 µS/cm), 500 mL
1440049	491 mg/L NaCl (1000 µS/cm), 500 mL
2972249	5366 mg/L NaCl, (10,000 µS/cm), 500 mL

Natural Water Conductivity Solutions

2974826	442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 µS/cm), 50 mL pour-top
2974549	442-30 Natural Water Standard Solution, 30 ppm TDS (46.7 µS/cm), 500 mL
2974649	442-300 Natural Water Standard Solution, 300 ppm TDS (445 µS/cm), 500 mL
2974749	442-1000 Natural Water Standard Solution, 1000 ppm TDS (1417 µS/cm), 500 mL
2974849	442-3000 Natural Water Standard Solution, 3000 ppm TDS (3960 µS/cm), 500 mL

ORP Standards and Solutions

2316949	ZoBell's Standard Solution, 500 mL
2612520	Light's Standard Solution in sealed ampules, 25/pk
2965349	Reducing Solution for ORP Electrodes For use with reducing (negative mV) sample matrices

Electrode Filling Solutions and Cartridges

25118049	Red Rod Filling Solution, Saturated KCl, 500 mL
25118026	Red Rod Filling Solution, Saturated KCl, 59 mL
2546902	KCl Reference Electrolyte Gel Cartridges, 2/pk
2965026	PHC281 Filling Solution, 2.44 M Viscous KCl, 59 mL
2965126	ISENA381 Filling Solution, 0.02 M NH_4Cl, 59 mL
2841700	MTC301 and PHC301 Filling Solution, 3.0 M KCl with Ag/Cl, 28 mL

Calcium Standard Solutions

2305442	10 mg/L Ca, 100 mL
4457649	100 mg/L Ca, 500 mL
2240349	1000 mg/L Ca, 500 mL

Chloride Standard Solutions

2370853	100 mg/L Cl^-, 1 L
18349	1000 mg/L Cl^-, 500 mL

Fluoride Standard Solutions (NIST) + ISA

40505	0.5 mg/L F^-, 500 mL
29149	1.0 mg/L F^-, 500 mL
29153	1.0 mg/L F^-, 1 L
40520	2.0 mg/L F^-, 500 mL
2797149	5.0 mg/L F^-, 500 mL
35949	10 mg/L F^-, 500 mL
23249	100 mg/L F^-, 500 mL
258901	Fluoride Ionic Strength Adjustor (ISA), Powder, 454 g
258999	Fluoride Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk
2829017	Fluoride Ionic Strength Adjustor (ISA), 3.78 L

Nitrogen-Ammonia Standard Solutions + ISA

189149	1 mg/L as NH_3-N, 500 mL
15349	10 mg/L as NH_3-N, 500 mL
1479120	50 mg/L as NH_3-N, 20x 2-mL PourRite Ampules
1479110	50 mg/L as NH_3-N, 16x 10-mL Voluette Ampules
2406549	100 mg/L as NH_3-N, 500 mL
4447169	Ammonia Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk

Nitrogen-Nitrate Standard Solutions + ISA

204649	1 mg/L as NO_3-N, 500 mL
2557810	5 mg/L as NO_3-N, 16x 10-mL Voluette Ampules
30749	10 mg/L as NO_3-N, 500 mL
2415132	15 mg/L as NO_3-N, 100 mL
194749	100 mg/L as NO_3-N, 500 mL
1426010	500 mg/L as NO_3-N, 16x 10-mL Voluette Ampules
1279249	1000 mg/L as NO_3-N, 500 mL
4456369	Nitrate Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk

Potassium Standard Solution

2351749	100 mg/L K^+, 500 mL

Sodium Electrode Storage Solution

4451659	Sodium Electrode Storage Solution, 50 mL

Sodium Standard Solutions + ISA

2835153	10 mg/L Na^+, 1 L
2318153	100 mg/L Na^+, 1 L (NIST)
1474949	1000 mg/L Na^+, 500 mL (NIST)
4451569	Sodium Ionic Strength Adjustor (ISA) Powder Pillows, 100/pk

HQD Benchtop E-Chem Meters

Take the guesswork out of measurements with Hach HQD laboratory meters. All HQD meters feature an advanced yet simple user interface that does not require manuals or training to operate.

Measurement data can be stored and transferred to a printer, PC or USB storage device

About HQD and Intellical Probes

HQD meters connect with digital Intellical probes and automatically recognize the testing parameter, calibration history and method settings to minimize errors and setup time.

Intellical Red Rod pH electrodes offer exceptional performance and response time across a wide variety of sample types. The LBOD probe utilizes optical technology to provide fast, accurate Dissolved Oxygen (DO) measurements while dramatically reducing maintenance costs.

Additional probes for Conductivity, Total Dissolved Solids (TDS), Ammonia, Ammonium, Fluoride, Nitrate, Sodium, and RedOx (ORP) measurements complete the Intellical portfolio.

HQD Series Meters are Available in Three Models:

- HQ411D - pH/mV/ORP (RedOx)
- HQ430D - Multi-parameter, single probe input
- HQ440D - Multi-parameter, dual probe inputs

Key Features Common to All Models:

- Designed for drinking water and wastewater professionals.
- Automatic probe and parameter recognition.
- Instrument guided calibration procedures.
- Calibration data stored in the probe.
- Probe specific method settings for regulatory compliance and Good Laboratory Practice (GLP).
- Real-time data logging with a USB connection.
- Bi-directional communication with PC-based systems with a virtual serial port connection.
- Sample ID and Operator ID for data traceability.
- Adjustable automatic shut-off.
- Durable, robust design to withstand years of use.

Learn More

Technical Data*

Model	HQ411D – pH/1 Channel	HQ430D – Multi/1 Channel	HQ440D – Multi/2 Channels
Temperature	•	•	•
pH	•	•	•
ORP	•	•	•
Conductivity		•	•
TDS		•	•
Salinity		•	•
Resistivity		•	•
Dissolved Oxygen (LDO)		•	•
Ammonia/Ammonium		•	•
Chloride		•	•
Fluoride		•	•
Nitrate		•	•
Sodium		•	•
IP Rating	IP54 (Resistant to spray of water; Dust-proof)		
Data Memory	500 records/FIFO		
Backlight	Yes		
GLP Features	Date; Time; Sample ID; Operator ID		
Communication	Integrated USB type A (for USB 2.0 flash memory device, printer, keyboard) and Integrated USB type B (for PC)		

**Subject to change without notice.*

Order Information

Prod. No.	Parameter	Model
HQ411D	pH/Oxydo Reduction Potential (ORP)	HQ411D – pH/1 Channel
HQ430D	pH/Oxydo Reduction Potential (ORP) Conductivity/Total Dissolved Solid (TDS)/Salinity/Resistivity Dissolved Oxygen (DO) Biochemical Oxygen Demand (BOD) Ion Selective Electrode (ISE): Ammonia, Ammonium, Chloride, Fluoride, Nitrate, Sodium	HQ430D – Multi/1 Channel
HQ440D	pH/Oxydo Reduction Potential (ORP) Conductivity/Total Dissolved Solid (TDS)/Salinity/Resistivity Dissolved Oxygen (DO) Biochemical Oxygen Demand (BOD) Ion Selective Electrode (ISE): Ammonia, Ammonium, Chloride, Fluoride, Nitrate, Sodium	HQ440D – Multi/2 Channels

Part numbers may vary by country.

Sensor Kits are available, please visit hach.com or contact Hach for further information.

HQ Series Portable Meters

A robust and intuitive range of portable meters, instilling confidence in reporting and managing your results.

Performing a successful calibration has never been so simple

Most measuring issues are due to incorrect calibration procedures. With our illustrated, step-by-step on-screen calibration and troubleshooting procedures, water quality professionals can succeed every time.

Deliver your daily activity in just a few clicks

Whether you are at your facility or working in the field, the Hach® HQ Series portable meter ensures your data will be safely transferred via USB.

Sensors designed for every application

We offer standard laboratory and rugged field Intellical™ smart sensors available with the HQ Series to measure a wide variety of parameters including Total Dissolved Solids (TDS), Optical Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD), Temperature, Conductivity, and pH. Intellical smart probes are automatically recognized by HQ meters, retain calibration history and method settings to minimize errors and setup time. They incorporate proven technology to deliver superior accuracy and response times – even when measuring challenging samples or challenging operating environments.

Peace of mind: Hach service and support will be there for you

Our Technical Support, Field Service, and Central Service Teams work together with over 90 years of electrochemistry expertise to help you maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk. Never feel alone when you need support.

Learn More

Parameter Table*

Model	HQ1110 pH/ ORP/ 1 Channel	HQ1130 DO/ 1 Channel	HQ1140 EC/ TDS/ 1 Channel	HQ2100 Multi/ 1 Channel	HQ2200 Multi/ 2 Channels	HQ4100 Multi/ISE/ 1 Channel	HQ4200 Multi/ISE/ 2 Channels	HQ4300 Multi/ISE/ 3 Channels
Temperature	•	•	•	•	•	•	•	•
pH	•			•	•	•	•	•
mV	•			•	•	•	•	•
Conductivity			•	•	•	•	•	•
TDS			•	•	•	•	•	•
Salinity			•	•	•	•	•	•
Resistivity				•	•	•	•	•
Dissolved Oxygen (LDO)		•		•	•	•	•	•
BOD (with LDO)		•		•	•	•	•	•
ORP/Redox	•			•	•	•	•	•
Ammonia						•	•	•
Ammonium						•	•	•
Chloride						•	•	•
Fluoride						•	•	•
Nitrate						•	•	•
Sodium						•	•	•

**Subject to change without notice.*

Order Information

HQ Series Portable Standard Sensor Kits

LEV015.53.11101 HQ1110 Portable Dedicated pH/ORP/mV Meter with Gel pH Electrode, 1 m Cable

LEV015.53.22004 HQ2200 Portable Multi-Meter with pH and Dissolved Oxygen Electrodes, 1 m Cables

LEV015.53.11301 HQ1130 Portable Dedicated Dissolved Oxygen Meter with Dissolved Oxygen Electrode, 1 m Cable

LEV015.53.42001 HQ4200 Portable Multi-Meter with Gel pH and Conductivity Electrode, 1 m Cables

LEV015.53.42005 HQ4200 Portable Multi-Meter with Gel pH and Dissolved Oxygen Electrode, 1 m Cables

LEV015.53.43001 HQ4300 Portable Multi-Meter with Gel pH, Conductivity, and Dissolved Oxygen Electrode, 1 m Cable

HQ Series Portable Rugged Sensor Kits

LEV015.53.11103 HQ1110 Portable Dedicated pH/ORP/mV Meter with Gel pH Electrode, 5 m Rugged Cable

LEV015.53.11302 HQ1130 Portable Dedicated Dissolved Oxygen Meter with Dissolved Oxygen Electrode, 5 m Rugged Cable

LEV015.53.22006 HQ2200 Portable Multi-Meter with pH and Dissolved Oxygen Electrode, 5 m Rugged Cables

LEV015.53.42006 HQ4200 Portable Multi-Meter with Gel pH and Dissolved Oxygen Electrode, 5 m Rugged Cables

LEV015.53.42003 HQ4200 Portable Multi-Meter with Gel pH and Conductivity Electrode, 5 m Rugged Cables

Additional Standard and Rugged Sensor Kits are available. Please contact Hach for more information.

Accessories and Consumables

LEZ015.99.A001A Portable HQ Series Standard Field Case for Standard Probes

LEZ015.99.A002A Portable HQ Series Field Case for Rugged Probes with Extended Cable Lengths

LEZ015.99.A003A Kick Stand and Hand Strap for Portable HQ Series Meter

LEZ015.99.A004A Protective Glove for Portable HQ Series Meter

LEZ015.99.A005A Wrist Strap and Dust Plugs for Portable HQ Series Meter

LEZ015.99.00001 Li-Ion Battery Replacement, HQ Series Meter

LEZ015.99.00002 USB Cable for Portable HQ Series Meter

LEZ015.99.00006 Replacement Power Supply for HQ Series Meter, US

LEZ015.99.00004 Replacement Power Supply for HQ Series Meter, EU

Intellical Probes

Choose from a broad selection of Intellical probes to meet your most demanding laboratory and field applications, for parameters such as pH, Dissolved Oxygen (DO), Conductivity, Total Dissolved Solids (TDS), Ammonia, Ammonium, Chloride, Fluoride, Nitrate, Sodium, Biochemical Oxygen Demand (BOD) and RedOx (ORP).

All Intellical probes are automatically recognised by HQ/HQD meters and maintain calibration data on the probe itself—eliminating the need of recalibration when switching probes between meters.

Probes for Every Application

- For high-volume labs or applications where performance is critical, Intellical Red Rod pH probes offer exceptional performance and response time across a wide variety of sample types in the laboratory.
- Standard lab probes and rugged field probes are available to measure a wide variety of parameters and are extremely practical for on-site analysis. Thanks to the digital technology, they can be used with cables up to 30 metres long.
- The LBOD probe utilises optical technology to provide fast, accurate DO measurements while dramatically reducing maintenance costs.

Key Features:

- Designed for water & industrial QC testing.
- Smart sensors embedding calibration data and history.
- Complete portfolio for Laboratory and field use.

Intellical Probes - pH

				
Model	**PHC101 Laboratory Cable Length: 1 m or 3 m**	**PHC101 Rugged Field Cable Length: 5, 10, 15, or 30 m**	**PHC108 Laboratory Cable Length: 1 m**	**PHC201 Laboratory Cable Length: 1 m or 3 m**
Application	Clean & Dirty Samples	Clean & Dirty Samples	Piercing / Semi-Solids	Clean Samples
Electrode Type	Non-Refillable Gel Reference Element	Non-Refillable Gel Reference Element	Non-Refillable Gel Reference Element	Non-Refillable Gel Reference Element, semi-liquid gel
Range	2 - 14 pH	2 - 14 pH	2 - 12 pH	0 - 14 pH
Accuracy	±0.02 pH	±0.02 pH	±0.02 pH	±0.02 pH
Temperature Range	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 60 °C (32 - 140 °F)	0 - 80 °C (32 - 176 °F)
Sensor material	Epoxy	Zeonor™/ Stainless Steel	Stainless Steel	Epoxy
Special Features	Double junction reference	Double junction reference	For semi-solid media/samples	General purpose. Clean water samples.
Sample Depth	20 mm	20 mm	15 mm	15 mm
Prod. No.	PHC10101 PHC10103	PHC10105, PHC10110, PHC10115, PHC10130	PHC10801	PHC20101 PHC20103

Intellical Probes - pH




Model	PHC281 Laboratory Cable Length: 1 m or 3 m	PHC301 Laboratory Cable Length: 1 m or 3 m	PHC705 Laboratory Cable Length: 1 m	PHC705A Laboratory Cable Length: 1 m
Application	Low Ionic Strength Samples	Clean Samples	High Performance (-10 to 100 °C)	High Performance/High Alkalinity
Electrode Type	Refillable Reference Element	Refillable Reference Element	RedRod / Refillable Reference Element	RedRod / Refillable Reference Element
Range	0 - 14 pH	0 - 14 pH	0 - 14 pH	0 - 14 pH
Accuracy	±0.02 pH	±0.02 pH	±0.01 pH	±0.01 pH
Temperature Range	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)	–10 - 100 °C (14 - 212 °F)	0 - 100 °C (32 - 212 °F)
Sensor material	Zeonor™	Zeonor™	Glass	Glass
Special Features	Double junction reference	Double junction reference		High-alkalinity samples
Sample Depth	15 mm	15 mm	18 mm	18 mm
Prod. No.	PHC28101 PHC28103	PHC30101 PHC30103	PHC70501	PHC705A01





Model	PHC725 Laboratory Cable Length: 1 m	PHC729 Laboratory Cable Length: 1 m	PHC735 Laboratory Cable Length: 1 m	PHC745 Laboratory Cable Length: 1 m	PHC805 Laboratory Cable Length: 1 m
Application	Low Ionic Strength & Dirty Samples - Annular Ring	Surface Measurement	Very Dirty Samples	Extremely Dirty Samples	High Performance (0 to 80 °C)
Electrode Type	RedRod / Refillable Reference Element	RedRod / Refillable Reference Element	RedRod / Refillable Reference Element / High Flow	RedRod / Refillable Reference Element / High Flow	RedRod / Refillable Reference Element
Range	0 - 14 pH	0 - 12 pH	0 - 14 pH	0 - 14 pH	0 - 14 pH
Accuracy	±0.01 pH	±0.01 pH	±0.01 pH	±0.01 pH	±0.02 pH
Temperature Range	–10 - 100 °C (14 - 212 °F)	–10 - 100 °C (14 - 212 °F)	–10 - 100 °C (14 - 212 °F)	–10 - 100 °C (14 - 212 °F)	0 - 80 °C (32 - 176 °F)
Sensor material	Glass	Glass	Glass	Glass	Glass
Special Features	Low Ionic Strength Media	Surface Measurements	Dirty Media	Clogging Media	
Sample Depth	14 mm	1 mm	14 mm	18 mm	18 mm
Prod. No.	PHC72501 PHC72501AP*	PHC72901 PHC72901AP*	PHC73501 PHC73501AP*	PHC74501 PHC74501AP*	PHC80501 PHC80501AP*

**AP=Application Package, includes probe and reagents*

Learn More

Intellical Probes - ORP





Model	MTC101 Laboratory Cable Length: 1 m or 3 m	MTC101 Rugged Field Cable Length: 5, 10, 15, or 30 m	MTC301 Laboratory Cable Length: 1 m or 3 m	MTC306 Laboratory Cable Length: 1 m	MTC695 Laboratory Cable Length: 1 m
Electrode Type	Non-Refillable Gel Reference Element	Non-Refillable Gel Reference Element	Refillable Reference Element	Metal RedOx Titration, Pt/Ref	Metal RedOx Titration, Pt-Pt
Range	±1200 mV	±1200 mV	±1200 mV	±1200 mV	±1200 mV (±200 µA)
Accuracy	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater		
Temperature Range	0 - 80 °C (32 - 176 °F)	0 - 80 °C (32 - 176 °F)	0 - 80 °C (32 - 176 °F)	0 - 80 °C (32 - 176 °F)	–10 - 80 °C (14 - 176 °F)
Sensor material	Epoxy	Epoxy / Stainless Steel	Epoxy	Epoxy	Epoxy
Special Features	Flat disc sensor for easy cleaning.	Flat disc sensor for easy cleaning.	Flat disc sensor for easy cleaning.	Argentometric Silver nitrate) Titration	Imposed current Redox Titration
Sample Depth	20 mm	20 mm	20 mm	20 mm	10 mm
Prod. No.	MTC10101 MTC10103	MTC10105, MTC10110, MTC10115, MTC10130	MTC30101 MTC30103	MTC30601	MTC69501

Intellical Probes - ISE






Model	ISECL181 Laboratory Cable Length: 1 m or 3 m	ISEF121 Laboratory Cable Length: 1 m or 3 m	ISENA381 Laboratory Cable Length: 1 m or 3 m	ISENH318 Laboratory Cable Length: 1 m or 3 m	ISENH418 Laboratory Cable Length: 1 m or 3 m	ISENO318 Laboratory Cable Length: 1 m or 3 m
Parameter	Chloride	Fluoride	Sodium	Ammonia	Ammonium	Nitrate
Electrode Type	Non-Refillable Dritek Gel Reference Element	Non-Refillable Dritek Gel Reference Element	Refillable Reference Element	Non-Refillable Gel Reference Element, Replaceable membrane	Non-Refillable Dritek Gel Reference Element	Non-Refillable Dritek Gel Reference Element
Range	0.1 mg/L (3 x 10^{-6} M) - 35.5 g/L (1 M) Cl^-	0.01 mg/L (5 x 10^{-7} M) - 19 g/L (1 M) F^-	0.023 mg/L (1 x 10^{-6} M) - 23 g/L (1 M) Na^+	0.01 mg/L (5 x 10^{-7} M) - 14 g/L (1 M) NH_3-N	0.018 mg/L (10^{-6} M) - 9 g/L (0.5 M) NH_4-N	0.1 mg/L (7 x 10^{-6} M) - 14 g/L (1 M) NO_3-N
Accuracy	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater	±0.02 mV or 0.05%, whichever is greater
Temperature Range	5 - 50 °C (41 - 122 °F)	5 - 50 °C (41 - 122 °F)	0 - 50 °C (32 - 122 °F)	5 - 50 °C (41 - 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)
Sensor material	Epoxy	Epoxy	Zeonor™	Epoxy	Epoxy	Epoxy
Special Features	Dry storage & fast response time. No replacement membranes.	Dry storage & fast response time. No replacement membranes.		Easy-to-replace membrane modules.	Dry storage & fast response time. No replacement membranes.	Dry storage & fast response time. No replacement membranes.
Sample Depth	26 mm	26 mm	26 mm	26 mm	26 mm	26 mm
Prod. No.	ISECL18101, ISECL18103, ISECL181AP*	ISEF12101, ISEF12103, ISEF121AP*	ISENA38101, ISENA38103, ISENA381AP*	ISENH318101, ISENH318103, ISENH3181AP*	ISENH418101, ISENH418103, ISENH4181AP*	ISENO318101, ISENO318103, ISENO3181AP*

**AP=Application Package, includes probe and reagents*

Intellical Probes - Conductivity and Oxygen (LDO)





Model	CDC401 Laboratory Cable Length: 1 m or 3 m	CDC401 Rugged Field Cable Length: 5, 10, 15, or 30 m	LDO101 Laboratory Cable Length: 1 m or 3 m	LDO101 Rugged Field Cable Length: 5, 10, 15, or 30 m	LBOD101 Laboratory Cable Length: 1 m
Parameter	Conductivity	Conductivity	Dissolved Oxygen	Dissolved Oxygen	BOD
Electrode Type	Conductivity Cell; 4 Poles - Graphite	Conductivity Cell; 4 Poles - Graphite	Luminescent Dissolved Oxygen	Luminescent Dissolved Oxygen	Luminescent Dissolved Oxygen
Range	Conductivity: 0.0 µS/cm - 200 mS/cm TDS: 0.00 mg/L - 50.0 g/L as NaCl Salinity: 0 - 42 ppt or ‰ Resistivity: 2.5 Ωcm - 49 MΩcm	Conductivity: 0.0 µS/cm - 200 mS/cm TDS: 0.00 mg/L - 50.0 g/L as NaCl Salinity: 0 - 42 ppt or ‰ Resistivity: 2.5 Ωcm - 49 MΩcm	0.05 - 20.0 mg/L 1 - 200% saturation	0.05 - 20.0 mg/L 1 - 200% saturation	0.05 - 20.0 mg/L 1 - 200% saturation
Accuracy	Cond: ±0.5% of reading TDS: ±0.5% ±1 digit Salinity: ±0.1, ±1 digit	Cond: ±0.5% of reading TDS: ±0.5% ±1 digit Salinity: ±0.1, ±1 digit	±0.1 mg/L from 0 to 8 mg/L ±0.2 mg/L for greater than 8 mg/L	±0.1 mg/L from 0 to 8 mg/L ±0.2 mg/L for greater than 8 mg/L	±0.05 mg/L from 0 to 10 mg/L ±0.1 mg/L for greater than 10 mg/L
Temperature Range	-10 - 110 °C (14 - 230 °F)	-10 - 110 °C (14 - 230 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)
Sensor material	Noryl	Noryl / Stainless Steel	Polycarbonate / ABS	Polycarbonate / ABS / Stainless Steel	Polycarbonate / ABS
Special Features					Integrated stirring system.
Sample Depth	45 mm	45 mm	10 mm	10 mm	10 mm
Prod. No.	CDC40101 CDC40103	CDC40105, CDC40110, CDC40115, CDC40130	LDO10101 LDO10103	LDO10105, LDO10110, LDO10115, LDO10130	LBOD10101

Intellical Accessories

SM5010 Beaker for Electrode/Sensor Calibration, colourless, 30 mL, pk/80

SM5011 Beaker for pH Electrode Calibration, Red, 30 mL, pk/80

SM5012 Beaker for pH Electrode Calibration, Yellow, 30 mL, pk/80

SM5013 Beaker for pH Electrode Calibration, Blue, 30 mL, pk/80

SM5014 Beaker for pH Electrode Calibration, Green, 30 mL, pk/80

8508850 Universal Probe Stand for Standard Intellical Probes

5818400 Clip a color-coded band to each end of your probe cable for identification. Ten clips of five different colors per package.

NOTE: One package of clips included with each probe.

5825900 Includes protective bell and locking ring. The rugged shroud absorbs the impact from rough wear and tear. NOTE: probe not included.

5828610 Taking reading at specific depths with rugged probes is a snap with these Depth Markers. Visually identify the depth of your probe by attaching Depth Marker securely on cable at points to meet your needs. Five Depth Markers per package.

NOTE: For use with rugged probes only.

5811200 Intellical Sensor Cap Replacement for LDO Sensor

5838000 Intellical Sensor Cap Replacement for LBOD101 Sensor

5812711 Intellical Replacement Membrane Modules for Ammonia ISE, 3 pcs

Hach LBOD Intellical Probe

A Breakthrough in BOD Measurement!

Hach LBOD Intellical probe uses patented LDO technology to deliver superior confidence in results!

All the same great benefits of the Hach LDO probe, with the built-in features to measure BOD!

- No membranes to replace.
- Calibration in less than one minute.
- Reliable performance and accurate readings time after time.
- Have confidence in your results!

EPA recommends Hach LDO Method 10360 for use in compliance monitoring!*

**Hach's LDO technology has been approved in numerous states for measuring and reporting Dissolved Oxygen (DO) and BOD. Speak with a Hach representative to learn if your state is approved.*

Order Information

LBOD10101	Intellical LBOD101 Luminescent/Optical Dissolved Oxygen (LDO) Sensor for BOD Measurements, 1 m Cable
2943100	Disposable BOD Bottles, 300 mL, 100/cs
2943900	Plastic BOD Bottle Stoppers, 25/pk
190901	Stopper, ground-glass for BOD bottles
241906	Bottle, BOD, Cap, 6/pk
253335	Nitrification Inhibitor for BOD, Formula 2533™, TCMP, 35 g
253334	Nitrification Inhibitor for BOD, Formula 2533™, TCMP, 500 g
2918700	BOD Seed Inoculum, Polyseed, pk/50 capsules
2514420	ez GGA - No Pipette GGA, Single Dose BOD Standard, pk/20, 2-mL ampules
2484600	Ampule breakers, media ampules for 2-mL PourRite ampules
1416066	BOD Nutrient Buffer Pillows, concentrate to make 300 mL, 50/pk
1486166	BOD Nutrient Buffer Pillows, 3 mL concentrate to make 3L, 50/pk
2436466	BOD Nutrient Buffer Pillows, 4 mL concentrate to make 4 L, 50/pk
1486266	BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk
1486398	BOD Nutrient Buffer Pillows, concentrate to make 19 L, 25/pk

Learn More

BODTrak II Apparatus

Use the Hach BODTrak II Apparatus for unattended, fast BOD (Biochemical Oxygen Demand) analysis. Features include delayed start for temperature stabilization, continuous data readout, and automatic shut-off.

Decrease Total Test Time

The Hach BODTrak II Apparatus is easy to set up and allows for quick sample preparation for BOD (Biochemical Oxygen Demand) analysis. Simply pour a measured sample of wastewater and nutrient buffer into each of six BODTrak II bottles. Connect the bottles to the instrument's pressure sensors, select a measurement range, and incubate. User calibration of the instrument is not necessary.

Faster than Dilution Method

Constant stirring in the bottles supplies additional oxygen to the sample and provides bacteria with greater exposure to food. This results in more rapid respiration and consumption of oxygen.

BOD Results that are Easy to Monitor

The BODTrak II Apparatus has a large graphic display that continuously updates results. View the results at any time during the test. The instrument plots a curve of BOD over time. To review the data in detail, simply move a cursor along the curve to display results for any stored data point.

Standalone Operation

The apparatus automatically ends the test and stores teh results after the chosen test length of five, seven, or ten days. This eliminates the need to be present when the test is complete.

DO Probes and Titrations are Eliminated

The BODTrak II Apparatus measures BOD using the respirometric method. Each sample bottle is connected to a pressure sensor in a closed system. As bacteria consume oxygen in the sample, the pressure in the bottle headspace drops. This pressure change correlates directly to BOD. By measuring pressure changes instead of dissolved oxygen levels, the need for probes and titrations is eliminated.

Order Information

Apparatus

2952400	BODTrak II Apparatus, 115/230 VAC Includes North American and continental European power cords, auto-switching power supply, six bottles, six magnetic stir bars, six seal cups, spatula scoop, 50 BOD nutrient buffer pillows, and potassium hydroxide pellets

Reagents

2962266	BOD Nutrient Buffer Pillows, 300 mL, 50/pk
31425	Potassium Hydroxide Pellets
1486610	BOD Standard Solution; for manometric method, glucose and glutamic acid, 300 mg/L, 10 mL Voluette Ampules, 16/pk
2952440	Replacement bottle for BODTrak II apparatus

Technical Data*

Range	0 - 700 mg/L BOD
Capacity	Six 492 mL bottles
Drift	< 3 mg/L BOD in 5 days
Measurement Method	Manometric
Interface	RS232
Input Voltage	110 - 240 V, 50/60 Hz
Output Voltage	24 V, UL CSA, and TUV approved
Dimensions (H x W x D)	98 x 289 x 260 mm (3.9 x 11.4 x 10.2 in.)
Weight	4 kg (8.82 lbs)

Subject to change without notice.

Learn More

Titralab AT1000 Series Automatic Titrators

Simply add your sample, press the button and read your titration results

Titration can be easy. The TitraLab AT1000 from Hach uses pre-set functions that eliminate complex programming and provide accurate results.

The Karl Fischer version TitraLab KF1000 requires only small sample quantities to deliver accurate and precise results for water content applications.

- Accurate and Reliable Titration Results
- Easy to Use for all Operators
- Low Cost of Ownership
- Improves Lab Safety
- Low Maintenance

Learn More

Technical Data*

Titration Types	Potentiometric (zero & imposed current), amperometric, colorimetric
Titration Modes	Sample, blank, sample with blank, QC sample, QC sample with blank
Parameter	mV/pH, Conductivity, Temperature
Resolution	mV/pH: ±0.1 mV / ±0.001 pH Conductivity: ±0.5% of reading Temperature: ±0.3 °C (32.54 °F)
Sample Stand	Integrated, magnetic stirring, beakers up to 250 mL
Electrode	IntelliCAL ("Plug & Play" digital), analog, photocolorimetric; 2 Inputs available
Burette: Volumes Available	2.5/5/10/25 mL, ISO8655-3
Burette Motor Resolution	20,000 steps with electronic µstepping technology (128 µsteps/step)
Calibration	Titrant & electrode (up to 5 buffers in Auto Mode, fixed & user defined)
Calibration Intervals/Alerts/ Reminder	Yes, user defined period
Data Memory	Last 100 samples, QC & blank analyses, last 10 calibrations
Data Export	On USB flash drive, CSV format, Excel compatible
Operating Interface	Soft keypad (Silicone)
Display Type	5,7"; Graphic color; VGA

Calibration Curves Display	Direct & derivative titration curves, electrode calibration curve
Supported Peripherals	Printer, PC software, balance, sample changer, keyboard, mouse, barcode reader, sampling pump, propeller stirrer
Data Storage	Date, Time, Operator IDs, Sample IDs
Maintenance Scheduler	Yes, user defined
Embedded Procedures	Tubing bubble purging, reagent priming, burette and pump replacement
Password Protection	Yes, user defined
Languages	English, German, French, Italian, Spanish
Dimensions (H x W x D)	220 x 400 x 360 mm (8.66 x 15.75 x 14.17 in.)
Weight	4 kg (8.82 lbs)
Material Enclosures	PP Latene, silicone, hardened glass, POM, stainless steel. Splashproof design.
Power Requirements (Voltage)	100/240 VAC
Power Requirements (Hz)	50/60 Hz
Operating Conditions	15 - 35 °C (59 - 95 °F), 20 - 80% RH, non-condensing
Storage Conditions	-5 - 40 °C (23 - 104 °F)
Certifications	Safety IEC/EN 61010-1; EMC IEC/EN 61326-1

**Subject to change without notice.*

Order Information

Instruments

AT1102.97	AT1000 Potentiometric Titrator with 1 Burette - Model AT1102
AT1112.97	AT1000 Potentiometric Titrator with 1 Burette and 1 Pump - Model AT1112
AT1122.97	AT1000 Potentiometric Titrator with 1 Burette and 2 Pumps - Model AT1122
AT1222.97	AT1000 Potentiometric Titrator with 2 Burettes and 2 Pumps - Model AT1222
KF1121.97	KF1000 Volumetric Titrator for Karl Fischer Titrations with 1 Burette and 2 Pumps

Optional Accessories

AS1000.97.12150	Titralab AS1000 Series Sample Changer, 12 Positions, 50 & 150 mL Beakers
AS1000.97.20090	Titralab AS1000 Series Sample Changer, 20 Positions, 90 mL Beakers
AS1000.97.30050	Titralab AS1000 Series Sample Changer, 30 Positions, 50 mL Beakers
LQV161.99.10000	DPU-S445 USB Thermal printer kit
LZE127	Titramaster 1000 Series, PC software with Ethernet cable
LZE142	External Pump (sample leveling) Complete, for AT1000 Series Titrator
LZE143	Propeller stirrer, 80 mm shaft, for AT Titrator

Titralab AT1000 Series Application Packages

Setting up your application has never been so simple.

Application Packages for use with Titralab 1000 Series titrators from Hach contain all elements except reagents to make it quick and easy for everyone to set up and operate a test. Each Application Package is specifically designed for unique parameters to ensure accurate and reproducible measurements at a glance, including*:

- **Adapters**
- **Glass bottle**
- **Magnetic stirring bars**
- **Polypropylene beakers**
- **Bottle stopper with desiccant tube**
- **Electrode(s) (Digital Intellical or Analog)**
- **High precision glass syringe (Hamilton)**
- **USB key containing application notes and applications to automatically program titrators for selected parameters.**

** Application package content varies depending on application/parameters.*

Technical Data*

Prod. No.	Parameter	AT1102	AT1112	AT1122	AT1222	KF1121
Municipal Applications						
AP0001.AT1102	pH/Alkalinity	•	•	•	•	
AP0002.AT1102	pH/Alkalinity & Conductivity	•	•	•	•	
AP0003.AT1112	Ca & Mg Hardness (ISE)		•	•	•	
AP0005.AT1222	pH/Alkalinity & Hardness				•	
AP0007.AT1122	Free & Total Chlorine, Chlorine Dioxide, Chlorite, Sulfite (Autocat)			•	•	
AP0009.AT1112	Chloride		•	•	•	
Food & Beverage Applications						
AP0008.AT1102	pH, Total Acidity	•	•	•	•	
AP0010.AT1112	Salt in food products		•	•	•	
AP0011.AT1222	pH, Total Acidity & Chloride				•	
AP0012.AT1122	Free & Total SO_2 in Wine			•	•	
AP0013.AT1222	pH, Total Acidity, Free & Total SO_2 in Wine				•	
AP0025.AT1102	pH, Total Acidity (Single Syringe)	•	•	•	•	
AP0026.AT1222	pH, Total Acidity (Double Syringe)				•	
Petrochemical Applications						
AP0015.AT1102	TAN (Total Acid Number)	•	•	•	•	
AP0016.AT1102	TBN (Total Base Number)	•	•	•	•	
AP0017.AT1112	R-SH (Thiol)		•	•	•	
AP0018.AT1102	BR_2/I_2 Number	•	•	•	•	
Environmental Applications						
AP0006.AT1102	FOS/TAC (Biogas)	•	•	•	•	
Moisture Content Applications (Karl Fischer)						
AP0014.KF1121	Moisture Content (Karl Fischer)					•

**Subject to change without notice.*

Pocket Pro and Pocket Pro+ Testers

Take The Guesswork Out of Your Measurements.

Pocket Pro and Pocket Pro+ testers measure electrochemical parameters in a broad range of water applications. The family of 12 testers offers convenient portable solutions for pH, ORP, conductivity, TDS, salinity, and temperature, delivering accurate results you can be confident in. The Pocket Pro+ testers take the value a step further with replaceable sensors, powerful backlight, and multi-parameter tester options.

Confidence in Results

Easy calibration steps and built-in diagnostics for pH testers take the guesswork out of calibrating the sensor to keep it in optimum condition.

Save Time and Money

Easy-to-replace AAA batteries and a convenient sample cup make maintenance and measurements simple.

Ease of Use

The large LCD screen is easy to read; backlighting is included on Pocket Pro+ models, allowing measurement in almost any lighting environment.

This product is intended for professional use only.

Technical Data*

Model	Pocket Pro pH	Pocket Pro ORP	Pocket Pro TDS_{LR}	Pocket Pro TDS_{HR}	Pocket Pro $Conductivity_{LR}$	Pocket Pro $Conductivity_{HR}$	Pocket Pro Salt	Pocket Pro Temperature
Parameter	pH, Temp	ORP	LR TDS, Temp	HR TDS, Temp	LR Conductivity, Temp	HR Conductivity, Temp	Salinity, Temp	Temp
Operating Temperature Range	0 - 50 °C	0 - 50 °C	0 - 50 °C	0 - 50 °C	0 - 50 °C	0 - 50 °C	0 - 50 °C	0 - 50 °C
Range	0.0 to 14.0 pH	±999 mV	0 to 1999 ppm	0 to 10.00 ppt	0 to 1990 µS/cm	0.0 to 19.99 mS/cm	0 to 10.00 ppt	-15 to 170°C
Accuracy	0.1 pH	± 2 mV	1% FS	2% FS	1% FS	2% FS	1% FS	1°C
Resolution	0.1 pH	1 mV	1 ppm	0.01 ppt	1 µS/cm	0.01 mS/cm	0.01 ppt	0.1°C
TDS Factor			Adjustable; 0.71 default	Adjustable; 0.71 default				
Battery Requirements	4, AAA	4, AAA	4, AAA	4, AAA	4, AAA	4, AAA	4, AAA	4, AAA
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Backlight	No	No	No	No	No	No	No	No
Prod. No.	9531000	9531100	9531200	9531300	9531400	9531500	9531600	9531700

**Subject to change without notice.*

Order Information

Pocket Pro Testers

9531000 Pocket Pro pH Tester
9531100 Pocket Pro ORP Tester
9531200 Pocket Pro Low Range TDS Tester
9531300 Pocket Pro High Range TDS Tester
9531400 Pocket Pro Low Range Conductivity Tester
9531500 Pocket Pro High Range Conductivity Tester
9531600 Pocket Pro Salinity Tester
9531700 Pocket Pro Temperature Tester

Pocket Pro+ Testers

9532000 Pocket Pro+ pH Tester with Replaceable Sensor
9532100 Pocket Pro+ ORP Tester with Replaceable Sensor
9532700 Pocket Pro+ Multi 1 Tester for Cond/TDS/Salinity with Replaceable Sensor
9532800 Pocket Pro+ Multi 2 Tester for pH/Cond/TDS/Salinity with Replaceable Sensor

Replacement Sensors

9531701 Replacement Sensor for Pocket Pro Temperature Tester
9532001 Replacement Sensor for Pocket Pro+ pH Tester
9532101 Replacement Sensor for Pocket Pro+ ORP Tester
9532701 Replacement Sensor for Pocket Pro+ Multi 1 Tester (Cond, TDS, Sal, Temp)
9532801 Replacement Sensor for Pocket Pro+ Multi 2 Tester (pH, Cond, TDS, Sal, Temp)

Calibration Singlets

2770020 Singlet Single-Use pH Buffer, pH 4.01, pk/20
2770120 Singlet Single-Use pH Buffer, pH 7.00, pk/20
2770220 Singlet Single-Use pH Buffer, pH 10.01, pk/20
2771320 Singlet Single-use Conductivity Standard Solution, 147 µS/cm, KCl, 20 mL
2771420 Singlet Single-use Conductivity Standard Solution, 1413 µS/cm, KCl, 20 mL
2771520 Singlet Single-use Conductivity Standard Solution, 12.88 mS/cm, KCl, 20 mL

Learn More

Process Instruments

Controllers

Analyzers & Sensors

Sample Preparation

EZ Series Analyzers

Water Monitoring Panels

HACH®

Be Right™

www.newteclab.mx
Tel. 667 7161023, 7160188
email: ecommerce@newteclab.mx

Digital Controller SC4500

Ready for Now. Ready for the Future.

Technologies are advancing rapidly, providing new levels of convenience, accuracy, and efficiency. Which is exactly why the SC4500 Controller from Hach® is designed to integrate easily into your current system while allowing you to upgrade as your capabilities advance, without having to replace inventory.

With a wide range of analog and digital connectivity options and the availability of intelligent instrument and data management features, the SC4500 unlocks the future, today.

Easy Adoption

The familiar experience of a modern touchscreen, the ability to use your current Hach sensors, and the same footprint as the SC200, make installation and integration of the SC4500 Controller seamless.

No Time for Downtime

The SC4500's built-in predictive diagnostic software ensures measurement confidence and reduces the risk of unexpected equipment downtime by enabling proactive maintenance planning via MSM, including step-by-step instructions.

The Connectivity Options You Need

The Controller is Smart Monitoring enabled and provides local communication to SCADA or a PLC. From analog and advanced digital protocols to Wi-Fi, cellular or LAN, the SC4500 gives you the flexibility to adapt in a rapidly changing world.

Order Information

Controllers

LXV525.99A11551	SC4500 Controller, Prognosys, 5x mA Output, 2 Digital Sensors, 100-240 VAC, without power cord
LXV525.99E11551	SC4500 Controller, Prognosys, 5x mA Output, 2 digital Sensors, US plug
LXV525.99A11541	SC4500 Controller, Prognosys, 5x mA Output, 1 digital Sensor, 1 mA Input, without plug
LXV525.99E11541	SC4500 Controller, Prognosys, 5x mA Output, 1 digital Sensor, 1 mA Input, US plug
LXV525.99AA1551	SC4500 Controller, Smart Monitoring enabled, 5x mA Output, 2 Digital Sensors, 100-240 VAC, without power cord
LXV525.99EA1551	SC4500 Controller, Smart Monitoring enabled, 5x mA Output, 2 digital Sensors, US plug
LXV525.99AA1541	SC4500 Controller, Smart Monitoring enabled, 5x mA Output, 1 digital Sensor, 1 mA Input, without plug
LXV525.99EA1541	SC4500 Controller, Smart Monitoring enabled, 5x mA Output, 1 digital Sensor, 1 mA Input, US plug

Additional configurations are available. Please contact Hach Technical Support or your Hach representative.

Accessories

LXZ524.97.00042	SC4x00 Input Module
LXZ525.99.D0002	SC4x00 mA Output Module (5 Outputs)
LXZ525.99.C0002	SC4500 Ethernet IP Upgrade Kit
LXZ525.99.C0003	SC4500 LAN Connector Upgrade Kit
LXZ524.99.00004	SC4x00 UV Protection Screen
LXZ524.99.00005	SC4x00 UV Protection Screen with Sunroof
LXZ525.99.D0003	SC4500 pH/ORP Module
LXZ525.99.D0004	SC4500 Conductivity Module
LXZ525.99.D0006	SC4500 Ultrapure pH/ORP Module
LXZ525.99.D0007	SC4500 Ultrapure Conductivity Module
LXZ525.97.D0008	SC4500 Modbus RS232/RS485 Module

Please visit hach.com for a complete overview of accessories and spare parts.

Learn More

Technical Data*

Description	Microprocessor-controlled and menu-driven controller that operates the sensor
Dimensions	½ DIN - 144 x 144 x 192 mm (5.7 x 5.7 x 7.6 in.)
Weight	3.7 lb (controller only, w/o modules)
Display	3.5-inch TFT colour display with capacitive touchpad
Enclosure Rating	UL50E type 4X, IEC/EN 60529–IP 66, NEMA 250 type 4X Metal enclosure with a corrosion-resistant finish
Operating Temperature Range	-20 to 60 °C (-4 to 140 °F) (8 W (AC)/9 W (DC) sensor load) -20 to 45 °C (-4 to 113 °F) (28 W (AC)/20 W (DC) sensor load) Linear derating between 45 and 60 °C (-1.33 W/°C)
Storage Conditions	-20 - 70 °C (-4 - 158 °F), 0 - 95% relative humidity, non-condensing
Altitude	3000 m (9842 ft) maximum
Installation Category	Category II
Indoor/Outdoor	Outdoor installation in direct sunlight or UV radiation requires UV protection screen and/or sunroof
Pollution Degree	4
Protection Class	I, connected to protective earth
Power requirements	AC controller: 100-240 VAC ±10%, 50/60 Hz; 1 A (28 W sensor load) DC controller: 24 VDC +15% -20%; 2.5 A (20 W sensor load)
Relays	Two relays (SPDT); Wire gauge: 0.75 to 1.5 mm^2 (18 to 16 AWG) AC controller Maximum switching voltage: 100 - 240 VAC Maximum switching current: 5 A Resistive/ 1 A Pilot Duty Maximum switching power: 1200 VA Resistive/ 360 VA Pilot Duty DC controller Maximum switching voltage: 30 VAC or 42 VDC Maximum switching current: 4 A Resistive/ 1 A Pilot Duty Maximum switching power: 125 W Resistive/ 28 W Pilot Duty
Communication (optional)	Analog: Five 0-20 mA or 4-20 mA analog outputs on each analog output module Up to two analog Input modules (0-20 mA or 4-20 mA). Each input module replaces a digital sensor input. Digital: Profibus DPV1 module Modbus TCP Profinet IO module Ethernet IP module
Network Connectivity	LAN: Two Ethernet connectors (10/100 Mbps) Cellular: External 4G Wi-Fi
USB Port	Used for data download and software upload. The controller records approximately 20,000 data points for each connected sensor.
Compliance Certifications	CE. ETL certified to UL and CSA safety standards (with all sensor types), FCC, ISED, KC, RCM, EAC, UKCA, SABS, C م (Morocco)
Compatible Network Technologies	GSM 3G/4G (e.g. AT&T, T-Mobile, Rogers, Vodafone etc.) CDMA (e.g. Verizon)

**Subject to change without notice.*

SC1000 Multi-parameter Universal Controller

The only controller needed for all of your water quality measurements.

The Hach SC1000 Multi-parameter Universal Controller is a state-of-the-art modular transmitter system. The SC1000 consists of a Display Module and at least one Probe Module. Probe Modules for the SC1000 can be networked together to accommodate up to 32 digital sensors or analyzers. The SC1000 Display Module is intuitive, with an easy to use interface and large color touch-screen display that can be used for any number of parameters. One Display Module controls one or more Probe Modules connected by a digital network. The Display Module is fully portable, and can be disconnected and moved anywhere within the network. The Hach SC1000 Display Module is available with GSM/GPRS and Modbus TCP/IP capability.

Prognosys is a predictive diagnostic system that allows you to be proactive in your maintenance, by alerting you to upcoming instrument issues. Know with confidence whether changes in your measurements are due to changes in your instrument or your water.

More Confidence in Your Instrument's Performance

Available exclusively on Hach instruments, Prognosys predictive diagnostics uses innovative diagnostic software to read multiple inputs from your instrument and alert you to the instrument's overall performance and upcoming maintenance. An easy-to-read dashboard provides instant indication of measurement reliability and service requirements. Process control has never been easier.

Plug and Play Operation

There's no complicated wiring or set up procedures with the SC1000 controller. Plug any Hach digital sensor into a Probe Module and it's ready for use. No special ordering or software configuration is needed.

Communication Options to Fit Any Application Need

The Hach SC1000 controller features state-of-the art Modbus TCP/IP communications protocol for seamless integration into a network of devices that support TCP/IP sockets. Use a standard Ethernet cable or connect wirelessly using GSM/GPRS to communicate with your SCADA, PLC or other network. Available with analog 4-20mA, Modbus 485, Profibus DP, or HART digital communication options.

Expandable and Upgradable

The SC1000 controller can adapt to your needs. Add or change probes without having to change the controller. Plus, with a single Display Module, additional Probe Modules and associated sensors can be added or removed depending on operational needs. Fully upgradable software ensures that this system will not be obsolete. Hach service plans are available.

Learn More

Technical Data*

Operating Temperature Range	-20 - 55 °C (-4 - 131 °F) / 0 - 95% relative humidity, non-condensing
Storage Conditions	-20 - 70 °C (-4 - 158 °F), 0 - 95% relative humidity, non-condensing
Power Requirements (Voltage)	100 - 240 VAC, 24 VDC
Power Requirements (Hz)	50/60 Hz
Display	¼ inch VGA graphical backlit TFT color Glas/Glas-Touch screen, high resistance 320 x 240 pixels
Display Viewing Area	11.4 x 8.6 cm (4.5 x 3.4 in)
Alarm	Low alarm point, low alarm point deadband, high alarm point, high alarm point deadband, off delay, and on delay
Relays	Up to four SPDT, user-configurable contacts rated 100 to 230 VAC, 5 Amp resistive maximum per probe module. Additional relays are available with additional probe modules.
Inputs	Up to 12 analog 0-20 mA, maximum impedance 500 Ohms per probe module. Additional inputs are available with additional probe modules.
Outputs	Up to 12 analog 0/4-20 mA, maximum impedance 500 Ohms per probe module. Additional analog outputs with additional probe modules. Optional digital communcations via Modbus (RS485) and Profibus DP/V1.
Analog Output Functional Mode	PID, high/low phasing, setpoint, deadband, overfeed timer, off delay, on delay
Communication	Modbus (RS485): Advanced communications/ networking with PLC or SCADA system directly from analyzer Profibus DP/V1 (certified) GSM/GPRS Quad-band cellular module (FCC and IC approved, EU and US only) Ethernet service port, RJ45, 10 MB/s
Mounting Configurations	Surface, panel, and pipe (horizontal and vertical) with optional sun shield
Enclosure Rating	IP65
Material Enclosures	ABS (display module) and metal (probe module) enclosure with corrosion resistant finish
Dimensions (H x W x D)	250 x 315 x 150 mm (12.4 x 10.1 x 6 in.)
Certifications	North American Certifications: cTUVus to UL 61010A-1 and CSA C22.2 No. 1010.1 FCC ID QIPMC56 / IC ID 267W-MC56 European Certifications: CE per 73/23/EEC and 89/336/EEC TUV-GS to EN 61010-1 EN 61326 Amd's 1 & 2
Weight	Approximately 6.5 kg (14.33 lb), depending on configuration

**Subject to change without notice.*

Order Information

SC1000 Display Modules

LXV402.99.00002	SC1000 Display Module
LXV402.99.10002	SC1000 Display Module with Modbus® TCP/IP Protocol

SC1000 Probe Modules

LXV400.99.1R172	SC1000 Probe Module, 4 Sensors with Conduits, 4x 4-20mA Out, 4x Relays, 110-240 VAC with Conduits
LXV400.99.1B572	SC1000 Probe Module, 4 Sensors, 4x 4-20mA Out, 4x 4-20mA In, Modbus RS485, 4x Relays, 100-240 VAC with Conduits
LXV400.99.1F572	SC1000 Probe Module, 4 Sensors, 4x 4-20mA Out, 4x 4-20mA In, Profibus DP, 4x Relays, 100-240 VAC with Conduits
LXV400.99.1R582	SC1000 Probe Module, 6 Sensors, 4x 4-20mA Out, 4x 4-20mA In, 4x Relays, 100-240 VAC with Conduits
LXV400.99.1H082	SC1000 Probe Module, 6 Sensors, Prognosys, Modbus RS485, 100-240 VAC with Conduits
LXV400.99.1G082	SC1000 Probe Module, 6 Sensors, Prognosys, 100-240 VAC with Conduits
LXV400.99.ZA022	SC1000 Probe Module, 4 Sensors, Modbus RS485, 24 VDC
LXV400.99.ZR122	SC1000 Probe Module, 4 Sensors, 4x 4-20mA Out, 4x Relays, 24 VDC
LXV400.99.10092	SC1000 Probe Module, 8 Sensors with Conduits, 110-240 VAC with Conduits
LXV400.99.10082	SC1000 Probe Module, 6 Sensors with Conduits, 110-240 VAC with Conduits

Note: Additional Probe Module configurations are available. Please contact your local Hach representative.

Network and Communication Cards

YAB021	SC1000 Internal Modbus RS485 Card
YAB020	SC1000 Internal Profibus DP Card
YAB076	SC1000 Internal Relay Card
YAB018	SC1000/SC1500 Internal 0/4-20 mA Analog Input Card
YAB019	SC1000/SC1500 Internal 0/4-20 mA Analog Output Card
LZY885.99.00002	Prognosys Communication Card for SC1000

Accessories

6169900	SC1000 Panel Mount Kit
LZX958	SC1000 Sunshield
LZX957	SC1000 Sunshield with mounting pole (1.8 m/5.9 ft)
LZY598	Modbus TCP/IP License Kit for field upgrade (Display Module serial number required when ordering)
LZX849	Digital Extension Cable, 10 m
LZY488	SC1000 Bus cable for flexible installations (order per foot)
LZY489	SC1000 Bus cable for fixed installations (order per foot)
5448800	Power Cord, 120 VAC

SC Controller Quick Reference Guide

Model	SC1000	SC4500
Description	The SC1000 multi-parameter Universal Controller is a fully modular system consisting of a Display Module and one or more Probe Modules.	Microprocessor-controlled and menu-driven controller that operates the sensor
Display	¼ inch VGA graphical backlit TFT color Glas/Glas-Touch screen, high resistance 320 x 240 pixels	3.5-inch TFT colour display with capacitive touchpad
Enclosure Rating	IP65	UL50E type 4X, IEC/EN 60529–IP 66, NEMA 250 type 4X Metal enclosure with a corrosion-resistant finish
Operating Temperature Range	-20 - 55 °C (-4 - 131 °F) / 0 - 95% relative humidity, non-condensing	-20 to 60 °C (-4 to 140 °F) (8 W (AC)/9 W (DC) sensor load) -20 to 45 °C (-4 to 113 °F) (28 W (AC)/20 W (DC) sensor load) Linear derating between 45 and 60 °C (-1.33 W/°C)
Storage Conditions	-20 - 70 °C (-4 - 158 °F), 0 - 95% relative humidity, non-condensing	-20 - 70 °C (-4 - 158 °F), 0 - 95% relative humidity, non-condensing
Altitude	2000 m (6562 ft) maximum	3000 m (9842 ft) maximum
Sensors	Up to 8 Sensors	Up to 2 Sensors
Power requirements	100-240 VAC ±10%, 50/60 Hz; max. 1000 VA, Category II or 24 VDC (18-30 VDC), max. 75 W	AC controller: 100-240 VAC ±10%, 50/60 Hz; 1 A (28 W sensor load) DC controller: 24 VDC +15% -20%; 2.5 A (20 W sensor load)
Relays	Up to four SPDT, user-configurable contacts rated 100 to 230 VAC, 5 Amp resistive maximum per probe module. Additional relays are available with additional probe modules.	Two relays (SPDT); Wire gauge: 0.75 to 1.5 mm^2 (18 to 16 AWG) AC controller Maximum switching voltage: 100 - 240 VAC Maximum switching current: 5 A Resistive/1 A Pilot Duty Maximum switching power: 1200 VA Resistive/360 VA Pilot Duty DC controller Maximum switching voltage: 30 VAC or 42 VDC Maximum switching current: 4 A Resistive/1 A Pilot Duty Maximum switching power: 125 W Resistive/28 W Pilot Duty
Inputs	Up to 12 analog 0-20 mA, maximum impedance 500 Ohms per probe module. Additional inputs are available with additional probe modules.	Up to two analog Input modules (0-20 mA or 4-20 mA). Each input module replaces a digital sensor input.
Outputs	Up to 12 analog 0/4-20 mA, maximum impedance 500 Ohms per probe module. Additional analog outputs with additional probe modules. Optional digital communcations via Modbus (RS485) and Profibus DP/V1.	Five 0-20 mA or 4-20 mA analog outputs on each analog Output module
Communication (optional)	Modbus (RS485): Advanced communications/networking with PLC or SCADA system directly from analyzer Profibus DP/V1 (certified) GSM/GPRS Quad-band cellular module (FCC and IC approved, EU and US only) Ethernet service port, RJ45, 10 MB/s	Profibus DPV1 module Modbus TCP Profinet IO module Ethernet IP module
Compliance Certifications	North American Certifications: cTUVus to UL 61010A-1 and CSA C22.2 No. 1010.1 FCC ID QIPMC56 / IC ID 267W-MC56 European Certifications: CE per 73/23/EEC and 89/336/EEC TUV-GS to EN 61010-1 EN 61326 Amd's 1 & 2	CE. ETL certified to UL and CSA safety standards (with all sensor types), FCC, ISED, KC, RCM, EAC, UKCA, SABS, C م (Morocco)
Compatible Network Technologies	GSM modem The SC1000 display module with integrated GSM/GPRS modem transmits data SMS messages and GPRS services in GSM nets. The SC1000 is offered with different GSM frequency bands: MC55I-W 850/900/1800/1900 MHz MC55I-W features GPRS multislot class 10 and supports the GPRS coding schemes CS-1, CS-2, CS-3 and CS-4.	GSM 3G/4G (e.g. AT&T, T-Mobile, Rogers, Vodafone etc.) CDMA (e.g. Verizon)
Network Connectivity		LAN: Two Ethernet connectors (10/100 Mbps) Cellular: External 4G Wi-Fi
Mounting	Surface, panel, and pipe (horizontal and vertical) with optional sun shield	Wall, Pole, or Panel Mounting
Dimensions	250 mm x 315 mm x 150 mm (12.4 x 10.1 x 6 in.)	½ DIN - 144 x 144 x 192 mm (5.7 x 5.7 x 7.6 in.)
Weight	Approximately 6.5 kg (14.33 lb), depending on configuration	1.7 kg (3.7 lb) (controller only, w/o modules)

**Subject to change without notice.*

NH6000sc Online Ammonia Analyzer

Experience Unmatched Efficiency and Reliability with the NH6000sc Ammonia Analyzer: High-Quality Measurements and Predictive Diagnostics for Optimal Performance

Simplify your online operations with the NH6000sc, an online Ammonia Analyzer using gas sensing electrode (GSE) technology. The environmentally controlled design is ready for easy, outdoor installations at the measurement point you need. With minimal maintenance requirements and proven reliability, Hach's NH6000sc will give you confidence in your measurement results and improved process efficiency.

Maximize uptime and accuracy with trusted technology

The NH6000sc ammonia analyzer from Hach® uses fast, accurate and trusted GSE technology. The NH6000sc provides reliable measurements with automatic calibration, validation, and cleaning. A verification grab sample improves consistency between online and lab data through an automatic sampling process. Predictive diagnostics and supportive maintenance workflows help you maximize uptime.

Save time with biannual maintenance

The NH6000sc ammonia analyzer reduced routine user maintenance frequency to only twice per year. Engineered with efficiency in mind, the instrument's streamlined design and optimized reagents make operation simple and user-friendly. With a standard cleaning cycle, the reagents have an extended replacement time of every 6-months.

Learn More

Robust and lightweight intergrated filtration options

The integrated FX610 filtration system and the more rugged FX620 feature lightweight construction with improved air cleaning and innovative flow detection. These features ensure reliable functionality and reduced operational touchpoints. Plus, you'll have the ability to remotely check that your sample is consistently supplied to your analyzer to increase confidence in your results.

Order Information

Analyzers

LXV461.99.00021	NH6000sc Ammonia Analyzer, 1 channel, for use with 1 external sample filtration system, 115 VAC
LXV461.99.00121	NH6000sc Ammonia Analyzer, 1 channel, for use with 1 external sample filtration system, automatic verification grab sample, 115 VAC
LXV461.99.02021	NH6000sc Ammonia Analyzer, 1 channel, includes sample supply pump for use with FX620 sample filtration system, 115 VAC
LXV461.99.02121	NH6000sc Ammonia Analyzer, 1 channel, includes sample supply pump for use with FX620 sample filtration system, automatic grab sample verification, 115 VAC
LXV461.99.03021	NH6000sc Ammonia Analyzer, 2 channels, for use with 2 external sample filtration systems, 115 VAC

Please note: These are the most common product configurations, but others are available. Please contact your Hach representative for additional information.

A sample filtration system (Filtrax, FX6x0, or TMS-C) and a digital Hach SC controller are required for operation of the NH6000sc. Sample filtration system and controller are sold separately.

For Filtration Systems please also see section Sample Preparation.

Mounting Hardware and Accessories

LZY285	Rail mounting kit for SC analyzer with SC controller
LZY286	Stand mounting kit for SC analyzer with SC controller
LZY316	Rail mounting kit for SC analyzer without SC controller
LZY287	Stand mounting kit for SC analyzer without SC controller
LXZ461.99.00007	Controller Mounting kit
LXZ461.99.00011	Heated Drain Hose, 5 m, 230 V
LXZ461.99.00003	Sample and Connection Tube for multiple Analyzers
LQV155.99.00002	Power box without power connection cable
LQV155.99.00012	Power box with power connection cable

Reagents

LCW1211	NH6000sc Standard Solution 1 for Measuring Range 1, 0.5 mg/L NH_4-N, 2 L
LCW1212	NH6000sc Standard Solution 2 for Measuring Range 1, 2.5 mg/L NH_4-N, 2 L
LCW1221	NH6000sc Standard Solution 1 for Measuring Range 2, 1 mg/L NH_4-N, 2 L
LCW1222	NH6000sc Standard Solution 2 for Measuring Range 2, 10 mg/L NH_4-N, 2 L
LCW1231	NH6000sc Standard Solution 1 for Measuring Range 3, 10 mg/L NH_4-N, 2 L
LCW1232	NH6000sc Standard Solution 2 for Measuring Range 3, 50 mg/L NH_4-N, 2 L
LCW1241	NH6000sc Standard Solution 1 for Measuring Range 4, 50 mg/L NH_4-N, 2 L
LCW1242	Standard solution 2, 500 mg/L for measurement range 4
LCW1255	NH6000sc Reagent Solution, 2 L
LCW1265	NH6000sc Cleaning Solution, 250 mL
LCW1275	NH6000sc Electrolyte Set for Measuring Range 2, 3 and 4
LCW1285	NH6000sc Electrolyte Set for Measuring Range 1

Part numbers may vary by country.

A-ISE sc Ammonia Sensor

ISE probe for the on-line measurement of Ammonium provides trending information with minimal maintenance at an affordable price.

Cost-Effective Trending Information

The A-ISE sc Sensor utilizes ion selective electrode (ISE) technology to provide your plant with high level trending information while saving money by eliminating the need for reagents and sample preparation. With no sample preparation required beforehand, NH_4-N can be measured during the actual process, ensuring less interruption, reduced costs, time and maintenance

Minimal Maintenance with Simple Cartridge Replacement

The sensor uses a factory calibrated cartridge so little maintenance is necessary. Cartridge replacement is simple: unscrew the old cartridge, plug in the new one, and the sensor is ready for measurement. Using RFID* technology, the factory calibration is automatically identified after replacing the cartridge.

Simple, Accurate Calibration

Easy to perform, fail-safe calibration corrections compensate for naturally occurring calibration drift in ISE instruments. An advanced menu structure allows you to perform corrections without manual entry of values via Ethernet, SD card or Bluetooth®.

**RFID version available only in US, EU, Canada, Australia, New Zealand, Croatia, Cyprus and Turkey.*

Order Information

Mounting Hardware

LXV440.99.10002	A-ISE sc Low cost ISE Ammonia probe (immersion) with RFID, 10 m cable
LXV440.99.10012	A-ISE sc Low cost ISE Ammonia probe (immersion) without RFID, 10 m cable

Please note: A digital Hach SC controller is required to operate the A-ISE sc sensor, controller is sold separately.

Mounting Hardware

LZY714.99.32320	Pole mounting hardware AN-ISE sc/A-ISE sc/N-ISE sc, 24 cm bracket, SS pole 2 m
6184900	Rail Mount Kit
LZX914.99.12400	Chain Mount Kit (PVC) for ISE sensors
LZY771	Sedimenter for AN-ISE sc/A-ISE sc/N-ISE sc

Cartridge

LZY694	Cartrical Sensor Cartridge for AN-ISE sc/A-ISE sc/N-ISE sc Sensors

Standards and Accessories

LCW895	Test Solution 1 for AN-ISE sc/A-ISE sc/N-ISE sc Sensors, 2 L
LCW896	Test Solution 2 for AN-ISE sc/A-ISE sc/N-ISE sc Sensors, 2 L
LZY720	Test Cartridge for AN-ISE sc/A-ISE sc/N-ISE sc
LZY706	Cleaning Unit for AN-ISE sc/A-ISE sc/N-ISE sc Sensors
6860000	High Output Air Blast Cleaning System, 115 VAC
6860100	High Output Air Blast Cleaning System, 230 Vac

Part numbers may vary by country.

Learn More

AN-ISE sc Combination Sensor for Ammonia and Nitrate

Two-in-one low maintenance sensor measures both ammonia and nitrate at the same time.

Combination Sensor for Ammonium and Nitrate

This combination sensor has the ability to measure Ammonia and Nitrate at the same time, eliminating the need for multiple sensors.

No Reagents or Sample Preparation

This sensor utilizes ion selective electrode (ISE) technology. It is designed for immersion directly in aeration basins eliminating the need for reagents and sample preparation. The sensor can be easily installed outdoors without additional housings, so it is easy to relocate to various locations.

Compensated for Significant Interferences

The sensor compensates for the most common interferences with integrated potassium and chloride electrodes within the cartridge. The compensation allows the sensor to provide accurate and reliable results.

Easy to Maintain Sensor Cartridge

The Cartrical cartridge eliminates handling and adjustment of individual electrodes because it contains four electrodes that are factory calibrated to each other. Cartridge replacement is simple: unscrew the old cartridge, plug in the new one, and the sensor is ready for measurement. The factory calibration is automatically identified after replacing the cartridge by using RFID technology.

Energy Cost Savings

The AN-ISE sc sensor can be used to optimize Nitrogen removal to facilitate reduced costs. Whether you are monitoring in a Sequencing Batch Reactor (SBR) or in a Nitrification/Denitrification process, the sensor provides visibility to real-time Ammonia and Nitrate levels, allowing you to run the blowers when needed and save energy costs.

Order Information

AN-ISE sc Sensors

LXV440.99.00002	AN-ISE sc Low Cost ISE Combination Sensor for Ammonia and Nitrate (immersion) with RFID, 10 m cable
LXV440.99.00012	AN-ISE sc Low Cost ISE Combination Sensor for Ammonia and Nitrate (immersion) without RFID, 10 m cable

Please note: A digital Hach SC controller is required to operate the AN-ISE sc sensor, controller is sold separately.

Mounting Hardware

LZY714.99.32320	Pole mounting hardware AN-ISE sc/A-ISE sc/N-ISE sc, 24 cm bracket, SS pole 2 m
6184900	Rail Mount Kit
LZX914.99.12400	Chain Mount Kit (PVC) for ISE sensors

Cartridge

LZY694	Cartrical Sensor Cartridge for AN-ISE sc/A-ISE sc/N-ISE sc Sensors

Standards and Accessories

LCW895	Test Solution 1 for AN-ISE sc/A-ISE sc/N-ISE sc Sensors, 2 L
LCW896	Test Solution 2 for AN-ISE sc/A-ISE sc/N-ISE sc Sensors, 2 L
LZY720	Test Cartridge for AN-ISE sc/A-ISE sc/N-ISE sc
LZY771	Sedimenter for AN-ISE sc/A-ISE sc/N-ISE sc
LZY706	Cleaning Unit for AN-ISE sc/A-ISE sc/N-ISE sc Sensors
6860000	High Output Air Blast Cleaning System, 115 VAC

Part numbers may vary by country.

Learn More

Ammonia Analyzer/Sensor Quick Reference Guide

			
Product Type	**NH6000sc Analyzer**	**A-ISE sc Sensor**	**AN-ISE sc Combination Sensor**
Parameter	Ammonium	NH_4-N	NH_4-N and NO_3-N
Measurement Method	Gas sensing electrode (GSE)	Potentiometric ion-selective measurement	Potentiometric ion-selective electrodes for ammonium and potassium, reference system and temperture sensor
RFID	--	Yes	Yes
Application	Wastewater Drinking Water	Wastewater	Wastewater
Range	0.02 - 5.0 mg/L NH_4-N 0.05 - 20 mg/L NH_4-N 1 - 100 mg/L NH_4-N 10 - 1000 mg/L NH_4-N	0 - 1000 mg/L NH_4-N	0 - 1000 mg/L NH_4-N 0 - 1000 mg/L NO_3-N 0 - 1000 mg/L K^+ 0 - 1000 mg/L Cl^-
Lower Limit of Detection (LOD)	Measuring range 1: 0.02 mg/L NH_4-N Measuring range 2: 0.05 mg/L NH_4-N Measuring range 3: 1 mg/L NH_4-N Measuring range 4: 10 mg/L NH_4-N	0.2 mg/L NH_4–N	0.2 mg/L NH_4–N and NO_3-N
Accuracy	With Standard Solution: Measuring range 1: ≤ 1 mg/L: 3% of the measured value + 0.02 mg/L > 1 mg/L: 5% of the measured value + 0.02 mg/L Measuring range 2: 3% of the measured value + 0.05 mg/L Measuring range 3: 3% of the measured value + 1.0 mg/L Measuring range 4: 4.5% of the measured value + 10 mg/L	5% of measured value + 0.2 mg/L (with standard solutions) NH_4-N	5% of measured value +0.2 mg/L (with standard solutions) NH_4-N and NO_3-N
Sample Temperature	4 - 40 °C (39 - 104 °F)	2 - 40 °C (35.6 - 104 °F)	
Sample Pressure	2.5 bar (0.25 MPa) maximum	0.3 bar max.	
Cable Length	Data and power cable: 2 m (80 in.) from edge of enclosure	Standard: 10 m (33.8 ft) Extension cables are available as an option in the following lengths: 5, 10, 15, 20, 30, 50 m (16.4, 33.8, 49.2, 65.6, 98.4, 164 ft)	
Dimensions (D x L)	575 x 991 x 425 mm (22.63 x 39.01 x 16.73 in.)	84.5 x 320 mm (3.3 x 12.6 in.)	
Weight	Approximately 45 kg (99.21 lbs.) without chemicals	2.38 kg (5.25 lbs.)	
Controller Compatibility	Digital SC Controller		

Please note that a Hach SC controller is required for operation, controller must be purchased separately.

**Subject to change without notice.*

5500sc Ammonia Monochloramine Analyzer

Chloramination made easy.

The Hach 5500sc Ammonia Monochloramine Analyzer provides all the information you need to eliminate nitrification events and taste and odor issues, giving you total confidence in your process.

Easy operation

The analyzer offers an easy-to-operate, low-maintenance solution to help you maintain the proper chlorine to ammonia ratio and assure there is no free ammonia in your system that could lead to nitrification. We removed the traditional pumps associated with reagent delivery and replaced them with a pressurized system to eliminate the hassles and maintenance that pumps can cause.

Reliability without all the work

With Prognosys, the analyzer's onboard predictive diagnostic software, you will have early insight into the measurement reliability and service requirements of your instruments. A user-friendly interface, color coded reagent bottles and at-a-glance status lights will offer peace of mind the instrument is up and running.

Improved control of your chloramination process

The 5500sc Ammonia Monochloramine Analyzer provides continuous monitoring, so you can trust that your instrument is giving you the information you need to control your chloramination process.

Order Information

5500.AMC.1.KTO	5500sc Ammonia Monochloramine Analyzer, 1 Channel
5500.AMC.2.KTO	5500sc Ammonia Monochloramine Analyzer, 2 Channel
5500.AMC.3.KTO	5500sc Ammonia Monochloramine Analyzer, 1 Channel with External Filter
5500.AMC.4.KTO	5500sc Ammonia Monochloramine Analyzer, 2 Channel with External Filter
Reagents	
25233000	5500sc Ammonia Monochloramine Analyzer Reagent Set
25234000	5500sc Ammonia Monochloramine Reagent 1, 1L
25235000	5500sc Ammonia Monochloramine Reagent 2, 1L
25236000	5500sc Ammonia Monochloramine Reagent 3, 1L
25237000	5500sc Ammonia Monochloramine Standard 1 (0 ppm NH_3), 2L
25238000	5500sc Ammonia Monochloramine Standard 2 (2 ppm NH_3), 2L
25239000	5500sc Ammonia Monochloramine Acidic Surfactant Wash, 2 L
Accessories	
9179700	Power cord, North American
9560501	5500sc Ammonia Monochloramine Maintenance Kit, 1 Channel
9560502	5500sc Ammonia Monochloramine Maintenance Kit, 2 Channel
25224000	Colorimeter Cleaning Kit for 5500sc Ammonia Monochloramine Analyzer
6792500	5500sc Modbus Module Kit
25277000	Prognosys License for the 5500sc Ammonia Monochloramine Analyzer

Learn More

Technical Data*

Range	0.01 - 2 ppm (as N), 0.05 - 10.0 mg/L (as Cl_2)
Parameter	Total Ammonia, Monochloramine, and Free Ammonia
Number of sample streams	1 or 2 in programmable sequence
Accuracy	± 5% or 0.01 ppm (as N) for 5 - 40 °C; ±10% or 0.02 ppm for 40 - 50 °C, whichever is greater
Repeatability	3% or 0.01 ppm (as N), whichever is greater
Lower Limit of Detection (LOD)	0.01 ppm (as N)
Response Time	Within 5 minutes
Reagent Consumption	1L of reagents every month with 5 minute cycle time
Operating Temperature Range	5 - 45 °C (41 - 113 °F)
Operating Humidity	5 - 95% non-condensing
Sample Pressure	0.17 - 6.8 bar (2.5 - 87 psi)
Sample Temperature	5 - 50 °C (41 - 122 °F)
Sample Flow Rate	100 - 1000 mL/minute
Grab Sample	Grab Sample In and Grab Sample Out capability
Mounting	Wall, panel, or table
Inlet	6mm OD push-to-connect fitting for plastic tubing
Outlet	11mm (7/16 in.) ID slip-on fitting
Outputs	Four 0/4-20 mA Outputs, load impedance 600 ohm maximum
Communication	4-20mA Output, Optional: Modbus RS485, Profibus DP with external controller
Dimensions (H x W x D)	804 x 452 x 360 mm (31.65 x 17.8 x 14.17 in.)
Enclosure Rating	IP56 / NEMA 4X
Certifications	CE (EN 61326-1: 2006; EN 61010-1: 2010; EN 60529: 1991, +A1:2000 cETLus (UL 61010-1:2012; NEMA 250:2003; CSA C22.2 No 61010-1:2012) Australian RCM Marking
Weight	20.5 kg (45.5 lb) without reagents and standards, 30 kg (66.2 lb) with reagents, standards and cleaning solution

**Subject to change without notice.*

CL17sc Colorimetric Chlorine Analyzer

The Next Standard in Chlorine Analysis

Built on a legacy of reliability in online chlorine analysis, the advanced design of the CL17sc reduces routine maintenance touch time and provides powerful diagnostic features and enhanced connectivity. The result is less hassle, minimized risk of data loss, and even more reliable information to empower your decision making.

Maintenance made easy

The CL17sc reduces your routine maintenance touch time with programmable alerts, simplified tubing replacement, nd step-by-step maintenance instructions.

Peace of mind through comprehensive diagnostics

With upgraded features like a flow meter, colorimeter window, multi-color status light, and predictive diagnostic software, you know your instrument is operating as intended.

Expanded connectivity. Increased flexibility.

By pairing the CL17sc with Hach's SC controller platform, your options increase significantly: internal data logging; external analog and digital communication alternatives; and multi-parameter instrument flexibility.

The CL17sc is compliant with US EPA regulation 40 CFR 141.74. Both Method 4500-CL G and Method 334.0 can be used for measuring residual chlorine in drinking water.

Order Information

Hach CL17sc Colorimetric Chlorine Analyzers are shipped with an installation kit, user manual, and one month of reagents where noted. The user selects a standpipe installation kit or a pressure regulator installation kit at the time of purchase. Hach SC controllers are required for operation and are sold separately.

CL17sc Colorimetric Chlorine Analyzers

8572700	CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit and Reagents for Free Chlorine
8572800	CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit and Reagents for Total Chlorine
8572900	CL17sc Colorimetric Chlorine Analyzer with Pressure Regulator Installation Kit and Reagents for Free Chlorine
8573000	CL17sc Colorimetric Chlorine Analyzer with Pressure Regulator Installation Kit and Reagents for Total Chlorine
8572300	CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit, w/o Reagents
8572400	CL17sc Colorimetric Chlorine Analyzer with Pressure Regulator Installation Kit, w/o Reagents
8572350	CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit (> 10 psi sample pressure to Y-strainer), w/o reagents
SPMP-CL	Single Parameter Monitoring Panel with SC4500 and CL17sc

Accessories

8568200	CL17sc Calibration Verification Kit
8573200	CL17sc Calibration Verification Refill Kit
8560500	CL17sc Standpipe Installation Kit (< 10 psi sample pressure to Y-strainer)
8565700	CL17sc Pressure Regulator Installation Kit
8576001	CL17sc Standpipe Installation Kit (> 10 psi sample pressure to Y-strainer)

Reagents and Consumables

8560400	CL17sc Tubing Kit (pre-assembled)
8573100	CL17sc Cell Cleaning Kit
2556900	Set includes: CL17 DPD Indicator, CL17 Free Chlorine Indicator Solution, and CL17 Free Chlorine Buffer Solution.
2557000	Set includes: CL17 DPD Indicator, CL17 Total Chlorine Indicator Solution, and CL17 Total Chlorine Buffer Solution.

Part numbers may vary by country.

Learn More

Ultra Low Range CL17sc Colorimetric Chlorine Analyzer

Total chlorine confidence. From the global leader in chlorine analysis.

Meet your unique water cycle needs with the new Ultra Low Range CL17sc online total chlorine analyzer from Hach®. Whether treating utility water, product water, or wastewater discharge, you'll have the direct chlorine measurements you need to optimize your process. You'll be able to protect valuable assets and report to regulatory agencies with confidence.

Monitor and Optimize your Dechlorination process

Chlorine breakthroughs can adversely affect your process, product, or equipment. You'll be able to mitigate issues and optimize your process with the Hach Ultra Low Range CL17sc analyzer, which has the lowest limit of detection at less than 8 ppb. It's time to accurately measure your total residual chlorine and take control of your dechlorination process.

Depend on direct measurements

Online residual chlorine measurement options for ultra-low range have been either inadequate or inefficient – until now. The Ultra Low Range CL17sc gives you direct total chlorine results, eliminating the need for ORP or amperometric measurement. The Ultra Low Range CL17sc uses colorimetric DPD Standard Method 4500-Cl G and consistently maintains accuracy without loss of sensitivity in your new target range.

Protect your assets

Understand the true impact of chlorine exposure. The Ultra Low Range CL17sc allows for process control across your water cycle, including visibility into GAC exhaustion or channeling and dechlorinating agent dosage. It is the only instrument with a cumulative chlorine counter, which helps you forecast your RO membrane efficiency and its useful life.

Smart Monitoring Enabled

The new Ultra Low Range CL17sc analyzer is Smart Monitoring enabled, providing real-time visibility into your processes so you can optimize and automate your chlorination/dechlorination. You'll have peace of mind and more time to focus on high-value tasks.

Order Information

Hach Ultra Low Range CL17sc Colorimetric Chlorine Analyzers are shipped with an installation kit, user manual, and one month of reagents where noted. The user selects a standpipe installation kit or a pressure regulator installation kit at the time of purchase. Hach SC controllers are required for operation and are sold separately.

Ultra Low Range CL17sc Colorimetric Chlorine Analyzers

9790200	Ultra Low Range CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit
9790300	Ultra Low Range CL17sc Colorimetric Chlorine Analyzer with Pressure Regulator Installation Kit
9793300	Ultra Low Range CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit and Reagents for Total Chlorine
9793400	Ultra Low Range CL17sc Colorimetric Chlorine Analyzer with Pressure Regulator Installation Kit and Reagents for Total Chlorine

Accessories

8568200	CL17sc Calibration Verification Kit
8573200	CL17sc Calibration Verification Refill Kit
8560500	CL17sc Standpipe Installation Kit (< 10 psi sample pressure to Y-strainer)
8565700	CL17sc Pressure Regulator Installation Kit

Reagents and Consumables

9791100	Ultra Low Range Total Chlorine Reagents Set
8560400	CL17sc Tubing Kit (pre-assembled)
8573100	CL17sc Cell Cleaning Kit

Part numbers may vary by country.

Learn More

CLF10sc & CLT10sc Free & Total Reagentless Chlorine Analyzers

Hach's answer to reagentless amperometric chlorine measurement

Exclusive Self Diagnostics

The CLF10sc and CLT10sc analyzers leverage Hach's exclusive self diagnostics to alert users when the process has changed or the instrument needs servicing. Diagnostic features include the Cal Watch algorithm for warning of pH and chlorine calibration deviation and a non-contacting flow sensor for notification of insufficient sample flow.

No Reagent Replacement, No Waste Stream

Chlorine measurement with an amperometric analyzer, such as the CLF10sc or CLT10sc, does not require reagents, eliminating the need for routine reagent replacement and waste stream management.

Real-Time Process Control

The CLF10sc and CLT10sc analyzers allow for real-time control of disinfection processes by providing continuous readings that indicate when treatment conditions have changed.

Compatible with Hach's "Plug and Play" Digital SC Controllers

The CLF10sc and CLT10sc analyzers can be used with any Hach digital SC controller. Whether you are measuring turbidity or chlorine, you only need to learn one controller for all your water analysis measurement points. Hach SC controllers have no complicated wiring or setup procedures. Just plug in any Hach digital sensor and it's ready to use without software configuration.

EPA Compliant According to Method 334.0

In accordance with EPA Method 334.0, the CLF10sc and CLT10sc analyzers can be used for reporting chlorine residual measurements. Additionally, Hach has created a suite of laboratory products and methods to help with startup and quality control procedures required in Method 334.0.

Order Information

CLF10sc Free Chlorine Analyzer

LXV45A.99.11022	CLF10sc Free Chlorine Analyzer (Panel Only) Grab Sample
LXV45A.99.12022	CLF10sc Free Chlorine Analyzer (Panel Only) with Combination pH Sensor
LXV45A.99.13022	CLF10sc Free Chlorine Analyzer (Panel Only) with pHD Differential Sensor

CLT10sc Total Chlorine Analyzer

LXV45B.99.11022	CLT10sc Total Chlorine Analyzer
LXV45B.99.12022	CLT10sc Total Chlorine Analyzer (Panel Only) with Combination pH Sensor
LXV45B.99.13022	CLT10sc Total Chlorine Analyzer with pHD Differential Sensor

Accessories and Replacement Parts

LZY051	Acidification/Cleaning Unit for Amperometric Sensors
9159900	Sample Conditioning Kit
9181500	pHD Differential Analog pH Sensor, PPS
9181600	Combination Analog pH Sensor, PPS
8626200	Replacement Sensor for CLF10sc, SS Tip
8628900	Replacement Sensor for CLT10sc, SS Tip
8633100	Replacement Membrane Kit for CLF10sc and CLT10sc, SS Tip
9160600	Electrolyte for Free Chlorine Sensor, 100 mL
9181400	Electrolyte for Total Chlorine Sensor, 100 mL

Learn More

Chlorine Analyzer Quick Reference Guide

			
Model	**CL17sc**	**ULR CL17sc**	**CLF10sc/CLT10sc**
Parameter	Free Chlorine, Total Chlorine	Total Chlorine	Free Chlorine (CLF10sc), Total Chlorine (CLT10sc)
Measurement Method	Colorimetric	Colorimetric	Reagentless, electrochemical, three-electrode amperometric system
Application	Drinking Water Wastewater Food and Beverage Pharmaceutical Power Semiconductor	Drinking Water Wastewater Food and Beverage Pharmaceutical Power Semiconductor	Drinking Water Process Water Wastewater and Reused Water Power
Range	0 - 10 mg/L free or total residual chlorine	0.008 - 5 mg/L Cl_2	0 - 20 ppm Cl_2
Lower Limit of Detection (LOD)	0.03 mg/L	0.008 mg/L Cl_2 at 25 °C	30 ppb (0.03 ppm)
Accuracy	± 5% or ± 0.04 mg/L (whichever is greater) from 0 - 5 mg/L Cl_2 ± 10% from 5 - 10 mg/L Cl_2	± 5% or ± 0.01 mg/L (whichever is greater) from 0 - 4 mg/L; ± 10% from 4 - 5 mg/L	**Free Chlorine:** ±3% of the reference test (DPD) at constant pH less than 7.2 (±0.2 pH unit) ±10% of the reference test (DPD) at stable pH less than 8.5 (±0.5 pH unit from the pH at calibration) **Total Chlorine:** ±10% of the reference test (DPD) at stable pH less than 8.5 (±0.5 pH unit from the pH at calibration) ±20% of the reference test (DPD) at stable pH greater than 8.5
Interferences	Other oxidizing agents such as bromide, chlorine dioxide, permanganate, and ozone will cause a positive interference. Hardness must not exceed 1,000 mg/L $CaCO_3$.	Other oxidizing agents such as bromide, chlorine dioxide, permanganate, and ozone will cause a positive interference.	Free chlorine: monochloramine, chlorine dioxide, ozone, and chalk deposits. Total chlorine: chlorine dioxide, ozone and chalk deposits
Reagent Consumption	0.5 L of buffer solution and 0.5 L of indicator solution in 31 days	0.5 L of buffer solution and 0.5 L of indicator solution in 31 days	
Sample Temperature	5 - 40 °C (41 - 104 °F)	5 - 40 °C (41 - 104 °F)	5 - 45 °C (41 - 113 °F)
Light Source	LED, measurement at 510 nm, 1 cm light pathlength	LED, measurement at 510 nm, 1 cm light pathlength	
Certifications	CE compliant with: EN 61326-1, CISPR 11, EN 50581 ACMA RCM South Korea KC Certificate North America: FCC Supplier's Declaration of Conformance, IEC/EN 60529, ICES-003	CE compliant with: EN 61326-1, CISPR 11, EN 50581 ACMA RCM South Korea KC Certificate North America: FCC Supplier's Declaration of Conformance, IEC/EN 60529, ICES-003	CE compliant for conducted and radiated emissions: - CISPR 11 (Class A limits) - EMC Immunity EN 61326-1 (Industrial limits) Additional certifications when connected to an sc controller
Dimensions (H x W x D)	342 x 329 x 177 mm (13.46 x 12.95 x 6.97 in.)	342 x 329 x 177 mm (13.46 x 12.95 x 6.97 in.)	483 x 495 x 151 mm (19 x 19.5 x 5.9 in.)
Weight	4.1 kg (9.0 lbs.)	4.1 kg (9.0 lbs.)	Approximately 5.5 kg (12 lbs) Panel and empty panel-mounted components only
Controller Compatibility	Digital SC Controller		
Please note that a Hach SC controller is required for operation, controller must be purchased separately.			

*Subject to change without notice.

9187sc Amperometric Chlorine Dioxide Sensor

Smart Amperometric Chlorine Dioxide Sensor

Selective Membrane Avoids Interference from other species

The Hach 9187sc Amperometric Chlorine Dioxide sensor uses a membrane that is selective for chlorine dioxide species. There are no interferences from bromine, chlorine or hydrogen peroxide. The only potential interference is from ozone, which is rarely present in water treated with chlorine dioxide.

Easy Setup and Maintenance

The all-inclusive 9187sc ClO_2 system comes preassembled on a panel. The membrane system of the sensor means there are no chemicals used for measurement. Maintenance is minimal and two years of typical maintenance items are included with the system.

Compatible with Hach's "Plug and Play" Digital SC Controllers

The 9187sc ClO_2 sensor is designed to be used with Hach SC digital controllers. Set up is fast and easy, and the system is compatible with the full line of Hach digital sensors.

Technical Data*

Range	0 - 2 mg/L ClO_2
Lower Limit of Detection (LOD)	0.01 mg/L ClO_2
Accuracy	5% or ±10 ppb ClO_2, whichever is greater
Response Time	90% in less than 90 seconds
Flow	14 L/h (200 - 250 mL/min) auto-regulated by flow through cell
Pressure Range	0.1 - 2 bar in flow cell
Sample Temperature	2 - 45 °C (35.6 - 113 °F)
Measuring Principle	Amperometric/Membrane (electrode, membrane, electrolyte)
Interferences	None
Calibration Method	Zero Calibration: Electrically or with ozone-free water Calibration: Comparison of lab method with process sample
Calibration Interval	2 months
Mounting	Flat, vertical surface (panel, stand, etc.)
Maintenance Interval	6 months for membrane and electrolyte (measurement cell)
Enclosure Rating	IP66 / NEMA 4X
Weight	6.5 kg (14.33 lb)
Controller Compatibility	Digital SC Controller

**Subject to change without notice.*

Order Information

LXV434.99.00001	9187sc Amperometric Chlorine Dioxide Sensor

Please note: A digital Hach SC controller is required for operation, controller is sold separately.

Accessories and Replacement Parts

LZY051	Acidification/Cleaning Unit for Amperometric Sensors
LZY052	Intermittent Flow Unit
5743200	Floor Stand
5867000	Digital Termination Box
09184=A=1001	Replacement Chlorine Electrode
09187=A=3500	Membranes for 9187sc Sensor, pk/4
09187=A=3600	Electrolyte for 9187sc Sensor, 100 mL

Part numbers may vary by country.

Learn More

3400 Digital and Analog Contacting Conductivity Sensors

3400sc Digital Contacting Conductivity Sensors

These enhanced performance sensors are manufactured to exacting tolerances using high quality, rugged materials for demanding applications including ultra-pure water, clean-in-place (CIP), and boiler/condensate monitoring. Each sensor is tested to determine its unique, absolute four-digit cell constant. Also, each sensor has a PT1000 RTD temperature element built into its tip for exceptionally fast response to changes in temperature with ±0.1°C accuracy.

The sensors measure from theoretically pure water (0.057 µS/cm or 18.2 MΩ) up to 200,000 µS/cm. Hach's Digital SC Controllers accept multiple digital sensor inputs, and can be user-set to measure conductivity, resistivity, TDS, salinity, or one of six calculated measurements.

Compression fitting sensors feature titanium electrodes and a compression fitting for universal installation with up to 4 inches (102 mm) insertion depth. The 1/2-inch or 3/4-inch male NPT compression fittings are offered in PVDF or 316 stainless steel. A longer version of this sensor is available for use with a 316 stainless steel ball valve hardware assembly to insert/retract the sensor from the process without stopping the flow. The longer version can also be used for insertion through a compression fitting. Maximum insertion depth is 7 inches (178 mm).

Order Information

Prod. No.	Cell Constant k	Range	Installation style	Installation Kit	Installation Requirement
D3422A2	0.05 cm-1	0 - 100 µS/cm	Compression	1/2" NPT	316 Stainless Steel
D3422C3	1.0 cm-1	0 - 2000 µS/cm	Compression	3/4" NPT	PVDF
D3422B3	0.5 cm-1	0 - 1000 µS/cm	Compression	3/4" NPT	PVDF
D3422D3	5.0 cm-1	0 - 10000 µS/cm	Compression	3/4" NPT	PVDF
D3422E3	10 cm-1	0 - 200000 µS/cm	Compression	3/4" NPT	PVDF
D3433B8	0.5 cm-1	0 - 1000 µS/cm	General purpose	3/4" NPT	PPS sensor body
D3433E8	10 cm-1	0 - 200000 µS/cm	General purpose	3/4" NPT	PPS sensor body
D3444B8	0.5 cm-1	0 - 1000 µS/cm	Boiler/Condensate	3/4" NPT	316 Stainless Steel sensor body
D3444D8	5.0 cm-1	0 - 10000 µS/cm	Boiler/Condensate	3/4" NPT	316 Stainless Steel sensor body
D3422A1	0.05 cm-1	0 - 100 µS/cm	Compression	1/2" NPT	PVDF
D3455A6	0.05 cm-1	0 - 100 µS/cm	Sanitary flange	1-1/2" Flange	316 Stainless Steel

Please note that a Hach SC controller is required for operation, controller must be purchased separately.

3400 Analog Contacting Conductivity Sensors

Order Information

Prod. No.	Cell Constant k	Range	Junction box	Material	Electrode Material
3422A1A	0.05 cm^{-1}	0 - 100 µS/cm	None	Compression Fitting: ½" NPT PVDF	Titanium
3422A3A	0.05 cm^{-1}	0 - 100 µS/cm	None	Compression Fitting: ¾" NPT PVDF	Titanium
3422B3A	0.5 cm^{-1}	0 - 1000 µS/cm	None	Compression Fitting: ¾" NPT PVDF	Titanium
3422E3A	10 cm^{-1}	0 - 200000 µS/cm	None	Compression Fitting: ¾" NPT PVDF	Titanium
3422C3A	1 cm^{-1}	0 - 2000 µS/cm	None	Compression Fitting: ¾" NPT PVDF	Titanium
3422D3A	5 cm^{-1}	0 - 10000 µS/cm	None	Compression Fitting: ¾" NPT PVDF	Titanium
3433E8A	10 cm^{-1}	0 - 200000 µS/cm	None		Graphite

Learn More

3700 Digital and Analog Inductive Conductivity Sensors

Learn More

3700sc Digital Inductive Conductivity Sensors

Hach's Inductive Conductivity Sensors measure 200 up to 2,000,000 microSiemens/cm. A built-in PT1000 RTD compensates the measured conductivity for changes in process temperature. The inductive sensor design eliminates polarization and electrode coating problems that commonly affect conventional contacting electrode-type conductivity sensors. All 3700sc sensors come complete with a Digital Gateway for use with a Hach Digital SC Controller.

Order Information

Prod. No.	Material	Range	Mounting
D3727E2T	PEEK	200 µS/cm - 2000 mS/cm	Convertible
D3705E2T	Polypropylene	200 µS/cm - 2000 mS/cm	Sanitary
D3706E2T	PVDF	200 µS/cm - 2000 mS/cm	Sanitary
D3708E2T	PFA	200 µS/cm - 2000 mS/cm	Sanitary
D3725E2T	Polypropylene	200 µS/cm - 2000 mS/cm	Convertible
D3726E2T	PVDF	200 µS/cm - 2000 mS/cm	Convertible
D3728E2T	PFA	200 µS/cm - 2000 mS/cm	Convertible

Please note that a Hach SC controller is required for operation, controller must be purchased separately.

Learn More

3700 Analog Inductive Conductivity Sensors

Order Information

Prod. No.	Material	Range	Mounting
3708E2T	Sensor Body: PFA	200 µS/cm - 2000000 mS/cm	Sanitary
3725E2T	Sensor Body: Polypropylene (PP)	200 µS/cm - 2000000 mS/cm	Convertible
3725E2T20G	Polypropylene (PP)	200 µS/cm - 2000000 mS/cm	Convertible
D3726E2T	PVDF	200 µS/cm - 2000 mS/cm	Convertible
D3727E2T	PEEK	200 µS/cm - 2000 mS/cm	Convertible
D3728E2T	PFA	200 µS/cm - 2000 mS/cm	Convertible
3728E2T20G	PFA		Convertible

Additional sensors are available, please visit hach.com or contact your local sales representative for more information.

3798sc Digital Inductive Conductivity Sensor

Immersion probe with integrated AD electronics, for operation with SC controller. Specially designed for use in municipal and industrial waste water.

Proven sensor with digital technology

Inductive sensor for heavily soiled media

Factory-calibrated

Plug and play with SC controllers

Order Information

Prod. No.	Description
LXV428.99.00001	3798-S sc Digital inductive conductivity sensor, 10 m cable

Please note: A digital Hach SC controller is required for operation, controller is sold separately.

Technical Specifications*

Range	250 µS/cm - 2500 mS/cm
Accuracy	±1% of actual value or ±0.004 mS/cm whichever is greater
Response Time T90	< 2 s
Reproducibility	< 0.2%
Interface	Modbus
Cable Length	10 m hard wired, Polyurethane
Material	Stainless steel metal housing, PEEK, Polyurethane, PPS
Sensor Immersion Depth	20 m / 2 bar
Flow	< 4 m/s
Storage Conditions	-20 - 60 °C (-4 - 140 °F), 95% relative humidity (non-condensing)
Dimensions (D x L)	43 x 370 mm (1.7 x 14.6 in.)
Weight	< 1 kg (2.2 lb)
Enclosure Rating	IP68
Certifications	CE (incl. RoHS)

**Subject to change without notice.*

Learn More

9525sc Degassed Cation Conductivity System

Simple to Integrate. Simple to Operate.

An integral part of a complete Power water analytics system, Hach®'s degassed cation conductivity (DCCP) system measures specific conductivity (SC), cation conductivity (CC), and degassed cation conductivity (DCC) and helps to reduce plant start-up time and distinguish between air and water contamination in UPW (Ultra Pure Water) cycles. This comprehensive approach saves you time on design, installation, training, maintenance, and operation.

Reliable measurements

Hach's newly redesigned Degassed Cation Conductivity Analyzer efficiently removes CO_2 from the sample to deliver fast reliable results that save you critical time and effort.

Space-Saving Design

Compact, wall mounted footprint to allow for easy integration into existing or new SWAS systems.

Easy and Safe Handling

The new 9525sc requires no additional cooling water supply but instead allows for a regenerative cooling option and condenses the steam to allow for safe discharge via a vent drain.

Technical Data*

Dimensions (H x W x D)	Degas System and DCCP System: 914 mm x 622 mm x 380 mm (36 x 24.5 x 15 inches)
Weight	27.7 kg (61 lb) for Degas System 50 kg (110 lb) for DCCP System
Power Requirements (Voltage)	110 - 120 VAC
Power Requirements (Hz)	60 Hz
Main Supply Voltage Fluctuation	±10 % of nominal voltage
Power Consumption	1.6 k VA
Operating Temperature Range	Recommended operating temperature: 23 - 27 °C (75 - 80 °F)
Ambient Temperature	2 - 50 °C (36 - 122 °F)
Storage Conditions	0 - 50 °C (32 - 120 °F) 0 - 85% relative humidity, non-condensing
Cell Constant k	0.01 cm^{-1}
Measuring Range Conductivity	0.01 - 200 µS/cm
Accuracy	< 2%
Power Requirements Controller	100 - 240 VAC ±10%, 50/60 Hz
Enclosure Rating	IP66 / NEMA 4X
Flow	100 - 150 cc/min (mL/min); 6 - 9 L/h
Fitting Type	Sample inlet/outlet connections: ¼ inch tube fitting
Sample Cooler Type	DTC-DCCP
Cooling Water	0.8 L/min (0.2 gpm)
Certifications	CE, UL, CSA

**Subject to change without notice.*

Order Information

Degas System

9525.99.0010DG	Hach 9525sc System, Degassed Conductivity only
9525.99.10CCDG	Hach 9525sc System, Specific Conductivity, Cation Conductivity, Calculated pH and Degassed Cation Conductivity
9525.99.0011	Hach 9525sc System, Degassed Conductivity only, with Regenerative Cooler
9525.99.10CCR	Hach 9525sc System, Specific Conductivity, Cation Conductivity, Calculated pH and Degassed Cation Conductivity, with Regenerative Cooler
9523.99.01P4	Polymetron 9523 Specific and Cationic Conductivity Analyzer, and pH Calculator with Modbus Communication, 100 - 240 VAC
9523.99.03P4	Polymetron 9523 Specific and Cationic Conductivity Analyzer, and pH Calculator with Profibus Communication, 100 - 240 VAC
9523.99.05P4	Polymetron 9523 Specific and Cationic Conductivity Analyzer, and pH Calculator with Hart Communication, 100 - 240 VAC

Accessories

9525.99.7030	Degas System Heater, 120 V
9525.99.7050	Degas Temperature Controller
9525.99.7060	Degas System Sample Cooler
4643600	Flow meter, 1.2 - 18 L/h, with ¼" OD tubing fittings
694=000=001	Adjustable flow meter, 0 to 16 L/h
09523=A=7000	Spare Resin Cartridge (includes resin inside)
8617700	Resin Column Refill Bag for 9525sc DCCP

Part numbers may vary by country.

Learn More

Dissolved Oxygen: Hach LDO sc Probe, Model 2

Accurate monitoring of dissolved oxygen in source water and for precise aeration process control

No Calibration Required

The Hach LDO sc probe uses luminescent dissolved oxygen technology. Traditional membrane style DO probes require sensor calibration, which increase maintenance requirements.

No Membranes to Replace

There is virtually no maintenance with Hach's breakthrough luminescent technology. There are no membranes to replace, no electrolyte solution to replenish, and no anode or cathode to clean.

No Missed Cleaning Cycles

The Hach LDO sc probe is equipped with Prognosys, a predictive diagnostic system, that allows you to be proactive in your maintenance by alerting you to upcoming instrument issues. Know with confidence whether changes in your dissolved oxygen level measurements are due to changes in your instrument or your water. To make sure routine cleaning cycles are never missed, the probe offers operators customizable diagnostic alert indicators, ensuring the probe can operate at its maximum performance level.

Customizable service indicators trigger a service message so that a cleaning cycle is never missed.

No Drift Technology

Cutting-edge 3D calibration procedure is conducted prior to shipping, the DO probe will not drift and is more accurate than ever before, compared to membrane style probes.

No Complications

Our newest Model 2 DO probe has a robust design with a smaller footprint allows for easier handling with enhanced durability.

Learn More

Technical Data*

Range	0 - 20.00 ppm
	0 - 20.00 mg/L
	0 - 200% saturation
Accuracy	Below 5 ppm: ± 0.1 ppm
	Above 5 ppm: ± 0.2 ppm
Response Time	T_{90} < 40 s T_{95} < 60 s
Resolution	0.01 ppm (mg/L) 0.1% saturation
Repeatability	± 0.1 ppm (mg/L)
Flow Rate	None required
Sensor Immersion Depth	Down to 34 m (112 ft.), 345 kPa (50 psi), maximum; accuracy may not be maintained at this depth
Transmission Distance	400 m (1312 ft.) maximum when used with a termination box
Cable Length	10 m (options with 30 m, 60 m)
Dimensions (D x L)	48.25 x 254 mm (1.9 x 10 in.)
Weight	1 kg (2.2 lbs), probe only
Warranty	36 months

**Subject to change without notice.*

Order Information

Sensor

9020000	Hach LDO 2 sc Dissolved Oxygen Probe
9020000-UPGRADE	Hach LDO 2 sc Dissolved Oxygen Probe, with Mounting Conversion Adapter

Please note that a Hach SC controller is required to operate the LDO sc sensor, controller must be purchased separately.

Accessories

5867000	Digital Termination Box
5796000	Digital Extension Cable, 7.7 m (25 ft.)
5796100	Digital Extension Cable, 15 m (50 ft.)
5796200	Digital Extension Cable, 30 m (100 ft.)
6860000	High Output Air Blast Cleaning System, 115 VAC
6860100	High Output Air Blast Cleaning System, 230 Vac
9253500	Air Blast Hardware Components

Replacements and Parts

9021100	LDO sc Model 2 Sensor Cap Replacement Kit

Mounting Kits

9253000	Pole Mount Kit, PVC
9253100	Ball Float Mount Kit, PVC
9257000	Union Mount Kit, PVC
9253400	Mounting Conversion Adapter, LDO sc Model 1 to LDO sc Model 2
7300800	1" NPT sc Sensors Flow Cell

Part numbers may vary by country.

Ultra Pure Water Orbisphere GA2400/GA2800 Oxygen Sensors

Highly accurate and customizable oxygen measurement for all environments

The Hach® Orbisphere GA2400 & GA2800 EX oxygen (O_2) Electrochemical (EC) sensors are designed for process monitoring of dissolved oxygen in ppm or ppb environments. It can also be utilized as part of laboratory analysis of oxygen in the liquid or gas phases.

The Hach Orbisphere GA2400 can be used for a wide range of non-harsh applications, including beer or soft-drinks production, rinsing of semiconductor waters in chip-manufacturing plants, and reactor coolant systems in nuclear power plants.

The Hach Orbisphere GA2800 EX sensor is suitable for harsh environments, including chemical, oil, or petrochemical plants.

There are several different pre-mounted membrane kits, able to be customized to fulfill any particular process requirements and oxygen measurement ranges required. This allows for low measurement ranges of 0.1 ppb, or even very high measurement ranges of 400 ppm.

Easy and fast maintenance

Traditional cleaning processes can take more than thirty minutes to complete. The GA2400 and GA2800 EX come with an innovative cartridge system that contains everything needed to complete membrane and electrolyte solution change in less than 5 minutes.

Low level oxygen measurement and unrivaled accuracy

The Hach Orbisphere GA2400 and GA2800 EX utilize an electrochemical oxygen sensor with a lower detection level of 0.1 ppb and unrivaled highly accurate readings of ±1%. This feature allows users to ensure control of low oxygen levels, for product and equipment integrity and avoiding corrosion.

Robust for harsh environments

The robust stainless steel or Hastelloy design makes the GA2400 and GA2800 EX sensor ideal for the most demanding applications. ATEX certification comes standard in all GA2800 units, making the sensor especially suitable for harsh chemical environments.

Learn More

Technical Data*

Model	GA2400	GA2800 EX
Certifications	CE	CE, Ex II 1 G, Ex ia IIC T6
Wetted Materials	Stainless Steel 1.4404 (AISI 316L) No O-rings are in contact with the sample	Hastelloy or Stainless Steel No O-rings are in contact with the sample
Pressure resistance	40 bar minimum with default PPS collar (100 bar with stainless steel collar)	
Temperature resistance	-5 - 100 °C (23 - 212 °F)	
Flow Rate	Recommended flow rate in flow chamber 2935A-A: 25 mL/min 2952A-A: 50 mL/min 2956A-A: 180 mL/min 29552A-A: 50 mL/min	
Protection Class	IP66	
Range	Range at 25 °C (77 °F) 2935A-A: 10 ppb - 400 ppm or 20 Pa - 1,000 kPa 2952A-A: 1 ppb - 80 ppm or 5 Pa - 200 kPa 2956A-A: 0.1 ppb - 20 ppm or 0.25 Pa - 50 kPa 29552A-A: 2 ppb - 80 ppm or 5 Pa - 200 kPa	
Accuracy	Accuracy = Trueness (ISO 57251) 2935A-A: The greater of ±1% of reading or ± 10 ppb, or ± 20 Pa 2952A-A: The greater of ±1% of reading or ± 2 ppb, or ± 5 Pa 2956A-A: The greater of ±1% of reading or ± 0.1 ppb[1], or ± 1 ppb[2], or ± 0.25 Pa 29552A-A: The greater of ±1% of reading or ± 2 ppb, or ± 5 Pa *[1] Accuracy is ± 0.1 ppb for 410, 510, 362x, 360x and 3655 instruments* *[2] Accuracy is ± 1 ppb for 366x and 3650 instruments*	
Response Time	Response time at 25 °C (77 °F) for a 90% signal change 2935A-A: 2.5 min 2952A-A: 38 s 2956A-A: 7.2 s 29552A-A: 90 s	
Temperature Compensation	-5 - 60 °C (23 - 140 °F)	
Weight	0.3 kg (0.66 lbs)	

**Subject to change without notice.*

Order Information

GA2400 Oxygen Sensors

GA2400-S00	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 40 bar, EPDM O-rings
GA2400-S00T	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC) or 6110 TPO Analyser, 40 bar, EPDM O-rings
GA2400-S0S	Orbisphere GA2400 Stainless Steel Oxygen Sensor (EC), 100 bar, EPDM O-rings

GA2800 ATEX Oxygen Sensors

GA280E-HKS	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, FFKM/FFPM O-rings
GA280E-HVS	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Hastelloy, 100 bar, FKM/FPM O-rings
GA280E-SKS	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, FFKM/FFPM O-rings
GA280E-SVS	Orbisphere GA2800 ATEX Oxygen Sensor (EC), Stainless Steel, 100 bar, FKM/FPM O-rings

Accessories

33051-S0	Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, without grille
33051-SP	Protection cap for GA2400 oxygen sensors, stainless steel, 28 mm, with grille
32001.011	Flow chamber in stainless steel (316) with ¼" fittings. Supplied with EPDM O-rings.
32001.010	Flow chamber in stainless steel (316) with 6 mm fittings. Supplied with EPDM O-rings.
2952A-A	Recharge kit of 4 pre-filled cartridges with premounted 2952A membranes
29552A-A	Recharge kit of 4 pre-filled cartridges with premounted 29552A membranes
29552A-AV	Recharge kit, 29552A membranes (4x), FKM/FPM O-rings
2956A-A	Recharge kit of 4 pre-filled cartridges with premounted 2956A membranes
2956A-AV	Recharge kit, 2956A membranes (4x), FKM/FPM O-rings
29781	Polishing kit for O_3 and H_2 sensors, incl. 3 µm powder (29331) and cloth
32301.A	Electrochemical sensor cleaning and regeneration unit, 115 VAC

Orbisphere K1100 Luminescent Dissolved Oxygen Sensor

The original maintenance-free optical oxygen sensor for power plants.

The Orbisphere K1100 optical sensor, together with the Orbisphere 410 single channel controller and the Orbisphere 510 multichannel controller, offers the simplest way to monitor oxygen in power plants. Orbisphere sensors set the industry standards for oxygen measurement by offering peace of mind to every water chemist.

One calibration per year

One zero point calibration per year is all that is needed with the K1100 sensor. Designed for minimal drift, luminescent technology makes the K1100 sensor the most stable sensor with the longest calibration interval in the industry.

No membranes = two minutes of maintenance

With no membranes to replace and no electrolyte solution to replenish, the K1100 requires only two minutes of maintenance per year. Corrosive or hazardous chemicals are not required, making the annual task faster, easier and safer without reducing measurement precision.

Low cost retrofit

The complete system consists of a controller, a flow chamber, and the K1100 Luminescent Dissolved Oxygen sensor. The sensor is compatible with Hach Orbisphere 28 mm flow chambers, eliminating the need for engineering changes. Installation is fast and easy and does not require special preparation.

A new level of confidence

The K1100 optical sensor is the first to use luminescent measurement technology to measure both ppb and ppm oxygen levels in power plants. Since 1978, Hach Orbisphere sensors have set the industry standard for oxygen measurement by delivering confidence to every water chemistry manager. The K1100 maintains this tradition and offers significant operating and cost benefits.

Learn More

Technical Data*

K1100 (Low Level Sensor)	
Range	0 - 2000 ppb dissolved O_2 (DO)
Temperature Range	Accurate from -5 - 50 °C (23 - 122 °F) Resistant - temperature from -5 - 100 °C (23 - 212 °F)
Repeatability	± 0.4 ppb or 1 % whichever is greater
Reproducibility	± 0.8 ppb or 2 % whichever is greater
Accuracy	± 0.8 ppb or 2 % whichever is greater
Lower Limit of Detection (LOD)	0.6 ppb
Response Time	(90%) <10 s (gas phase); <30 s (liquid phase)
Display Resolution	0.1 ppb
Calibration	Single point zero calibration with standard 99.999% nitrogen (quality 50) or equivalent oxygen free gas
Sample Pressure	1 - 20 bar absolute (14.5 - 290 psia)
K1100 (High Level Sensor)	
Range	0 - 40 ppm dissolved O_2 (DO)
Temperature Range	Accurate from -5 - 50 °C (23 - 122 °F) Resistant - temperature from -5 - 100 °C (23 - 212 °F)
Repeatability	± 0.015 ppm or 2 % whichever is greater
Reproducibility	± 0.02 ppm or 3 % whichever is greater
Accuracy	± 0.02 ppm or 3 % whichever is greater
Lower Limit of Detection (LOD)	0.015 ppm
Response Time	(90%) <10 s (gas phase); <50 s (liquid phase)
Display Resolution	0.1 ppb
Calibration	Two points at cap replacement (zero and air), one during use (air)
Sample Pressure	1 - 20 bar absolute (14.5 - 290 psia)
Orbisphere Controller	
Enclosure Construction	Wall (pipe) mount: stainless steel Panel mount: aluminum
Enclosure Rating	Wall (pipe) mount: IP65, NEMA 4x Panel mount: IP65
Compliance Certifications	EMC: EN61326-1:2006 CE: EN61010-1:2010 ETL, conforming to UL 61010-1 and CSA 22.2 No. 61010-1
Display	Color TFT touchscreen display
Analog Outputs	3 smart 0/4-20 mA (500 ohms), programmable as linear or tri-liniear, configurable to send diagnostics information
Relays	3 measurement alarm relays (2A to 30 VAC or 0.5 A to 50 VDC); configurable to send diagnostics information 1 system alarm relay (2 A to 30 VAC or 0.5 A to 50 VDC)
Communication	RS485 Profibus DP (optional) Ethernet USB-client to download data from a computer USB-host to download data with a USB memory stick
Data Storage	Rolling buffer or store once mode for up to 1000 measurements and 1000 operator actions Holds calibration records for last 50 calibrations
User Interface	Touch-screen panel displays: concentration, trend graph, diagnostics, alarm status, historical data
Dimensions (H x W x D)	Wall dimensions: 230.5 mm x 250 mm x 160 mm (9.1 in x 9.8 in x 6.3 in) Panel dimensions: 156 mm x 220 mm x 253.5 mm (6.14 in x 8.86 in x 9.84 in)
Power	Universal 100/240 VAC @ 50/60 Hz, 25 VA 10-36 VDC, 25 W

**Subject to change without notice.*

Order Information

Pre-configured Systems

K1100-KTO-W-IMP	Kit containing sensor K1100-S00, controller 410K/W1C0000, 3 m cable (32510.03), ¼" flow chamber (32001.011)
K1100-KTO-W-MET	Kit containing sensor K1100-S00, controller 410K/W1C0000, 3 m cable (32510.03), 6 mm flow chamber (32001.010)
K1100-KTO-P-MET	Kit containing sensor K1100-S00, controller 410K/P1C00000, 3 m cable (32510.03), 6 mm flow chamber (32001.010)
K110H-KTO-W-IMP	Kit containing sensor K1100-S00H, controller 410K/W1C0000, 3 m cable (32510.03), ¼" flow chamber (32001.011)
K110H-KTO-P-IMP	Kit containing sensor K1100-S00H, controller 410K/P1C00000, 3 m cable (32510.03), ¼" flow chamber (32001.011)
K110H-KTO-P-MET	Kit containing sensor K1100-S00H, controller 410K/P1C00000, 3 m cable (32510.03), 6 mm flow chamber (32001.010)
DGK510KK-W1025	Kit containing 1x dual-channel controller 510KK0/W1C00000, 2x sensor K1100-S00, 2x 5 m cable (32510.05), 2x 6 mm flow chamber (32001.010)
DGK510KK-P1025	Kit containing 1x dual-channel controller 510KK0/P1C00000, 2x sensor K1100-S00, 2x 5 m cable (32510.05), 2x 6 mm flow chamber (32001.010)
DGK510KK-W-IMP	Kit containing 1x dual-channel controller 510KK0/W1C00000, 2x sensor K1100-S00, 2x 10 m cable (32510.10), 2x ¼" flow chamber (32001.011)
DGK510KK-P-IMP	Kit containing 1x dual-channel controller 510KK0/P1C00000, 2x sensor K1100-S00, 2x 10 m cable (32510.10), 2x ¼" flow chamber (32001.011)
DGK510KKK-W-IMP	Kit containing 1x multi-channel controller 510KKK/W1C00000, 3x sensor K1100-S00, 3x 10 m cable (32510.10), 3x ¼" flow chamber (32001.011)
DGK510KKK-P-IMP	Kit containing 1x multi-channel controller 510KKK/P1C00000, 3x sensor K1100-S00, 3x 10 m cable (32510.10), 3x ¼" flow chamber (32001.011)

Controllers and Sensors

410K/W1C00000	Hach Orbisphere 410 controller (wall mount)
410K/P1C00000	Hach Orbisphere 410 controller (panel mount)
510KK0/P1C00000	Hach Orbisphere 510 dual-channel controller (panel mount)
510KK0/W1C00000	Hach Orbisphere 510 dual-channel controller (wall mount)
510KKK/W1C00000	Hach Orbisphere 510 multi-channel controller (wall mount)
K1100-S00	Luminescent dissolved oxygen sensor for in-line applications, 0 - 2000 ppb, with 28 mm Orbisphere fitting
K1100-S00H	Luminescent dissolved oxygen sensor for in-line applications, 0 - 40 ppm, with 28 mm Orbisphere fitting

Accessories

K1100-L	Replacement luminescent spot for low range sensors (0 - 2000 ppb)
K1100-H	Replacement luminescent spot for high range sensors (0 - 40 ppm)
32510.05	Sensor cable to connect M/K-type sensors, 5 m (16.4 ft.)
32001.011	Flow chamber in stainless steel (316) with ¼" fittings. Supplied with EPDM O-rings.
32001.010	Flow chamber in stainless steel (316) with 6 mm fittings. Supplied with EPDM O-rings.

Orbisphere M1100 Luminescent Dissolved Oxygen Sensor

Monitors oxygen in the beverage production process

The Orbisphere M1100 optical sensor, together with the Orbisphere 410 one channel and the Orbisphere 510 multichannel controller, offers a new way of monitoring oxygen in the beverage production process (bypass).

Minimal Drift and Annual Calibration

The M1100 sensor provides immediate oxygen readings with a measurement frequency of two seconds. The instrument carries consistent readings with no drift for 12 months without calibration (when utilising standard weekly CIP processes), surpassing other optical sensors that display significant drift after only a few months in similar conditions.

Minimal Maintenance Optical Technology

The M1100 pioneered the use of luminescent technology in brewing applications (bypass) and as a result, the sensor doesn't require the replacement of membranes or any electrolytes. Additionally, the sensor's accuracy is unaffected by process changes or pressure shocks, further reducing maintenance. Annual maintenance is limited to just a few minutes for a zero-point calibration. Chemicals are not required for this process, making the task easier and safer without reducing measurement precision.

Low Level Oxygen Measurement with Accurate ppb

The M1100-L sensor has a lower detection level of 0.6 ppb. This highly accurate instrument's readings are essential to control low oxygen levels in beverage production. As an example, it is critical to control low level oxygen in the post fermentation applications of the brewery to ensure high quality of the final product.

High Level Oxygen Measurement with Accurate ppm

The M1100-H sensor has a range of 0-40 ppm, and is ideal for use in wort applications, for example. Even in this harsh wort environment, the instrument maintains very good accuracy and minimal drift. Only a yearly maintenance and calibration will be required in most cases.

Learn More

Technical Data*

M1100 (Low Level Sensor)	
Range	0 - 2000 ppb DO (dissolved oxygen)
Temperature Range	Accurate from -5 - 50 °C (23 - 122 °F) Resistant to temperature from -5 - 100 °C (23 - 212 °F)
Repeatability	± 0.4 ppb or 1 % whichever is greater
Reproducibility	± 0.8 ppb or 2 % whichever is greater
Accuracy	± 0.8 ppb or 2 % whichever is greater
Lower Limit of Detection (LOD)	0.6 ppb
Response Time	(90%)< 10 s (gas phase) (90%)< 30 s (beer process)
Display Resolution	0.1 ppb
Calibration	Single point zero calibration with standard 99.999% nitrogen (quality 50) or equivalent oxygen free gas
Sample Pressure	1 - 20 bar absolute
M1100 (High Level Sensor)	
Range	0 - 40 ppm DO (dissolved oxygen)
Temperature Range	Accurate from -5 - 50 °C (23 - 122 °F) Resistant to temperature from -5 - 100 °C (23 - 212 °F)
Repeatability	± 0.015 ppm or 2 % whichever is greater
Reproducibility	± 0.02 ppm or 3 % whichever is greater
Accuracy	± 0.02 ppm or 3 % whichever is greater
Lower Limit of Detection (LOD)	0.015 ppm
Response Time	(90%)< 10 s (gas phase) (90%)< 30 s (beer process)
Display Resolution	0.1 ppb
Calibration	Two points at cap replacement (zero and air), one during use (air)
Sample Pressure	1 - 20 bar absolute
Orbisphere Controller	
Enclosure Construction	Wall (pipe) mount: stainless steel Panel mount: aluminum
Enclosure Rating	Wall (pipe) mount: IP65, NEMA 4X Panel mount: IP65
Compliance Certifications	EMC: EN61326-1:2006 CE: EN61010-1:2010 ETL, conforming to UL 61010-1 and CSA 22.2 No. 61010-1
Display	Color TFT touchscreen display
Analog Outputs	3 smart 0/4-20 mA (500 ohms), programmable as linear or tri-liniear, configurable to send diagnostics information
Relays	3 measurement alarm relays (2A to 30 VAC or 0.5 A to 50 VDC); configurable to send diagnostics information 1 system alarm relay (2 A to 30 VAC or 0.5 A to 50 VDC)
Communication	RS485
Data Storage	Rolling buffer or store once mode for up to 1000 measurements and 1000 operator actions Holds calibration records for last 50 calibrations
User Interface	Touch-screen panel displays: concentration, trend graph, diagnostics, alarm status, historical data
Dimensions (H x W x D)	236.5 mm x 250 mm x 160 mm
Power Supply	Universal 100 - 240 VAC @ 50/60 Hz, 25 VA 10 - 36 VDC, 25 W

**Subject to change without notice.*

Order Information

Pre-Configured Systems

DGKM110H-W1123	Kit containing M1100-S00H sensor, 410M/W1C10000 controller, 3 m cable (32510.03)
DGKM110H-W11215	Kit containing M1100-S00H sensor, 410M/W1C10000 controller, 15 m cable (32510.15)
DGKM1100-W1123	Kit containing M1100-S00 sensor, 410M/W1C1000 controller, 3 m cable (32510.03)
DGKM1100-W1121	Kit containing M1100-S00 sensor, 410M/W1C1000 controller, 10 m cable (32510.10)
DGK510MM-W1015	Kit containing 2x M1100-S10 sensors, 1x 510MM0/W1C0000 dual-channel controller, 2x 5 m cable (32510.05)
DGK510MM-W1025	Kit containing 2x M1100-S00 sensors, 1x 510MM0/W1C0000 dual-channel controller, 2x 5 m cable (32510.05)
DGK510MM-W2025	Kit containing 2x M1100-S00 sensors, 1x 510MM0/W2C0000 dual-channel controller, 2x 5 m cable (32510.05)

Controllers and Sensors

410M/W1C00000	Hach Orbisphere 410 controller (wall mount)
410M/P1C00000	Hach Orbisphere 410 controller (panel mount)
510MM0/W1C0000	Hach Orbisphere 510 dual-channel controller (wall mount)
510MM0/P1C0000	Hach Orbisphere 510 dual-channel controller (panel mount)
510MMM/W1C0000	Hach Orbisphere 510 multichannel controller (wall mount)
M1100-S00	Luminescent dissolved oxygen sensor, 0-2 ppm, with 28 mm Orbisphere fitting
M1100-S10	Luminescent dissolved oxygen sensor, 0-2 ppm, with 12 mm fitting
M1100-S00H	Luminescent dissolved oxygen sensor, 0-40 ppm, with 28 mm Orbisphere fitting
M1100-S10H	Luminescent dissolved oxygen sensor, 0-40 ppm, with 12 mm fitting

Accessories

32003	ProAcc sensor insertion device; for use with Tuchenhagen adapter
33095	28 mm Stationary housing, for mounting on Varinline® access unit
33096	PG 13.5 stationary housing or 12 mm sensors; for mounting on Varinline® access units
M1100-L	Replacement luminescent spot for low range sensors (0-2 ppm)
M1100-H	Replacement luminescent spot for high range sensors (0-40 ppm)
32510.05	Sensor cable to connect M/K-type sensors, 5 m (16.4 ft.)
32001.011	Flow chamber in stainless steel (316) with ¼" fittings. Supplied with EPDM O-rings.
32001.010	Flow chamber in stainless steel (316) with 6 mm fittings. Supplied with EPDM O-rings.

These are common kits. There are additional options available.

CA610 Fluoride Analyzer

Reliable, Full-time Fluoride Monitoring

The CA610 Fluoride Analyzer uses advanced ion-selective electrode (ISE) technology for continuous monitoring of fluoride concentration in drinking water effluent. Accuracy is ensured with precise control of temperature, ionic strength, and pH. Interferences that can bias measurements are virtually eliminated with this electrode.

Patented Electrode Design with Replaceable Tip

The proven ISE technology of the electrode is enhanced by a patented* design and manufacturing process. The lanthanum crystal at the tip of the probe is molded into a one-piece, monolithic tip that is threaded for easy removal. This prevents errors and premature failures. Electrodes are equipped with BNC connectors so that they can be independently checked with laboratory electrochemical meters.

Cost Effective Operation

The electrode of the CA610 analyzer is made with a molded fluoride crystal tip. The working life of the electrode is approximately one year. The specially designed tip of the electrode should be replaced every six months. Reagent consumption is very low and maintenance is simple.

Method of Analysis

The ISE system of the CA610 analyzer includes a reference pH electrode and a working electrode. Three reagents are used: Total Ionic Strength Adjustment Buffer (TISAB) solution and two fluoride standards. The TISAB is used for the following purposes. The Ionic strength adjustment lets the electrode respond to concentration instead of activity. The pH control ensures fluoride is present in its ionic state. The Weak complexes formed by certain metals (for example, aluminum) are broken up by TISAB and chelates potential interferents for accurate fluoride measurement.

Automatic Calibration

Two calibration standards are fully enclosed in the CA610 analyzer's case. The instrument performs a 2-point calibration at 0.5 and 5.0 mg/L fluoride at user-selected time intervals. Automatic calibration intervals can be set for 1 day to 1 month. Readings and calculations of the most recent calibration is stored in the instrument.

Technical Data*

Range	0.1 - 10.0 mg/L Fluoride
Accuracy	± 10 % or ±0.10 mg/L whichever is greater
Cycle Time	4.2 min
Sample Temperature	5 - 40 °C (41 - 104 °F)
Inlet Pressure	1 - 10 psig (use sample restriction device to reduce higher pressure samples)
Operating Temperature Range	5 - 40 °C (41 - 104 °F)
Operating Humidity	90% at 40 °C (104 °F)
Mounting	Wall mount
Power Requirements (Voltage)	100 - 115/230 V AC
Power Requirements (Hz)	50/60 Hz
Dimensions (H x W x D)	475 x 341 x 179 mm (18.7 x 13.4 x 7.1 in.)
Weight	11.3 kg (25 lbs)

Subject to change without notice.

Order Information

5740001 CA610 Fluoride Analyzer with Reagents

Accessories

The CA610 Fluoride Analyzer comes with one-month supply of reagents, maintenance kit, wall mounting kit, and manual. Power cord has to be ordered separately.

5448800 Power Cord, 120 VAC

4643600 Flow meter, 1.2 - 18 L/h, with ¼" OD tubing fittings

Replacement Items

5742100 Maintenance Kit

5744400 Pump Tubing Set

5744800 Electrode Kit

5528100 Electrode, pH reference

5745100 Electrode Tip, Fluoride Lanthanum Crystal, 2/pk

Reagents

One unit of each standard solution is sufficient for two months operation at a 24-hour calibration interval. One unit of Reagent 1 TISAB is sufficient for a 30-day operating period.

2816900 CA610 Fluoride Reagent Set (includes Reagent 1 TISAB, Standard 1 + 2)

2812811 CA610 Fluoride Reagent 1 (TISAB), 473 mL

2743811 CA610 Fluoride Standard 1, 0.5 mg/L, 473 mL

2797111 CA610 Fluoride Standard 2, 5.0 mg/L, 473 mL

4450126 Fluoride Half-Cell Electrode Filling Solution, 50 mL

Learn More

SP510 Hardness Monitor

Maximize your softener cycle time and minimize your regeneration cost.

The Hach SP510 Hardness Monitor is reliable, accurate, and virtually maintenance free. It can operate unattended for two months and still promptly and immediately signal hardness breakthrough to activate regeneration. Use it to make water softening systems more efficient and less costly.

Continuous hardness detection

The SP510 monitor detects hardness breakthrough when the capacity of a water softener is exhausted, immediately signaling the need for regeneration. Alarm points are 0.3, 1, 2, 5, 10, 20, 50, and 100 ppm (expressed as mg/L of $CaCO_3$) and are selected by choosing the appropriate model. Easy to read LED indicators show a simple "HARD" or "SOFT" sample status. You can also use SP510's built-in alarm relay to actuate an external annunciator.

Low maintenance requirements

The SP510 samples water every two minutes, operating automatically for up to 60 days. It is virtually maintenancefree, requiring only about 15 minutes every two months to replenish and standardise the reagents. Replace tubing in the pump system every six months.

Convenient, trouble-free operation

The SP510 monitor makes your water softening system more eBcient and less costly. It eliminates the guesswork so your softener is regenerated only when needed. Regeneration based on calculation or set times can be replaced with continuous monitoring and automatic control, lowering reagent consumption.

Rugged, lightweight, and self-contained

The SP510 case is made of ABS plastic which is lightweight, corrosion-resistant, and shatterproof. This sealed case is IP62-rated and has a hinged door for easy access to internal components.

Order Information

Instrument

5410003	SP510 Hardness Monitor with 0.3 mg/L trip point
5410001	SP510 Hardness Monitor with 1 mg/L trip point
5410002	SP510 Hardness Monitor with 2 mg/L trip point
5410005	SP510 Hardness Monitor with 5 mg/L trip point
5410010	SP510 Hardness Monitor with 10 mg/L trip point
5410020	SP510 Hardness Monitor with 20 mg/L trip point
5410050	SP510 Hardness Monitor with 50 mg/L trip point
5410099	SP510 Hardness Monitor with 100 mg/L trip point

The Hach SP510 Hardness Monitor includes: installation kit, maintenance kit (stirring bar, strainer, spare tube assemblies, shut-off valve) and two-month supply of reagents.
NOTE: When choosing the appropriate model/trip point, the alarm trip point selected should be 40 to 50% higher than the normal effluent hardness. Please contact Hach for assistance in ordering the SP510 Hardness Monitor that is appropriate for your application.

Accessories and Reagents are available on hach.com

Learn More

Technical Data*

Range	Hardness levels: 0.3, 1, 2, 5, 10, 20, 50, 100 ppm (expressed as mg/L $CaCO_3$)
Accuracy	±25% of set point value
Measurement Method	Colorimetric
Light Source	LED with peak wavelength of 610 nm
Cycle Time	1.9 minutes (60 Hz) or 2.3 minutes (50 Hz), selectable
Sample Flow Rate	50 - 500 mL/min
Sample Pressure	0.07 - 0.34 bar (0.10 bar is optimum) Sample conditioning: 0.10 - 5.17 bar
Reagent Consumption	500 mL each indicator and buffer every two months
Outputs	1 SPDT relay
Material Enclosures	ABS plastic, large plastic windows to view alarm and reagents level
Enclosure Rating	IP62
Mounting	Wall mount
Power Requirements	115/230 VAC; 50/60 Hz
Certifications	NRTL certified to UL and CSA standards, and CE approved
Dimensions (H x W x D)	419 x 318 x 178 mm (16.5 x 15.5 x 7.0 in.)
Weight	11.3 kg (25 lbs)

**Subject to change without notice.*

GSx440 Hydrogen Sulfide (H_2S) Monitoring Sensors

Water or air, measure H_2S where it matters—right at the source

Meet your needs with the new hydrogen sulfide sensor from Hach®. Whether in water or air, you will have the direct H_2S measurement you need to optimize your H_2S treatment process and proactively control H_2S before it causes issues.

Data and trends can easily be accessed via wireless or hard-wired connections, so that you will gain actionable insights into H_2S levels, protect valuable assets from corrosion, and avoid public nuisance from odor.

Designed for tough applications in water or air

With stationary and portable options, measure H_2S in water or air with this robust, fouling-resistant sensor – whether at the plant or sewers!

Actionable H_2S measurements helps you to stay ahead of your process

Early detection makes it easier than ever before to protect infrastructure, anticipate odor, and minimize buildup.

Reliable H_2S data ready for you when you need it, how you need it

Actionable data and trends from this sensor can be accessed by wireless or hard-wired connections. Using the cloud based Hach WebData solution, users will have access to accurate measurements in water or air with ease.

Continuous H_2S monitoring made simple

This corrosion-resistant stainless-steel instrument can be inserted in pipes or installed in a flow cell, making ultra-tight spaces easy for continuous H_2S monitoring. Cleaning is as simple as wiping the sensor head before each calibration, and calibration only takes five minutes.

Learn More

Technical Data*

Sensor		
Model	**GS1440**	**GS2440EX**
EExp / Hazardous Location	N/A	ATEX and UKCA: II 1G Ex ia IIC T4 Ga IECEx: Ex ia IIC T4 Ga North America: Class I Zone 0 AEx ia IIC T4 Ga Class I Division 1 Groups A-D T4 Ex ia IIC T4 Ga (-20 °C ≤ Ta ≤ +60 °C)
Certifications	CE, UKCA, FCC, ISED, RCM, KC	CE, UKCA, IECEx, FCC, ISED, RCM, cETLus
Parameter	Hydrogen Sulfide (H_2S)	
Range	Wastewater: 0 - 5 mg/L Air: 0 - 1000 ppm	
Accuracy	± 5% full scale (discrete measurement accuracy, 90-second purge of 1000 ± 20 ppm H_2S standard following single-point calibration)	
Response Time	< 30 seconds	
Calibration	1000 ppm ± 2% gas standard	
Calibration Interval	1 - 6 months, depending on use	
Material	Stainless Steel (316 L)	
Cleaning	Mechanical cleaning (wipe) of sensor face for in-water installations	
Mounting	Free hanging, in pipe or flow cell	
Storage Conditions	0 - 60 °C (32 - 140 °F), relative humidity 0 - 100%	
Operating Temperature Range	0 - 40 °C (32 - 104 °F)	
Power Options	4-20 mA loop power DC power (12-28 V) Battery powered with field transmitter H_2S EX	
Dimensions (D x L)	48.3 x 240 mm (1.9 x 9.4 in.)	
Weight	1.36 kg (3.00 lb)	
CAx440EX Field Transmitter		
Power Options	Batteries or DC power (9-28 VDC, min. 1 A), 4-20 mA loop power (24 VDC from a device, e.g. SCADA/PLC)	
Battery Life	3 months (estimated)	
Data Download/ Output	Cloud data 4-20 mA (24 V) for SCADA/PLC	
Parameter	Hydrogen Sulfide (mg/L or ppm), Temperature	
Interface	Status LED; On-off switch	
Material	Polypropylene	
Certifications	CE, UKCA	
EExp / Hazardous Location	ATEX/UKEX II 2(1) G Ex ib [ia IIC Ga] IIC T4 Gb ATEX/UKEX II (1) G [Ex ia Ga] IIC (with external connections)	
Dimensions (H x W x D)	179 x 215 x 107 mm (7.04 x 8.46 x 4.21 in.)	
Weight	0.99 kg (2.18 lb)	

**Subject to change without notice.*

Order Information

Sensors

LXV449.99.10000	GS1440 Sensor H_2S
LXV449.99.20000	GS2440EX Sensor H_2S EX

Portable Transmitters and Power Sources

LXV449.97.01010	CAx440EX Field Transmitter H_2S EX, Wireless 4G (US & CA)

Consumables and Spare Parts

LXZ449.99.00003	Batteries for CA440EX Field Transmitter H_2S EX, pk/8
LXZ449.99.00012	Installation spare parts kit, GS1440/GS2440EX

Accessories

LXV449.99.02000	CDx440sc Gateway
LXZ449.99.00009	CAx440EX Field Transmitter H_2S EX External Antenna
LXZ449.99.00010	Flush-front sensor cap for submerged sensors
LXZ449.99.00011	Air flow cell, GS1440/GS2440EX
LXZ449.99.00013	4-20 mA Barrier with power supply, GS2440EX
LXZ449.99.00018	CAx440EX Field Transmitter H_2S EX DIN rail and wall bracket (US & CA)

Cellular Data Subscriptions

LXZ449.99.D0001	CAx440EX Field Transmitter Data License, 1 year
LXZ449.99.D0002	CAx440EX Field Transmitter Data License, 2 years

Sensor Cables

101335	Cable pull-through tool for cable guard
100934-05	RS232 cable, 5 m (16.4 ft)
100934-10	RS232 cable, 10 m (32.8 ft)
100934-30	RS232 cable, 30 m (98.4 ft)
100935-05	Power cable, 5 m (16.4 ft)
100935-10	Power cable, 10 m (32.8 ft)
100935-30	Power cable, 30 m (98.4 ft)
LXZ449.99.02G05	Cable Set, RS232 and Power, 5 m (16.4 ft), gas measurement
LXZ449.99.02G10	Cable Set, RS232 and Power, 10 m (32.8 ft), gas measurement
LXZ449.99.02G30	Cable Set, RS232 and Power, 30 m (98.4 ft), gas measurement
LXZ449.99.02L05	Cable Set, RS232, Power and cable guard, 5 m (16.4 ft), liquid measurement
LXZ449.99.02L10	Cable Set, RS232, Power and cable guard, 10 m (32.8 ft), liquid measurement
LXZ449.99.02L30	Cable Set, RS232, Power and cable guard, 30 m (98.4 ft), liquid measurement

Part numbers may vary by country.

Orbisphere 31XXX TC Sensors

Selective gas measurement for CO_2, H_2, or N_2

The Orbisphere patented Thermal Conductivity sensors have been developed to give continuous Carbon Dioxide (CO_2), Hydrogen (H_2), or Nitrogen (N_2) measurements in gas phase or dissolved in a liquid. The measuring technique is a combination of a gas diffusion membrane and a solid-state gas thermal conductivity detector.

A micro volume enclosed between a semi-permeable membrane and a thermal conductivity detector is periodically flushed with a purge gas. After each purge, the gas to be measured diffuses from the sample through the membrane, changing the thermal conductivity of the gas surrounding the detector. A change in thermal conductivity modifies the detector resistivity. This is measured, together with temperature, to calculate the gas concentration.

Benefits:

- *No sample preparation needed, gas concentration is measured directly in the sample.*
- *Robust construction to handle harsh plant conditions and high sample pressures.*
- *High temperature resistance to withstand cleaning in place (CIP).*
- *Annual maintenance and traceable calibration, quick and easy to carry out for a minimum downtime.*

Technical Data Standard (TC) Sensors*

	314XX	312XX	312XX	315XX
Parameter	Carbon Dioxide (CO_2)	Hydrogen (H_2)	Hydrogen (H_2)	Nitrogen (N_2)
Application	In-line beverage	Waste gas, off gas, and reactor coolant	Reactor coolant	In-line beverage, semi-conductors industry
Sample Temperature	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)	0 - 50 °C (32 - 122 °F)
Sample Pressure	0 - 20 bar	0 - 20 bar	0 - 20 bar	0 - 20 bar
Sample Flow Rate	100 mL/min	220 mL/min	200 mL/min	300 mL/min
Linear Flow Rate	50 cm/s	N/A	N/A	150 cm/s
Range at 25 °C	0 - 10 bar, or 0 - 15 g/kg, or 0 - 7 V/V	0 - 2 ppm, or 0 - 25 cc/kg, or 0 - 1.5 bar	0 - 10 ppm, or 0 - 120 cc/kg, or 0 - 6 bar	0 - 20 bar, or 0 - 350 ppm, or 0 - 300 mL/L
Accuracy[1)]	±1% of reading	±1% of reading	±1% of reading	±2% of reading
Cycle Time	22 s	17 s	17 s	22 s
Recommended Purge Gas	Pure N_2, or air	Pure N_2, or air	Pure CO_2	Pure CO_2, or Argon
Recommended Calibration Gas	Pure CO_2	Pure H_2	Pure H_2	Pure N_2
Signal Drift (per year)	<1% of reading	<1% of reading	<1% of reading	<2% of reading

[1)]Accuracy for sample temperature between 20-50 °C, within ±5 °C of calibration temperature. Values may vary depending on the conditions of measurement and each sensor's limit of detection.

**Subject to change without notice.*

Order Information

Prod. No.	Parameter	Sample Pressure	Purge Gas
31490TC	Carbon Dioxide (CO_2)	0 - 20 bar	N_2
31290TC	Hydrogen (H_2)	0 - 20 bar	N_2
31292TC	Hydrogen (H_2)	0 - 20 bar	CO_2
31290HP	Hydrogen (H_2)	0 - 170 bar	N_2
31292HP	Hydrogen (H_2)	0 - 170 bar	CO_2
31590TC	Nitrogen (N_2)	0 - 20 bar	CO_2
31593TC	Nitrogen (N_2)	0 - 20 bar	Argon
31593HP	Nitrogen (N_2)	0 - 170 bar	Argon
31594HP	Nitrogen (N_2)	0 - 170 bar	He

Learn More

NT3100sc UV Nitrate Sensor

Proven nitrate measurements made more accessible

Improve your experience in nitrate measurement with Hach's new NT3100sc sensor. Backed by a legacy of reagent-free UV absorbance technology expertise, Hach's NT3100sc UV Nitrate Sensor is equipped to meet your unique application needs.

Whether measuring nitrate in municipal sewage treatment plants, surface water, untreated water or treated drinking water, you'll have the choice of 3 different path lengths to fit your measurement ranges and turbidity compensation needs.

No time for downtime

Make your best process decisions to ensure water quality when you have reliable and real-time data. The Hach® NT3100sc uses internal smart sensors to proactively alert you of potential measurement issues so you have confidence in your process health. We'll help you reduce time spent on troubleshooting, validations, and avoid unplanned equipment downtime.

Optimize your process with smart decisions

The NT3100sc UV nitrate sensor features improved accuracy and low-level detection to help you optimize your plant performance and ensure regulatory compliance now and into the future. Hach's proven wiper technology keeps your system clean and our enhanced one-step, tool-free, wiper replacement reduces user maintenance and improves your experience.

Hach service and support - there when you need us

For nearly a century, Hach has been a leader in water quality analysis. Backed by a legacy of UV absorbance technology expertise, our Technical Support, Field Service, and Central Service Teams work together to help you maximize instrument uptime, ensure data integrity, maintain operational stability, and reduce compliance risk.

Order Information

Sensors

LXV448.99.11001	NT3100sc UV Nitrate Sensor, 1 mm path length
LXV448.99.21001	NT3100sc UV Nitrate Sensor, 2 mm path length
LXV448.99.51001	NT3100sc UV Nitrate Sensor, 5 mm path length

A Hach SC controller is required to operate the NT3100sc sensor, controller must be purchased separately.

Accessories and Consumables

LZY714.99.53120	Stainless Steel Pole Mounting Kit for Sensors, 10 cm
LZX869	Flow through unit, 1/2 mm
LZX867	Flow through unit, 5 mm
LXZ448.99.00002	Wiper blade, 1 mm, pk/5
LXZ448.99.00003	Wiper blade, 2 mm, pk/5
LXZ448.99.00033	Wiper blade, 5 mm, pk/5
LCW943	Nitrate standard, 40 mg/L NO_3 (9.04 mg/L NO_3-N), 500 mL
LCW825	Nitrate standard, 50 mg/L NO_3 (11.3 mg/L NO_3-N), 500 mL
LCW944	Nitrate standard, 75 mg/L NO_3 (16.9 mg/L NO_3-N), 500 mL
LCW945	Nitrate standard, 150 mg/L NO_3 (33.9 mg/L NO_3-N), 500 mL

Additional Accessories and Consumables are available.
Please visit hach.com or contact Hach for more information.

Learn More

N-ISE sc Probe with RFID Technology

Single ISE probe for the on-line measurement of nitrate provides trending information with minimal maintenance at an affordable price.

Order Information

N-ISE sc Sensors

LXV440.99.20002	N-ISE sc Low cost ISE Nitrate probe (immersion) with RFID, 10 m cable
LXV440.99.20012	N-ISE sc Low cost ISE Nitrate probe (immersion) without RFID, 10 m cable

Please note that a Hach SC controller is required to operate the N-ISE sc sensor, controller is sold separately.

Mounting Hardware

6184900	Rail Mount Kit
LZX914.99.12400	Chain Mount Kit (PVC) for ISE sensors

Cartridge

LZY694	Cartrical Sensor Cartridge for AN-ISE sc/A-ISE sc/N-ISE sc Sensors

Air Cleaning Systems (Optional)

LZY706	Cleaning Unit for AN-ISE sc/A-ISE sc/N-ISE sc Sensors
6860000	High Output Air Blast Cleaning System, 115 VAC
6860100	High Output Air Blast Cleaning System, 230 Vac

Part numbers may vary by country.

Cost-Effective Trending Information

The N-ISE sc Sensor utilizes ion selective electrode (ISE) technology to provide your plant with high level trending information while saving money by eliminating the need for reagents and sample preparation.

Minimal Maintenance with Simple Cartridge Replacement

The sensor works with a Cartrical cartridge that comes factory calibrated, so little maintenance is necessary. Cartridge replacement is simple: unscrew the old cartridge, plug in the new one, and the sensor is ready for measurement. Using RFID* technology, the factory calibration is automatically identified after replacing the cartridge.

Simple, Accurate Calibration

Easy to perform, fail-safe calibration corrections compensate for naturally occurring calibration drift in ISE instruments. An advanced menu structure allows you to perform corrections without manual entry of values via Ethernet, SD card or Bluetooth.

**RFID version available only in US, EU, Canada, Australia, New Zealand, Croatia, Cyprus and Turkey.*

Learn More

Nitrate Sensor Quick Reference Guide

Product Type	NT3100sc Sensor			N-ISE sc Sensor	AN-ISE sc Combination Sensor
Parameter	Nitrate			Nitrate	Ammonia, Nitrate
Measurement Method	UV Absorption, sludge compensated, 2-channel beam path			Potentiometric ion-selective electrodes for nitrate and chloride, reference system and temperature sensor	Potentiometric ion-selective electrodes for ammonium, nitrate and temperature sensor
RFID	--			Yes	Yes
Application	Wastewater Drinking Water			Wastewater	Wastewater
Path Length	1 mm	2 mm	5 mm	--	--
Range	0.1 - 90 mg/L NO_3-N	0.05 - 50 mg/L NO_3-N	0.02 - 25 mg/L NO_3-N	0 - 1000 mg/L NO_3-N	0 - 1000 mg/L NH_4-N 0 - 1000 mg/L NO_3-N 0 - 1000 mg/L K^+ 0 - 1000 mg/L Cl^-
Lower Limit of Detection (LOD)	0.1 mg/L NO_3-N	0.05 mg/L NO_3-N	0.02 mg/L NO_3-N	0.2 mg/L NO_3-N	0.2 mg/L NH_4–N and NO_3-N
Accuracy	± 5% of reading ± 0.1 mg/L NO_3-N	± 4% of reading ± 0.1 mg/L NO_3-N from 0.05 - 22 mg/L, ± 5% of reading ± 0.1 mg/L NO_3-N from 22 - 50 mg/L	± 3% of reading ± 0.1 mg/L NO_3-N from 0.02 - 13 mg/L, ± 5% of reading ± 0.1 mg/L NO_3-N from 13 - 25 mg/L	5% of measured value +0.2 mg/L (with standard solutions) NO_3-N	5% of measured value +0.2 mg/L (with standard solutions) NH_4-N and NO_3-N
Sample Pressure	0.5 bar			0.3 bar	
Sample Temperature	2 - 40 °C (36 - 100 °F)			2 - 40 °C (35.6 - 104 °F)	
Cable Length	10 m (33 ft) Extension cables are available: 5, 10, 15, 20, 30 and 50 m. The maximum cable length is 60 m (190 ft).			Standard: 10 m (33.8 ft) Extension cables are available as an option in the following lengths: 5, 10, 15, 20, 30, 50 m (16.4, 33.8, 49.2, 65.6, 98.4, 164 ft)	Standard: 10 m (33.8 ft) Extension cables are available as an option in the following lengths: 5, 10, 15, 20, 30, 50 m (16.4, 33.8, 49.2, 65.6, 98.4, 164 ft)
Dimensions (D x L)	70 x 402 mm (3 x 15.8 inches) approximately			84.5 mm x 320 mm (3.3 x 12.6 inches)	
Weight	4.8 kg (10.58 lb) with 10 m cable			2.38 kg (5.25 lb)	
Controller Compatibility	SC4500, SC1000, SC200				

Please note that a Hach SC controller is required for operation, controller must be purchased separately.

**Subject to change without notice.*

FP360sc Oil-in-Water Continuous Online Monitoring Sensor

Continuous oil-in-water monitoring for the right price.

The FP 360 sc is the only online oil-in-water instrument that delivers the highest sensitivity and selectivity with the lowest total cost of ownership.

The Right Technology for the Right Price

Due to its unique combination of submersible probe design and UV fluorescence sensing technology, the FP360sc delivers the best technology to detect oil in water and is priced below competitive UV fluorescent instruments.

Minimal Maintenance

The FP360sc has no tubes, pumps, or valves that can foul or require constant maintenance interventions. Maintenance is limited to occasional wiping of the sensor's measurement window, calibration once every two years, and Xenon lamp replacement every four years.

Reduced Laboratory Testing

While laboratory testing is the ultimate method of measuring oil in water, it is a long and complex process that requires special equipment and trained lab personnel. The FP360sc provides a cost-effective, continuous online monitoring solution to maintain process control and avoid oil contamination with minimal laboratory testing.

High Sensitivity and Selectivity

The FP360sc can detect and measure polycyclic aromatic hydrocarbons (PAHs) from 1.2 ppb to up to 5000 ppb (µg/L). This is approximately equivalent to a concentration of mineral oil between 0.1 to 150 ppm (mg/L). Furthermore, the FP360sc method of detection makes it impervious to interferences by turbid water or natural organic and biological matter that impact online light scattering, UV absorbance, and VIS fluorescence instruments.

Learn More

Technical Data*

Measurement Method	UV fluorescence method for polycyclic aromatic hydrocarbons (PAH)
Light Source	Miniature xenon flashlamp with interference filter
Detector	UV photodiode with interference filter; Compensation of daylight and flashlamp intensity fluctuations
Excitation	Wavelength 254 nm
Wavelength	Measurement: 360 nm
Range	*Low Range:* 0 - 50 ppb (µg/L) and 0 - 500 ppb (µg/L) PAH** 0.1 - 1.5 ppm (mg/L) and 0.1 - 15 ppm (mg/L) oil** *High Range:* 0 - 500 ppb (µg/L) and 0 - 5,000 ppb (µg/L) PAH** 0.1 - 15 ppm (mg/L) and 0.1 - 150 ppm (mg/L) oil**
Resolution	0.1 ppb (µg/L) PAH in the lowest measuring range
Reproducibility	2.5% of measured value at constant temperature (PAH)
Response Time T90	10 s
Calibration	Factory calibrated with UV fluorescence standard or process calibration with results of a grab sample analysis.
pH Value(s)	≥ 4
Sample Temperature	1 - 40 °C (33.8 - 104 °F)
Pressure Range	Max. 30 bar (measurement probe)
Material	Housing: stainless steel 316Ti (1.4571) or titanium
Dimensions	68 x 306 mm (D x L; without connector and suspension pin)
Weight	Stainless steel: 2.8 kg (6.17 lb) Titanium: 1.8 kg (3.97 lb)

**Subject to change without notice.*
***With calibration standard.*

Order Information

Sensors

LXV441.99.11102	FP360sc Oil-in-Water Sensor, 500 ppb, Stainless Steel Body, 10 m (32.8 ft) Cable, without Cleaning Unit
LXV441.99.11202	FP360sc Oil-in-Water Sensor, 500 ppb, Stainless Steel Body, 10 m (32.8 ft) Cable, with Cleaning Unit
LXV441.99.11302	FP360sc Oil-in-Water Sensor, 500 ppb, Stainless Steel Body, 1.5 m (5 ft) cable, without Cleaning Unit
LXV441.99.12102	FP360sc Oil-in-Water Sensor, 500 ppb, Titanium Body, 10 m (32.8 ft) Cable, without Cleaning Unit
LXV441.99.12202	FP360sc Oil-in-Water Sensor, 500 ppb, Titanium Body, 10 m (32.8 ft) Cable, with Cleaning Unit
LXV441.99.12302	FP360sc Oil-in-Water Sensor, 500 ppb, Titanium Body, 1.5 m (5 ft) Cable, without Cleaning Unit
LXV441.99.21102	FP360sc Oil-in-Water Sensor, 5,000 ppb, Stainless Steel Body, 10 m (32.8 ft) Cable, without Cleaning Unit
LXV441.99.21202	FP360sc Oil-in-Water Sensor, 5,000 ppb, Stainless Steel Body, 10 m (32.8 ft) Cable, with Cleaning Unit
LXV441.99.21302	FP360sc Oil-in-Water Sensor, 5,000 ppb, Stainless Steel Body, 1.5 m (5 ft) Cable, without Cleaning Unit
LXV441.99.22102	FP360sc Oil-in-Water Sensor, 5,000 ppb, Titanium Body, 10 m (32.8 ft) Cable, without Cleaning Unit
LXV441.99.22202	FP360sc Oil-in-Water Sensor, 5,000 ppb, Titanium Body, 10 m (32.8 ft) Cable, with Cleaning Unit
LXV441.99.22302	FP360sc Oil-in-Water Sensor, 5,000 ppb, Titanium Body, 1.5 m (5 ft) Cable, without Cleaning Unit

A digital Hach SC controller is required to operate the FP360sc sensor, controller is sold separately.

Accessories

LZX914.99.11110	Stainless steel chain mounting set for FP360sc
LZY669	Flow cell with mounting panel for FP360sc
LZY623	Extension cable FP360sc, 1.5 m (5 ft)
LZY624	Extension cable FP360sc, 10 m (32.8 ft)

Part numbers may vary by country.

UVAS plus sc Sensor

Continuously monitor plant treatment processes of organic loads.

Learn More

Continuous, Automatic Early Warning Systems

Use the Hach UVAS plus sc UV Absorbance/Transmittance Sensor to continuously protect plant treatment processes from high influent organic loads. Operators can use the continuous readings of UV absorbance or transmission to watch for sudden changes in organic load that would require alternate treatment procedures.

Control Activated Sludge Processes

Activated sludge processes require precise balancing of organic load, aeration, and nutrients. Continuous trending of the organics in the system with the UVAS plus sc sensor can help operators know how to balance other factors resulting in cost and time savings.

Self-cleaning Wiper System

With the UVAS plus sc sensor submerged in the sample stream, the detector windows are automatically cleaned by a built-in wiper that eliminates surface films or particles that can diminish accuracy.

Monitor Efficiency of UV Disinfection Process

UV light transmittance (UVT) is critical in the delivery of dose in a UV reactor. The delivered dose is determined by, among other things, the UVT of the source water, the intensity of the UV lamps, and the flow rate of the water source. UVT can be affected by many factors, from a simple change in the seasons to storm events. Potential changes in UVT should be considered in a UV disinfection system for optimized dose delivery. Hach's UVAS plus sc is designed to provide continuous UVT measurement of pre-disinfected source water. Operational costs related to sampling for UVT may be reduced with continuous online measurement. Data can immediately be incorporated into the operation in real time.

Self Diagnostics and Easy Maintenance

Diagnostic routines built into the UVAS plus sc sensor reduce the need for extensive calibration and maintenance. Only semi-yearly inspection and replacement of the wiper and seals is needed.

Order Information

The following sensors include the Hach SC4500 Multi-parameter Controller.

LXV525.97KTO027	1 mm UVAS plus sc sensor with SC4500 Controller
LXV525.97KTO030	2 mm UVAS plus sc sensor with SC4500 Controller
LXV525.97KTO021	5 mm UVAS plus sc sensor with SC4500 Controller
LXV525.97KTO017	50 mm UVAS plus sc sensor with SC4500 Controller

UVAS plus sc Sensor

LXV418.99.10002	1 mm UVAS plus sc Sensor
LXV418.99.20002	2 mm UVAS plus sc Sensor
LXV418.99.50002	5 mm UVAS plus sc Sensor
LXV418.99.90002	50 mm UVAS plus sc Sensor

A Hach SC controller is required to operate the UVAS plus sc sensor, controller must be purchased separately.

Bypass Panel

LZX869	Flow through unit, 1/2 mm
LZX867	Flow through unit, 5 mm
LZX868	Bypass Panel for 50 mm sensor
LZX450	Sedimenter for Sensor

Mounting Hardware

LZY714.99.53120	Stainless Steel Pole Mounting Kit for Sensors, 10 cm
LZY714.99.52120	Stainless Steel Pole Mounting Kit for Sensors, 24 cm

Accessories

LZX148	Spare wiper blades for 1 mm sc sensor, pk/5
LZX012	Spare wiper blades for 2 mm sc sensor, pk/5
LZX117	Spare wiper blades for 5 mm Nitratax, pk/5
LZX119	Spare wiper blades for 50 mm UVAS sc, pk/5

Part numbers may vary by country.

Technical Data*

	Principal of Operation	
Measurement Method	UV absorption measurement (unique 2-beam technique) SAC254 in accordance with DIN 38404 C3	
Path Length	1, 2, 5 and 50 mm	2, 5 and 50 mm
Range	Choice of: 0.01 - 60 m^{-1} at 50 mm 0.1 - 600 m^{-1} at 5 mm 0 - 1500 m^{-1} at 2 mm 2 - 3000 m^{-1} at 1 mm	Choice of: 0.01 - 60 m^{-1} at 50 mm 0.1 - 600 m^{-1} at 5 mm 0 - 1500 m^{-1} at 2 mm
Reference Wavelength	550 nm	
Measuring Interval	≥ 1 min	
Operating Temperature Range	2 - 40 °C (35.6 - 104 °F)	
pH Range	4.5 - 9 pH	
Pressure Range	≤ 0.5 bar	
Sample Flow Rate	N/A	Bypass: 0.5 L/h minimum
Connections	N/A	Bypass: 4 mm ID / 6 mm OD hose
Cable Length	10 m fixed cable at sensor	
Control	Control Function: PID, time control, 2-point controller (with SC controller)	
Service Interval	6 months	
User Maintenance	1 h/month, typical	
Controller Compatibility	SC4500, SC1000, SC200	
Dimensions	70 x 333 mm (2.75 x 13.11 in.) approx.	
Weight	3.6 kg (7.94 lb) approx.	

**Subject to change without notice.*

Orbisphere C1100 Ozone Sensor

Time and Cost Saving Ozone Sensor

Eliminate Product Loss

Withstanding pressure up to 40 bar, the Hach Orbisphere C1100 is the only ozone sensor in the industry that can be placed directly in the process pipe. This eliminates the need to send product to drain and amounts to a typical savings of 380 gallons per day.

Maintenance in Less Than Five Minutes

Traditional cleaning processes can take more than thirty minutes to complete, but with the C1100 patented cartridge system, both the set-up and the initial sensor replacement procedure can be performed in less than five minutes without the need for a trained technician.

True Zero Reading: Drift-free and Accurate Measurements

The unique platinum guard ring technology prevents false signals arising from the electrolyte. Operators can be confident of measurements and alarm settings knowing the sensor does not require a separate "zero" calibration.

Fast, Easy, and Reliable Calibration

The C1100 ozone sensor has a unique air calibration feature that offers operators a quick and easy method to calibrate without requiring an external standard. Air calibration provides an accuracy of ±5% (achieving better than ±1% against an ozone standard of known concentration). The Orbisphere C1100 is the only sensor that provides such certified high accuracy!

Extended Life Expectancy

The robust stainless steel design makes the C1100 sensor ideal for the most demanding applications, extending the life expectancy of the sensor from 5 to 10 years.

Technical Data*

Range	0 ppb - 50 ppm O_3
Accuracy	± 0.4 ppb or ±5%, whichever is the greater
Pressure Range	Stainless steel: up to 40 bar Titanium: up to 100 bar
Lower Limit of Detection (LOD)	0.6 ppb
Response Time	30 s
Temperature Range	Working operating range: -5 - 45 °C (23 - 113 °F) Maximum operating range: -5 - 100 °C (23 - 212 °F)
Membrane	2956A-C
Flow Rate	350 mL/min (typical)

**Subject to change without notice.*

Order Information

C1100-T00	Electrochemical ozone sensor, titanium version, maximum pressure 100 bar, with Smart capability
C1100-S00	Electrochemical ozone sensor, stainless steel version, maximum pressure 40 bar, with Smart capability
2956A-CT	Recharge kit of 4 pre-filled cartridges with pre-mounted 2956A membranes for C1100 ozone sensors with 33051-xT cap only.

Learn More

Differential pH and ORP Sensors

The smart choice for accurate and reliable online process pH/ORP measurement

Hach Digital pHD sc sensors are available in convertible (PEEK or PPS), insertion, and sanitary body styles. Three electrodes are used in these sensors to increase measurement accuracy and eliminate sensor ground loops.

Exceptional Process Sensor Performance with the Differential Electrode pHD Measurement Technique

This field-proven technique uses three electrodes instead of the two normally used in conventional pH/ORP sensors. Process and reference electrodes measure the pH/ORP differentially with respect to a third ground electrode. The end result is unsurpassed measurement accuracy, reduced reference junction potential, and elimination of sensor ground loops. These process pH/ORP sensors provide greater reliability, resulting in less downtime and maintenance.

Lower Maintenance Needs with the Double Junction Salt Bridge

The double junction salt bridge creates a barrier to contamination which minimizes the dilution of the internal standard cell solution. The result is lower maintenance needs and a longer time period between calibrations.

Extended Working Life with the Replaceable Salt Bridge/Protector

The unique, replaceable salt bridge holds an extraordinary volume of buffer to extend the working life of the sensor by protecting the reference electrode from harsh process conditions. The salt bridge simply threads onto the end of the sensor if replacement is needed.

Reliability with Built-in Encapsulated Preamp

Encapsulated construction protects the sensor's built-in preamp from moisture and humidity, ensuring reliable sensor operation. The preamp in the pHD analog sensor produces a strong signal, enabling the sensor to be located up to 1000 m (3280 ft.) from the analyzer.

Innovative Technology

The former GLI, now a Hach Company brand, invented the Differential Electrode Technique for pH measurement in 1970. The pHD sensor series takes this field-proven technology to a new level.

Versatile Mounting Styles

Sensors are available in four mounting styles - convertible, insertion, immersion, and sanitary

Differential Sensor Warranty

Hach Company offers the best sensor warranty in the industry on its Differential Sensors. We will replace any Differential Sensor that fails due to defects in materials or workmanship within one year from the date of shipment-and up to 30 months on a prorated basis for any failure.

Learn More

Technical Data*

Compliance	For hazardous and maritime applications, CE	For non-hazardous and non-maritime applications only
Operating Temperature Range	-5 - 70 °C (23 - 158 °F) pHD and ORP 0 - 50 °C (32 - 122 °F) SS pHD Before initial pH calibration, calibrate the temperature measurement when the sensor is in water or buffer which is at approximately the same temperature as the pH buffers (matches current recommendation)	-5 - 70 °C (23 - 158 °F) pHD and ORP 0 - 50 °C (32 - 122 °F) SS pHD Before initial pH calibration, calibrate the temperature measurement when the sensor is in water or buffer which is at approximately the same temperature as the pH buffers (matches current recommendation) Please Note: When the sensor is placed into the application sample, if that sample is more than 10 °C (18 °F) different than the previous temperature/ pH calibration, then it is recommended to recalibrate the temperature while the sensor is in the sample to maintain the ±0.5 °C (±0.9 °F) temperature accuracy specification.
Range	-2.0 to 14.0 pH -1500 to +1500 mV ORP	
Sensitivity	± 0.01 pH ± 0.5 mV	
Flow Rate	3 m (10 ft.) per second, maximum	
Pressure Range	Digital: 6.9 bar at 70 °C (100 psi at 158 °F)	
Temperature Sensor	NTC 300 Ω thermistor for automatic temperature compensation and analyzer temperature readout	
Transmission Distance	100 m (328 ft.), maximum	
Temperature Accuracy	± 0.5 °C (± 0.9 °F)	
Sensor Cable	4 conductor cable with one shield and polyurethane jacket; rated to 105 °C (221 °F); 10 m (33 ft.) standard length	
Wetted Materials	PEEK or PPS, salt bridge of matching material with PVDF junction, glass process electrode, titanium ground electrode, and FKM/FPM O-ring seals (pH sensor with optional HF-resistant glass process electrode has 316 stainless steel ground electrode, and perfluoroelastomer wetted O-rings; consult factory for other available wetted O-ring materials)	

**Subject to change without notice.*

Some industrial applications require accurate measurement and control below 2 or above 12 pH. In these special cases, please contact Hach Technical Support for further details.

For best ORP measuring results in solutions containing zinc, cyanide, cadmium or nickel, Hach recommends using the pHD sc ORP sensor equipped with an optional gold electrode.

Order Information

pHD sc Digital Differential pH Sensors

DPD1P1	Digital pH Sensor, PEEK, Convertible, General Purpose
DPD1R1	Digital pH Sensor, PPS, Convertible, General Purpose
DPD2P1	Digital pH Sensor, PEEK, Insertion, General Purpose

pHD Analog pH Sensors

PD1P1	Analog pH Sensor, PEEK, Convertible, General Purpose
PD1R1	Analog pH Sensor, PPS, Convertible, General Purpose
PD2P1	Analog pH Sensor, PEEK, Insertion, General Purpose

pHD sc Digital Differential ORP Sensors

DRD1P5	Digital ORP Sensor, PEEK, Convertible, Platinum
DRD1R5	Digital ORP Sensor, PPS, Convertible, Platinum

pHD Analog ORP Sensors

RD1R5	Analog ORP Sensor, PPS, Convertible, Platinum
RD1P5	Analog ORP Sensor, PEEK, Convertible, Platinum
RD2P5	Analog ORP Sensor, PEEK, Insertion, Platinum
RD1P5A50	Analog ORP Sensor, PEEK, Convertible, Platinum
RD1P6	Analog ORP Sensor, PEEK, Convertible, Gold

Accessories

SB-P1SV	PEEK sensor and salt bridge body, PVDF outer junction
SB-R1SV	PPS sensor and salt bridge body, PVDF outer junction
25M2A1001-115	200 mV reference sol. 500 mL (1 pt)

Additional sensors and accessories are available, please visit hach.com or contact Hach. Part numbers may vary by country.

Encapsulated Differential pH and ORP Sensors

Differential Electrode Measurement Technique

This field-proven technique uses three electrodes instead of the two normally used in conventional pH sensors. Process and reference electrodes measure the pH differentially with respect to a third ground electrode. The end result is unsurpassed measurement accuracy, reduced reference junction potential, and elimination of sensor ground loops. These sensors provide greater reliability, resulting in less downtime and maintenance.

Complete Encapsulation

Complete encapsulated construction protects the sensor's built-in electronics from moisture and humidity problems, extending the working life of the sensor.

Encapsulated (LCP) Sensor

- Low drift sensor configuration for reliable readings
- Stable reference method for superior stability of the reference electrode

Longer Calibration Stability

- Larger surface area electrode
- Larger volume buffer capacity

Improved Measurement Accuracy

With the reduction in common interferences. Ground loop, electrical noise in readings.

Learn More

Low Maintenance and Long Sensor Life

Rebuildable sensor and variety of electrodes/ materials available for multiple applications.

Technical Data*

	Cleaning Systems for Encapsulated Differential Sensors	
Wetted Materials	**LCP Sensor:** LCP (liquid crystal polymer) body and salt bridge with PVDF (or ceramic) junction, glass process electrode, titanium ground electrode, and FKM/FPM O-ring process seals. Union-mount style sensor also has LCP adapter. pH sensor with optional antimony process electrode has stainless steel ground electrode. **PPS Sensor:** PPS body and salt bridge with PVDF (or ceramic) junction, glass process electrode, titanium ground electrode, and FKM/FPM O-ring process seals. Union-mount style sensor also has PPS adapter. pH sensor with optional antimony process electrode has stainless steel ground electrode.	**LCP Sensor:** LCP (liquid crystal polymer) body and salt bridge with PVDF (or ceramic) junction, glass and platinum (or glass and gold) process electrode, titanium ground electrode, and RTV sealant. Union-mount style sensor also has LCP adapter and FKM/FPM O-ring process seals. **PPS Sensor:** PPS body and salt bridge with PVDF (or ceramic) junction, glass and platinum (or glass and gold) process electrode, titanium ground electrode, and RTV sealant. Union-mount style sensor also has PPS adapter and FKM/FPM O-ring process seals.
Range	LCP and PPS Sensors 0 - 14 pH (See Note 1.)	-2000 - +2000 mV (See Note 2.)
Sensitivity	Less than 0.005 pH	Less than 0.5 mV
Drift	0.03 pH per 24 hours, non-cumulative	2 mV per 24 hours, non-cumulative
Output Span	Only with 2-wire transmitter: 0.95 mA per pH unit	Only with 2-wire transmitter: 16 mA per 1000 mV
Outputs	Offset (only with 2-wire transmitter): 12 mA occurs at 7.0 pH, ±0.88 pH (See Note 3.)	Offset (only with 2-wire transmitter): -500 to 500 mV range: 12 mA occurs at 0 mV, ±40 mV 0 to 1000 mV range: 12 mA occurs at 500 mV, ±40 mV
Pressure Range	**Temperature Limit:** Sensor Only (no hardware): LCP Sensor -5 to 95 °C (23 to 203 °F) PPS Sensor -5 to 95 °C (23 to 203 °F) *NOTE: An LCP or PPS sensor that is mounted in a plastic flow-through tee has a higher pressure rating at maximum temperature than when it is mounted in a union tee. The temperature rating is increased to 95 °C (203 °F) at 100 psig when the sensor is mounted in a stainless steel flow-through or union tee, or a stainless steel cross.*	
Flow Rate	3 m/s (10 ft./s) maximum	
Load	At 20 mA (only with 2-wire transmitter): 450 ohms	
Transmission Distance	Sensor with Preamplifier: 914 m (3000 ft.) Sensor with 2-wire Transmitter: Limited only by wire resistance and power supply voltage	
Sensor Cable	Sensor with Preamplifier: 5 conductor (plus shield); 3 m (10 ft.) long Sensor with 2-wire Transmitter: 2 conductor (twisted pair); 3 m (10 ft.) long	

**Subject to change without notice.*

1. Most pH applications fall in the 2.5 to 12.5 pH range. General purpose pH glass electrodes perform well in this range. For pH applications below 4 or above 10 pH, GLI recommends using an LCP-bodied pH sensor. Some industrial applications require accurate measurement and control below 2 or above 12 pH. In these cases, please contact Hach for further details. Repeatability and speed of response of a pH sensor with an optional antimony process electrode is not as good as a sensor with a glass process electrode. Antimony electrodes are only linear between 3 and 8 pH, and should only be ordered when process conditions, such as the presence of hydrofluoric acid, dictate their use.

2. For ORP applications where zinc, cyanide, cadmium, or nickel are present, specify the optional gold electrode instead of the standard platinum electrode.

3. A pH sensor with a built-in two-wire transmitter provides a non-isolated and uncalibrated 4-20 mA output. The indicating instrument of the measuring system must be able to provide 24 VDC to power this sensor, and have adjustment means to calibrate for zero offset and span.

Encapsulated Differential pH and ORP Sensors Configurator

Product Number	X	X	X	X
Type of Measurement				
ORP, 5-wire (with built-in preamplifier)	20			
ORP, 2-wire (with built-in two-wire transmitter providing 4-20 mA output)	24			
pH, 5-wire (with built-in preamplifier)	60			
pH, 2-wire (with built-in two-wire transmitter providing 4-20 mA output)	64			
Mounting Style (each style has integral 3 m/10 ft. long cable)				
Convertible (immersion or flow-through mount, see note A below)		2		
Union-mount (includes adapter, but requires special 2-inch threaded tee)		5		
Body Material				
PPS (for elevated temperatures in high pH applications)			2	
LCP (liquid crystal polymer)			8	
Electrode Material				
Glass (only for pH - general purpose)				P0
Antimony (only for pH - only for LCP and PPS sensors)				P1
Platinum (only for ORP - see note B below)				R0
Gold (only for ORP - see note B below)				R1

A. When immersion mounting a convertible style sensor, it is recommended to order a protector of the same material as the sensor body (LCP protector P/N 60A2F1278 or PPS protector P/N 60A2F1278-300). The protector threads onto the end of the sensor.

B. Specify the gold electrode material for processes containing zinc, cyanide, cadmium, or nickel which poison a platinum electrode.

12 mm Combination pH/ORP Sensors

Common menu guides reduce variability and provide step-by-step procedures for maintenance and pH/ ORP calibration. This standard ¾" and 12 mm pH/ORP sensor delivers fast and accurate measurement.

Order Information

Prod. No.	Description
08350=C=0004	pH Combination Sensor for High Temperatures, 0 - 14 pH
08350=C=0005	pH Combination Sensor for Fouling Environments, 0 - 12 pH
08351=C=0000	ORP Combination Sensor for High Temperatures, ±1500 mV
08362=A=2000	pH Combination Sensor for Ultrapure Water, 0 - 14 pH
368417,00000	pH Combination Sensor for High Temperatures, 2 - 12 pH, Ag/AgCl Reference

For more details and additional options please visit hach.com or contact Hach.

Learn More

Combination pH/ORP Sensors

These combination sensors are designed for specialty applications for immersion or in-line mounting. The reference cell features a double-junction design for extended service life, and a built-in solution ground. The body is molded from chemically-resistant PPS or PVDF, and the reference junction is coaxial porous PTFE. All sensors are rated 0 to 105 °C up to 100 psig, and have integral 4.5 m (15 ft.) cables with tinned leads. The PC-series (for pH) and RCseries (for ORP) combination sensors are ideal for measuring mild and aggressive media.

Sensors with rugged dome electrodes, “easy-to-clean” flat glass electrodes, and even HF (hydrofluoric acid) resistant glass electrodes are available for a wide variety of process solutions.

The PC-series combination pH sensors come with or without a Pt 1000 Ohm RTD temperature element. The RC-series combination ORP sensors are supplied without a temperature element.

The Sensors are available in three mounting styles–convertible, insertion, and sanitary.

Order Information

Prod. No.	Description
PC1R1A	Combination pH Sensor, ¾” convertible, PPS Body
PC1R2A	Combination pH Sensor with PT1000, ¾” convertible, PPS Body
PC1R3A	Combination pH/ORP Sensor, ¾” convertible, PPS Body, HF-resistant Glass Electrode, Temperature Compensation
RC1R5N	Combination ORP sensor with PT1000, ¾” convertible, PPS Body
DPC1R1A	Digital Combination pH Sensor, ¾” convertible, PPS Body, General Purpose Glass pH Electrode

Additional sensors are available, please visit hach.com or contact Hach.

Part numbers may vary by country.

Learn More

8362sc High Purity Water pH or ORP Panel

The Hach 8362sc High Purity Water pH/ORP Panel is designed for use in electric power generation, industrial boiler, pharmaceutical, microelectronics, and other applications that require excellent accuracy when measuring pH or ORP in high purity water.

Save time on design

A single design source and one product platform means you spend less time searching for design files or configuring components. Create and reuse your optimal design templates. The compact design saves valuable space.

Accelerate your installation

One source, interchangeable components, a common user interface, and one support team make installation faster and less complicated. Quickly and easily transfer user settings between pH/ORP loops. The self-pressurizing electrode is ready to operate and requires no maintenance or refilling of electrolyte reservoirs between normal electrode replacements

Reduce training complexity

A single platform minimizes time required to teach and learn product operations, getting new systems in use faster.

Simplify maintenance

Common menu guides reduce variability and provide step-by-step procedures for maintenance and calibration. Standard visual alerts across parameters notify operators when troubleshooting is required.

Optimize operation

Self-pressurizing electrodes and platinum RTD temperature sensor ensures accurate measurement. Hach's unique conductive flow chamber and stainless steel sheath reduces drift common to less sophisticated probes.

Accurate temperature measurement

Accuracy of temperature is critical for high purity water algorithms for measuring pH or ORP. Temperature is measured with a 100 ohm Platinum RTD that is accurate to 0.1°C. A stainless steel sheath provides grounding of the sample at the electrode to reduce the effects of streaming currents.

Learn More

Order Information

6178000	8362sc High Purity Water pH Panel *Includes pH sensor, digital electronics junction box. flow meter, and 7.7 m (25 ft.) digital interconnect cable.*
6178001	8362sc High Purity Water ORP Panel *Includes ORP sensor, digital electronics junction box. flow meter, and 7.7 m (25 ft.) digital interconnect cable.*
08362=A=0000	8362sc pH sensor
08362=A=1111	8362sc ORP sensor

Part numbers may vary by country.

Technical Data*

Parameter	pH	ORP
Range	2 - 12 pH at 0 - 80 °C (32 - 176 °F)	-1500 - 1500 mV at 0 - 80 °C (32 - 176 °F)
Accuracy	±0.05 pH at 25 °C (77 °F) above 1 µS/cm (constant flow) ±0.1 pH at 25 °C (77 °F) below 1 µS/cm (constant flow)	± 3 mV at 25 °C (77 °F) (constant flow)
Repeatability	0.01 pH at 25 °C (77 °F) (constant flow)	± 2 mV at 25 °C (77 °F) (constant flow)
Temperature Accuracy	0.1 °C (32.2 °F) between 0 - 80 °C (32 - 176 °F)	
Contents	316 stainless steel back panel with pH or ORP sensor, flowmeter, and junction box Temperature probe: Pt100	
Cable Length	7.7 m (25 ft.), supplied	
Dimensions (H x W x D)	304.8 x 384.2 x 165.1 mm (12 x 15.1 x 6.5 in.)	
Weight	3.6 kg (7.94 lb)	

**Subject to change without notice.*

5500sc Phosphate Analyzer

Lower Maintenance, Less Downtime

Delivering reliable results that save you critical time and effort. For pure water / power applications.

90 days of continous runtime

Only two litres of reagent are required for the analyser to perform unattended for up to 90 days; twice as long as the previous analyser versions.

Save time on maintenance

The industry's only pressurized reagent delivery system eliminates the frequent maintenance associated with pumps.

Avoid downtime

Predictive diagnostic tools, including Hach's proprietary Prognosys technology, warning LEDs, and high-visibility notification screens let you avoid unplanned downtime.

Clean, fast and easy reagent change

No more dripping reagents on the instrument, the floor, or your clothing while fumbling with tubes and straws. Simply match the colour-coded cap to the sealed reagent bottle and twist gently.

Verify easily with Hach Lab products so you don't waste time second-guessing

Grab Sample In and Grab Sample Out features allow quick analysis of a grab sample poured into the analyser, and facilitate taking a sample out of the analyser to verify in a lab test.

Order Information

Instruments

5500.KTO.PH.A1U	Hach 5500sc Phosphate High Range Analyzer, Proprietary chemistry only, AC, 1 channel
5500.KTO.PH.A2U	Hach 5500sc Phosphate High Range Analyzer, Proprietary chemistry only, AC, 2 channels
5500.KTO.PH.A4U	Hach 5500sc Phosphate High Range Analyzer, Proprietary chemistry only, AC, 4 channels
5500.KTO.PL.A1U	Hach 5500sc Phosphate Low Range Analyzer, Proprietary chemistry only, AC, 1 channel
5500.KTO.PL.A2U	Hach 5500sc Phosphate Low Range Analyzer, Proprietary chemistry only, AC, 2 channels
5500.KTO.PL.A4U	Hach 5500sc Phosphate Low Range Analyzer, Proprietary chemistry only, AC, 4 channels

Each Analyzer comes with a Hach reagents set for start up and up to 90 days of use.

24 VDC options are available too. Please visit hach.com or contact Hach for further details.

Reagents

6776100	5500sc Phosphate High Range Reagent Set
2035400	5500sc Phosphate Low Range Reagent Set

Part numbers may vary by country.

Learn More

Technical Data*

Application	Pure water / Power
Measuring Principle	Colorimetric
Range	LR model: 4 - 3000 µg/L as PO_4 [Detection range capable of 4 - 5000 µg/L as PO_4] HR model: 200 - 50000 µg/L as PO_4
Accuracy	LR model: ±4 µg/L or ±4% of reading, whichever is greater; HR model: ±500 µg/L or ±5% of reading, whichever is greater
Response Time	Typically, 9.5 minutes at 25 °C (77 °F); changes with temperature
Reagent Consumption	2 L of each reagent every 90 days with 15 minute cycle time
Operating Temperature Range	5 - 45 °C (41 - 113 °F)
Operating Humidity	5 - 95% relative humidity, non-condensing (indoor use only)
Sample Pressure	0.14 - 6 bar (to preset pressure regulator)
Sample Temperature	5 - 50 °C (41 - 122 °F)
Sample Flow Rate	55 - 300 mL/min
Grab Sample	Grab Sample In and Grab Sample Out capability
Mounting	Wall, panel or table
Power Requirements (Voltage)	100 - 240 VAC, 24 VDC
Dimensions (H x W x D)	804 x 452 x 360 mm (31.65 x 17.8 x 14.17 in.)
Enclosure Rating	IP56 / NEMA 4X
Certifications	CE (EN 61326-1: 2006; EN 61010-1: 2010; EN 60529: 1991, +A1:2000) KC (EN 61326-1: 2006) C-tick (EN 61326-1: 2006) cETLus (UL 61010-1: 2012; NEMA 250: 2003; CSA C22.2 No 61010-1: 2012)

**Subject to change without notice.*

Phosphax sc Online Phosphate Analyzer

The Phosphax sc online analyzer provides reliable and accurate PO_4 measurements

Multiple measurement ranges for a variety of wastewater applications

With detection limits as low as 0.05 mg/L and as high as 50 mg/L, the Phosphax sc phosphate analyzer can be used anywhere in the wastewater treatment process, from the influent or start of the phosphorus removal process where phosphate levels may be high to the effluent where phosphate levels are at their lowest.

Low cost of operation with proven yellow method

The Phosphax sc analyzer determines ortho-phosphate concentration using the molybdovanadate yellow colorimetric method which optimizes reagent consumption and helps save on operating costs.

Generate actionable insights from measurement data

The Phosphax sc is Smart Monitoring enabled so you can leverage Hach to collect, manage and analyse data from your instrument.

Easy installation at the measurement point

Hach's Phosphax sc phosphate analyzer is designed to be installed at the measurement point (indoor and outdoor options). The housing is weatherproof and lockable for installation at the basin, even in the toughest climates. Mounting options include: wall, rail, or standing. The unit comes complete and assembled; no separate housing is required.

Low maintenance

Several features make the Phosphax sc phosphate analyzer easy to use and maintain:

1. Automatic cleaning at customized intervals.
2. Automatic zero-calibration at each measuring cycle.
3. Prognosys Predictive Diagnostics alerts you to upcoming instrument issues and guides you on whether the changes in your measurements are due to your instrument or your water.
4. Easy access to reagents and wear parts.

Learn More

Technical Data*

	Range 1 (LXV422.99.1xxxx)	Range 2 (LXV422.99.2xxxx)
Range	0.05 - 15.0 mg/L PO_4-P	1.0 - 50 mg/L PO_4-P
Lower Limit of Detection (LOD)	0.05 mg/L PO_4-P	1.0 mg/L PO_4-P
Accuracy	Using standard solutions: 2% ± 0.05 mg/L	Using standard solutions: 2% ± 1.0 mg/L
Reagent Consumption	500 mL/month	1000 mL/month
Response Time	< 5 minutes	
Measurement Method	Photometric method using vanadate-molybdate	
pH Range	5 - 9 pH	
Permissible Chloride Range	Max. Cl^- concentration: 1000 mg/L	
Operating Conditions	Indoor model: 5 - 40 °C (41 - 104 °F); 95% relative humidity, non-condensing Outdoor model: -20 - 45 °C (-4 - 113 °F) ; 95% relative humidity, non-condensing	
Sample Temperature	4 - 40 °C (39 - 104 °F)	
Sample Quality	Ultra filtrated or comparable	
Flow	1 - 20 L/h sample (free of suspended solids)	
Controller Compatibility	SC4500, SC1000, SC200	
Power Requirements (Voltage)	115 - 230 VAC, 50/60 Hz, power provided by SC controller or power box	
Dimensions (H x W x D)	Indoor model: 720 x 540 x 370 mm (28.35 x 21.25 x 14.5 in.) Outdoor model: 720 x 540 x 390 mm (28.35 x 21.25 x 15.35 in.)	
Weight	Without sample preparation system and without chemicals: 29 kg (64 lb) indoor model, or 31 kg (68 lb) outdoor model	
Enclosure Rating	Indoor model: IP54 Outdoor model: IP55	

**Subject to change without notice.*

Order Information

Analyzers

6159600	Phosphax sc Phosphate analyzer, 0.05-15 mg/L PO_4-P, one channel continuous sample, 115-230 VAC
6159700	Phosphax sc Phosphate analyzer, 0.05-15 mg/L PO_4-P, two channel continuous sample, 115-230 VAC
6159800	Phosphax sc Phosphate analyzer, 1-50 mg/L PO_4-P, one channel continuous sample, 115-230 VAC
6159900	Phosphax sc Phosphate analyzer, 1-50 mg/L PO_4-P, two channel continuous sample, 115-230 VAC

There are additional options available (indoor versions), please visit hach.com or contact Hach for more information.

Please note: A sample filtration system (e.g. Filtrax) and a digital Hach SC controller are required for operation of the Phosphax sc. Sample filtration system and controller are sold separately.

For Filtration Systams please also see section Sample Preparation.

Mounting Hardware

LZY287	Stand mounting kit for SC analyzer without SC controller
LZY286	Stand mounting kit for SC analyzer with SC controller
LZY316	Rail mounting kit for SC analyzer without SC controller
LZY285	Rail mounting kit for SC analyzer with SC controller

Reagents

2825253	Reagent for Phosphax compact analyzer (high range and low range), 1000 mL
2825254	Reagent for Phosphax sc analyzer (high range and low range), 2000 mL
2825353	Cleaning solution for Phosphax compact analyzer (high range and low range), 1000 mL

Accessories

LZY303	Heated drain/connecting hose, 2 m, 115 V
LQV155.99.00002	Power box without power connection cable
LQV155.99.00012	Power box with power connection cable

Part numbers may vary by country.

Phosphax sc LR Online Phosphate Analyzer

High accuracy and stability in low range measurement

Confidence in low range measurement values

The Phosphax sc LR features a new photometer with glass cuvette that results in high stability in low range measurement giving you confidence in your measurement values.

Ensure compliance and lower plant-operating costs

The Phosphax sc LR features a new yellow method with split-reagent dosing, and a new photometer with twice the path length of the Phosphax sc. These features result in high accuracy in low range measurement that help you do just enough treatment to stay compliant and lower plant operating costs at the same time.

Generate actionable insights from measurement data

The Phosphax sc LR is Smart Monitoring enabled so you can leverage Hach to collect, manage and analyse data from your instrument.

Technical Data*

Range	0.015 - 2 mg/L PO_4-P
Accuracy	Using standard solutions: 2 % + 0.015 mg/L
Reproducibility	0.7 % + 0.005 mg/L
Response Time	10 min
Measurement Method	Two-beam photometer (yellow method)
Measuring Interval	10 - 120 min
pH Range	5 - 9 pH
Pressure Range	-30 - 50 mbar with continous sample preparation; at overflow vessel
Permissible Chloride Range	Max Cl^- concentration: 5000 mg/L
Operating Temperature Range	Indoor model: 5 - 40 °C (41 - 104 °F); 95% relative humidity, non-condensing Outdoor model: -20 - 45 °C (-4 - 113 °F) ; 95% relative humidity, non-condensing
Sample Temperature	4 - 45 °C (39 - 113 °F)
Sample Quality	Ultra filtrated or comparable
Flow	1.0 - 20.0 L/h
Controller Compatibility	SC4500, SC1000, SC200
Power Requirements (Voltage)	115 - 230 VAC, powered by Power Box or SC Controller
Dimensions (H x W x D)	Indoor model: 720 x 540 x 370 mm (28.35 x 21.25 x 14.5 in.) Outdoor model: 720 x 540 x 390 mm (28.35 x 21.25 x 15.35 in.)
Weight	Without sample preparation system and without chemicals: 29 kg (64 lb) indoor model, or 31 kg (68 lb) outdoor model
Enclosure Rating	Indoor model: IP54 Outdoor model: IP55

**Subject to change without notice.*

Order Information*

Analyzers

LXV422.99.33001	Phosphax sc LR Online Phosphate Analyzer, Outdoor, 0.015 - 2 mg/L PO_4-P, 1-channel
LXV422.99.33011	Phosphax sc LR Online Phosphate Analyzer, Indoor, 0.015 - 2 mg/L PO_4-P, 1-channel

Please note: A sample filtration system (e.g. Filtrax) and a digital Hach SC controller are required for operation of the Phosphax sc LR. Sample filtration system and controller are sold separately.

For Filtration Systems please also see section Sample Preparation.

Mounting Hardware

LZY316	Rail mounting kit for SC analyzer without SC controller
LZY287	Stand mounting kit for SC analyzer without SC controller
LZY286	Stand mounting kit for SC analyzer with SC controller
LZX355	Wall mounting kit
LZY285	Rail mounting kit for SC analyzer with SC controller

Reagents

LCW956	Phosphax sc LR Reagent A
LCW957	Phosphax sc LR Reagent B
LCW955	Phosphax sc LR Reagent Set
LCW958	Phosphax sc LR Standard Solution
LCW959	Phosphax sc LR Cleaning Solution

Accessories

LZY302	Heated drain/connecting hose, 2 m, 230 V
LZY431	Power extension cable for SC1000, 5 m, 115-230 VAC
LQV155.99.00002	Power box without power connection cable
LQV155.99.00012	Power box with power connection cable

Part numbers may vary by country.

Learn More

5500sc Silica Analyzer

Lower Maintenance, Less Downtime

Delivering reliable results that save you critical time and effort.

90 days of continuous runtime

Only two litres of reagent are required for the analyser to perform unattended for up to 90 days; twice as long as the previous analyser versions.

Save time on maintenance

The industry's only pressurized reagent delivery system eliminates the frequent maintenance associated with pumps.

Avoid downtime

Predictive diagnostic tools, including Hach's proprietary Prognosys technology, warning LEDs, and high-visibility notification screens let you avoid unplanned downtime.

Clean, fast and easy reagent change

No more dripping reagents on the instrument, the floor, or your clothing while fumbling with tubes and straws. Simply match the colour-coded cap to the sealed reagent bottle and twist gently.

Verify easily with Hach Lab products so you don't waste time second-guessing

Grab Sample In and Grab Sample Out features allow quick analysis of a grab sample poured into the analyser, and facilitate taking a sample out of the analyser to verify in a lab test.

Order Information

Instruments

5500.KTO.S0.A1U	Hach 5500sc Silica Analyzer, proprietary chemistry only, AC, 1 channel
5500.KTO.S0.A2U	Hach 5500sc Silica Analyzer, proprietary chemistry only, AC, 2 channels
5500.KTO.S0.A4U	Hach 5500sc Silica Analyzer, proprietary chemistry only, AC, 4 channels
5500.KTO.S0.A6U	Hach 5500sc Silica Analyzer, proprietary chemistry only, AC, 6 channels

Each Analyzer comes with a Hach reagents set for start up and up to 90 days of use.
24 VDC options are available too. Please visit hach.com or contact Hach for further details.

Reagents

6783600	5500sc Silica Reagent Set
6774802	5500sc Reagent 1 Silica, 2 L
6774902	5500sc Reagent 2 Silica, 2 L
6775102	5500sc Reagent 3 Silica, package
6775002KTO	5500sc Standard 1 Silica, 2 L

Part numbers may vary by country.

Learn More

Technical Data*

Application	Pure water / Power
Measuring Principle	Colorimetric
Range	0 - 5000 µg/L as SiO_2
Accuracy	0 - 500 µg/L: ±1% or ±1 µg/L of reading, whichever is greater; 500 - 5000 µg/L: ±5%
Response Time	Typically, 9.5 minutes at 25 °C (77 °F); changes with temperature
Reagent Consumption	2 L of each reagent every 90 days with 15 minute cycle time
Operating Temperature Range	5 - 45 °C (41 - 113 °F)
Operating Humidity	5 - 95% relative humidity, non-condensing (indoor use only)
Sample Pressure	0.14 - 6 bar (to Preset Pressure Regulator)
Sample Temperature	5 - 50 °C (41 - 122 °F)
Sample Flow Rate	55 - 300 mL/min
Grab Sample	Grab Sample In and Grab Sample Out capability
Mounting	Wall, panel or table
Power Requirements (Voltage)	100 - 240 VAC, 24 VDC
Outputs	4 to 20 mA
Dimensions (H x W x D)	804 x 452 x 360 mm (31.65 x 17.8 x 14.17 in.)
Enclosure Rating	IP56 / NEMA 4X
Certifications	CE (EN 61326-1: 2006; EN 61010-1: 2010; EN 60529: 1991, +A1:2000) KC (EN 61326-1: 2006) C-tick (EN 61326-1: 2006) cETLus (UL 61010-1: 2012; NEMA 250: 2003; CSA C22.2 No 61010-1: 2012)

**Subject to change without notice.*

Sonatax sc Sludge Level Probe

The superior way of measuring sludge levels: Sonatax sc process probe

Reduced Maintenance with Innovative Wiper Design

The wiper functions with a magnetic connection and without a shaft so there are no o-rings to replace and no need to open the probe housing. Tools are not needed to replace the wiper blades.

Superior Accuracy with Automatic Frequency Adjustment

The Sonatax sc probe automatically scans a range of frequencies to find the ideal settings for the solids concentration for the application. Built-in software disregards signals reflected from tank structures such as pipes, rods, etc.

Unique Features

The fully digitized Sonatax sc probe means there are no electromagnetic interferences. Instantly resume measurements after skimmer passes with the built-in position sensor that also compensates for angle when the probe is not mounted exactly vertically.

Temperature Compensation for Seasonal Changes

Automatic temperature compensation assures ultrasonic measurement is unaffected by seasonal changes in water temperature - seasonal calibration becomes unnecessary.

Visual Performance Indicator Enhances Troubleshooting

A visual performance LED indicator light on the Sonatax sc probe provides quick glance assurance of proper performance. Green light indicates "okay", red indicates warning. Troubleshooting, particularly in applications with multiple sludge blanket level probes connected to one controller, is quick and easy.

Technical Data*

Measuring Principle	Ultrasonic measurement
Range	0.2 - 12 m (0.65 - 39.4 ft) sludge level
Resolution	0.03 m (0.1 ft) sludge level
Accuracy	0.1 m (0.33 ft)
Operating Temperature Range	0 - 50 °C (32 - 122 °F)
Pressure Range	≤ 0.3 bar or ≤ 3 m
Power Requirements (Voltage)	12 V, 2.4 W, provided by SC controller
Mounting Configurations	Fixed pole mount, pivot mount or chain mount
Calibration	Factory calibrated
Material	POM: Wiper Magnet Encapsulating Compound: Epoxy resin; Wiper Rubber: Silicone rubber
Controller Compatibility	SC4500, SC1000, SC200
Certifications	CE certified to EN 61326-1:1998 /A1/A2/A3 & EN 61010-1:2001
Dimensions (D x L)	185 x 130 mm (7.28 x 5.12 in.)
Weight Sensor	3.5 kg (7.7 lb)

Subject to change without notice.

Order Information

LXV431.99.00002	Sonatax sc Sludge Level Probe
5773000	Sonatax sc Sludge Level Probe with Pivot Mount Hardware

A Hach SC controller is required to operate the Sonatax sc sensor, controller must be purchased separately.

Accessories

LZY714.99.42120	Fixed Point Mount for Probe For mounting probe at a fixed location.
LZY714.99.00030	Extension pipe 1 m (3.3 ft.) For fixed point mount LZY714.99.42120
LZY714.99.00040	Extension pipe 2 m (6.6 ft.) For fixed point mount LZY714.99.42120
LZY714.99.62160	Pivot Mount for Probe (0.35 m (1.15 ft.) extension pipe) For mounting probe on a pivot assembly for clarifiers with skimmers.
LZY714.99.72160	Pivot Mount for Probe (1 m (3.3 ft.) extension pipe) For mounting probe on a pivot assembly for clarifiers with skimmers.
LZX414.00.73000	Rail Mount Kit for Probe (rail mount must be ordered with either LZY714.99.42120 or LZY714.99.72160)
LZX914.99.11300	Chain Mount Kit for Sonatax sc
LZX328	Wiper Blades for Sonatax sc, 5/pk

Part numbers may vary by country.

Learn More

NA5600sc Online Sodium Analyzer

Ensure uptime with accurate, low-level sodium measurements and predictive diagnostics.

Be confident in your steam cycle water with proprietary predictive diagnostic tools, automatic electrode reactivation to avoid downtime, less maintenance with 90-day reagent replacement, and a convenient small footprint for easy integration with the new Hach® NA5600sc Sodium Analyzer.

Optimize Operation and Response Time with Automatic Electrode Reactivation

To maintain optimum response time and accuracy, the NA5600sc analyzer provides automatic electrode reactivation. Reactivation uses non-hazardous chemicals and eliminates the need for manual reactivation or electrode etching.

Space-Saving Design

Smaller instrument footprint with streamlined layout to allow for easy integration into existing or new sites.

Low Maintenance

Maintenance of the NA5600sc Sodium Analyzer requires reagent replenishment only every 90 days and annual replacement of reagent tubing and the sodium electrode. Clear step-by-step instructions are provided to simplify maintenance operations.

Avoid Downtime

Predictive diagnostic tools, including Hach's proprietary Prognosys technology, warning LEDs, and high visibility notification screens let you avoid unplanned downtime.

Technical Data*

Range	Analyzers without cationic pump: 0.01 ppb - 10,000 ppb Analyzers with cationic pump: 0.01 ppb - 200 ppm
Response Time	From 0.1 ppb to 10 ppb: T90 ≤ 3 minutes, T95 ≤ 4 minutes From < 1 ppb to 100 ppb: T90 < 2 minutes, T95 < 3 minutes (about 150 s)
Sample conditioner	For non-cationic applications: Di-isopropylamine (DIPA) (1 L/90 days) at 25 °C for a sample pH target of 10.5 For cationic applications: DIPA (1 L/month) at 25 °C for a sample pH target of 10.5
Number of Channels	1, 2 or 4 with programmable sequence
Max. Concentration of Suspended Solids in Sample	< 2 NTU, no oil, no grease For boiler sample type install approx. 100 µm filter
Acidity	< 50 ppm, non-cationic application < 250 ppm, cationic application
Sample Temperature	5 - 45 °C (41 - 113 °F)
Sample Pressure	0.2 - 6 bar (3 - 87 psi)
Sample Flow Rate	100 - 150 mL/min (6 - 9 L/h)
Power requirements	100 - 240 VAC; 50/60 Hz
Protection Rating	Analyzer with enclosure: NEMA 4/IP65 Analyzer without enclosure: IP65, PCBA housing
Material	Polyol case, PC door, PC hinges and latches, 304/316 SST hardware
Dimensions	Analyzer with enclosure: 681 mm x 452 mm x 335 mm (H x W x D) Analyzer without enclosure: 681 mm x 452 mm x 254 mm (H x W x D)
Weight	Analyzer with enclosure: 20 kg (40.1 lb) with empty bottles Analyzer without enclosure: 14 kg (30.7 lb) with empty bottles
Maintenance Interval	Every 90 days: refill electrolyte, reactivation, conditioning, and calibration solution

Subject to change without notice.

Learn More

Order Information

Analysers

Unit with Enclosure	Panel Mount Unit	
LXV526.97.1011A	LXV526.97.2011A	NA5600sc Sodium Analyzer, 1-channel
LXV526.97.1012A	LXV526.97.2012A	NA5600sc Sodium Analyzer, 2-channel
LXV526.97.1014A	LXV526.97.2014A	NA5600sc Sodium Analyzer, 4-channel
LXV526.97.1111A	LXV526.97.2111A	NA5600sc Sodium Analyzer, 1-channel, with Autocalibration
LXV526.97.1112A	LXV526.97.2112A	NA5600sc Sodium Analyzer, 2-channel, with Autocalibration
LXV526.97.1114A	LXV526.97.2114A	NA5600sc Sodium Analyzer, 4-channel, with Autocalibration
LXV526.97.1211A	LXV526.97.2211A	NA5600sc Sodium Analyzer, 1-channel, with Cation Kit
LXV526.97.1212A	LXV526.97.2212A	NA5600sc Sodium Analyzer, 2-channel, with Cation Kit
LXV526.97.1214A	LXV526.97.2214A	NA5600sc Sodium Analyzer, 4-channel, with Cation Kit
LXV526.97.1311A	LXV526.97.2311A	NA5600sc Sodium Analyzer, 1-channel, with Cation Kit & Autocalibration
LXV526.97.1312A	LXV526.97.2312A	NA5600sc Sodium Analyzer, 2-channel, with Cation Kit & Autocalibration
LXV526.97.1314A	LXV526.97.2314A	NA5600sc Sodium Analyzer, 4-channel, with Cation Kit & Autocalibration

Upgrade Options

8371200	Kit, K-pump NA5600sc
9013200	Modbus RS232/485 Module
9173900	Profibus DP Module
8425700	Hart Module
8428000	Prognosys NA5600sc License Kit

Accessories

595=010=000	Sample Filter, 100 micron, metric fittings
595=010=005	Sample Filter; 100 micron, imperial fittings
8368900	Kit, Heater Exchange, NA5600sc

Consumables and Spare Parts

9660500	NA5600sc one year spare parts kit
595=010=906	Replacement Filter Cartridges, pk/6
2834453	Di-isopropylamine (DIPA), 1 L
2835153	Sodium Standard, 10 ppm, 1 L
2834253	Sodium Standard, 100 ppm, 1 L
2507149	Sodium Nitrate, 0.5M, 500 mL

Part numbers may vary by country.

TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Level System

Learn More

Three Parameters in One Instrument

The Hach TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument's unique multi-beam alternating light method with infrared diode system gives it a broad measuring range for both turbidity and suspended solids in one portable handheld instrument.

Multiple Calibration Curves for Convenience

It stores up to four different calibration curves for suspended solids and one for turbidity. There's no need for constant re-calibration for different locations or types of sludge.

Easy Sludge Blanket Levels

The sludge blanket level can be measured by setting the units to mg/L, g/L or percent. Calibrate the instrument and then slowly lower the sensor into the clarifier. The suspended solids concentration will significantly increase as it reaches the sludge blanket level. Once the blanket level is reached, examine the sensor cable which is marked every meter to determine the sludge blanket level depth from the water surface.

Air Bubble Compensation for Accuracy

The instrument software automatically compensates for air bubbles to prevent its influence on the measurement. Turbidity is pre-calibrated with a calibration curve stored in the instrument. For suspended solids, each of the calibration curves can be closely adjusted to the laboratory results because each calibration curve can use up to three points per curve plus a zero value.

Durable Materials for Long Life

The probe is made of polished stainless steel with a scratch-resistant sapphire window to withstand harsh environments. Polished stainless steel helps keep particles from sticking to the surface of the probe. The internal memory stores up to 290 measuring values, including time, date, measurement, location, and homogeneity. Three operating modes are available: single, interval, or continuous.

Rechargeable Battery Power

With rechargeable batteries, the Hach TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Instrument can provide up to one month of usage in typical measuring mode and up to four hours of continuous operation. Interval mode has automatic shut off between measurements for longer operation in the field. The battery status is always visible. The operating menu is user-friendly and is displayed on an easy-to-read LCD graphic display.

Technical Data*

Measuring Range TSS	0.001 - 400 g/L (upper range depending on sample characteristics)
Measuring Range Turbidity	0.001 - 9999 FNU
Material	Sensor Body: stainless steel; Probe: stainless steel; Sensor Window: sapphire
Power Requirements (Voltage)	Meter: 6 rechargeable NiMH batteries or 6 "AA" standard batteries
Dimensions	Probe (Ø X L) 40 mm x 29 cm (1.57 x 11.42 in.) Meter (H X W X D): 110 x 230 x 40 mm (4.33 x 9.06 x 1.57 in.) Case L: 450 mm (17.7 in)
Cable Length	10 m (32.8 ft.) cable with marks for distance
Protection Class	Probe IP68; Control unit IP 55

**Subject to change without notice.*

Order Information

LXV322.99.00002	TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level System; includes meter, probe, rechargeable batteries, charger for rechargeable batteries with four plug adapters, manual, quick start guide and carrying case.

Replacement Parts

LXV320.99.00002	TSS Portable Hand-held Turbidity, Suspended Solids, and Sludge Blanket Level Meter
LXV321.99.00002	TSS Turbidity, Suspended Solids, and Sludge Blanket Level Probe, with 10 m (32.8 ft.) cable and plug
LZY607	Charger; for rechargeable batteries; includes 4 plug adapters (for Spain, United States, Great Britain, Hong Kong, Malaysia, Singapore, Australia, New Zealand, and China)
LZY606	Battery Holder
LZY604	Rechargeable NiMH Batteries; qty. 6

Part numbers may vary by country.

TSS sc Suspended Solids Probes

Measures online suspended solids in virtually all applications under the strictest regulatory conditions

TSS sc probes measure online suspended solids from spring water to corrosive chemicals under the strictest regulatory conditions. With 8 different probe models with several mounting options, it is possible to measure suspended solids over a wide range of concentrations with just one probe.

Unique Multi-Beam Pulsed Infrared Light System

TSS sc probes have a double optical system with two pulsating infrared LEDs and four receivers. This combined multiple beam alternating light method with beam focusing facilitates accurate color independent measurement of turbidity from 0.001 to 4,000 FNU and suspended solids from 0.001 to 500 g/L.

Automatic Compensation for Air Bubbles and Temperature Swings for Accuracy

Special software gives the system the ability to recognize gas bubbles or temperature swings for a more accurate suspended solids or turbidity measurement.

Standard-Compliant and Precise with Easy Calibration

The turbidity measurement complies with the standard DIN EN 27027 (ISO 7027). Calibration is not necessary. If the probe is used to measure the solids content, a one-point calibration suffices. For special applications, curves can be defined using several calibration points.

Withstands Difficult Conditions and Harsh Environments

Probes are made of highly polished stainless steel or titanium with a scratch resistant sapphire window. They are designed to withstand harsh environments and keep particles from sticking to the surface.

Technical Data*

Models	TSS sc TSS W sc TSS HT sc TSS Vari sc TSS XL sc TSS EX1 sc TSS Titanium2 sc TSS Titanium7 sc
Mounting Configurations	Tank-side, Triclamp, Inline, Varivent measuring tube, XL measuring tube
Measurement Method	Combined multiple beam alternating light method with infrared diode system and beam focusing Turbidity (TRB): 2-channel 90° scattered light measurement in accordance with DIN EN ISO 7027, wavelength = 860 nm Solids (TSS): 90° and 120° scattered light measurement, wavelength = 860 nm
EExp / Hazardous Location	Class I Div 2 certified (TSS EX1 sc only)
Range	Turbidity (TRB): 0.001 - 9999 NTU Solids (TSS): 0.001 - 500 g/L
Accuracy	Turbidity: Up to 1000 FNU/NTU: < 5 % of measurement value or ±0.01 NTU, whichever is greater
Repeatability	Turbidity (TRB): < 3% Solids (TSS): < 4%
Response Time	1 s < T90 < 300 s (adjustable)
Calibration	Turbidity (TRB): Factory calibrated Solids (TS): To be calibrated by customer on site Zero point: Permanently calibrated in the factory
Pressure Range	< 6 bar: TSS W sc < 10 bar: TSS sc, TSS HT sc, TSS Titanium2 sc, TSS Titanium7 sc ≤ 10 bar: TSS EX1 sc < 16 bar: TSS Vari sc, TSS XL sc
Ambient Temperature	0 - 50 °C (32 - 122 °F): TSS W sc 0 - 60 °C (32 - 140 °F): TSS sc, TSS Titanium2 sc, TSS Titanium7 sc 0 - 80 °C (32 - 176 °F): TSS Vari sc, TSS XL sc 0 - 90 °C (32 - 194 °F): TSS HT sc -10 - 50 °C (14 - 122 °F): TSS EX1 sc
Controller Compatibility	SC4500, SC1000, SC200
Dimensions	Tank-side models, installation sensor Inline models: 330 x 40 mm (13 x 1.6 in.) (L x D) Installation sensor Triclamp models: 332 x 40 mm (13.1 x 1.6 in.) (L x D) TSS Vari sc, TSS XL sc: 232 x 40 mm (9.1 x 1.6 in.) (L x D)
Weight	Tank-side models, installation sensor Inline/Triclamp models: approx. 1.6 kg (3.5 lb) TSS Vari sc, TSS XL sc: approx. 1.5 kg (3.3 lb) TSS EX1 sc: approx. 2.7 kg (5.95 lb)

**Subject to change without notice.*

Learn More

Order Information

Overview Probes and Mounting Options*

Model	Type of mounting	Description	Prod. No.
Stainless steel			
TSS sc	Tank-side mounting	All purpose standard probe for turbidity and suspended solids measurement.	**LXV323.99.10002**
	Weld-on fitting	All purpose probe with Triclamp.	**LXV323.99.20002**
	Ball valve fitting	All purpose probe for simple inline installation.	**LXV323.99.30002**
TSS W sc	Tank-side mounting	All purpose probe with wiper to ensure a clear view. For use in high solids environments.	**LXV324.99.10002**
	Weld-on fitting	All purpose probe with wiper, with Triclamp.	**LXV324.99.20002**
	Ball valve fitting	All purpose probe with wiper for simple inline installation.	**LXV324.99.30002**
TSS HT sc	Tank-side mounting	Turbidity and suspended solids probe for use in high temperature environments of up to 90 °C and 95 °C for short intervals.	**LXV325.99.10002**
	Weld-on fitting	High temperature probe with Triclamp.	**LXV325.99.20002**
	Ball valve fitting	High temperature probe for simple inline installation.	**LXV325.99.30002**
TSS Vari sc	Varivent measuring tube (available at external supplier)	Turbidity and suspended solids probe for colour-independent measurement of highly concentrated sludges. This probe connects to Varivent piping systems.	**LXV326.99.10002**
TSS XL sc	XL weld-on fitting	Turbidity and suspended solids probe for colour-independent measurement of highly concentrated sludges. This probe connects to Triclamp piping systems.	**LXV327.99.10002**
TSS EX1 sc	Tank-side mounting	Turbidity and suspended solids probe designed for use in hazardous locations (Class I Div 2).	**LXV328.99.10002**
	Ball valve fitting	Turbidity and suspended solids probe designed for use in hazardous locations (Class I Div 2) with Triclamp.	**LXV328.99.20002**
	Ball valve safety fitting	Turbidity and suspended solids probe designed for use in hazardous locations (Class I Div 2) for simple inline installation.	**LXV328.99.30002**
Titanium			
TSS Titanium sc	User defined	Turbidity and suspended solids Titanium2 probe for use in aggressive or corrosive environments.	**LXV329.99.10002**
	User defined	Turbidity and suspended solids Titanium2 probe with Triclamp for simple inline installation and quick access for maintenance.	**LXV329.99.20002**
TSS Titanium7 sc	User defined	Turbidity and suspended solids Titanium7 probe for use in brine, seawater, or high salinity environments.	**LXV330.99.10002**
	User defined	Turbidity and suspended solids Titanium7 probe with Triclamp for simple inline installation and quick access for maintenance.	**LXV330.99.10002**

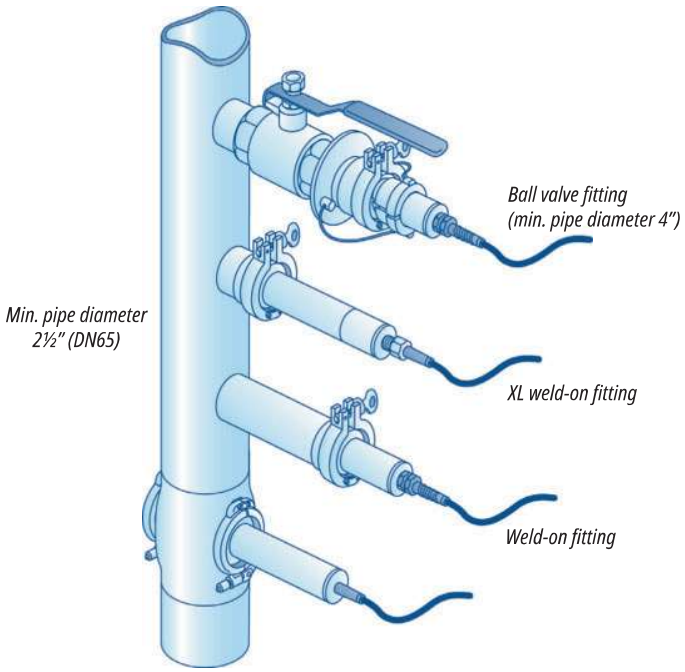
**Subject to change without notice.*

Part numbers may vary by country.

Order Information

Mounting Hardware

Prod. No.	Description
LZY714.99.53120	Stainless steel pole mounting kit for TSS sc probes, incl. 10 cm bracket and 2 m pole with 90° adapter
LZU300.99.00000	Ball valve armature for TSS sc Triclamp
LZY630.00.10000	Ball valve armature for TSS sc, TSS W sc, and TSS HT sc inline probes including non-coped stainless steel welding flange LZX660
LZY630.00.11000	Ball valve armature for TSS sc, TSS W sc, and TSS HT sc inline probes including non-coped carbon steel welding flange LZX661
LZY630.00.12000	Ball valve armature for TSS sc, TSS W sc, and TSS HT sc inline probes without welding flange
LZY630.00.20000	Ball valve safety armature for TSS EX1 sc Inline probe including non-coped stainless steel welding flange LZX660
LZY630.00.21000	Ball valve armature for TSS EX1 sc Inline probe including non-coped carbon steel welding flange LZX661
LZY630.00.22000	Ball valve armature for TSS EX1 sc inline probe without welding flange
LZX660	Non-coped stainless steel welding flange for insertion kit
LZX661	Non-coped carbon steel welding flange for insertion kit



Solitax sc Turbidity & Suspended Solids Sensors

Accurate, color-independent suspended solids and turbidity measurements

Greater accuracy, less maintenance

Hach®'s Solitax sc sensors provide accurate, colour-independent measurement of turbidity and suspended solids in drinking water, wastewater and industrial process applications. A self-cleaning device prevents biological growth and interference of gas bubbles. This system's reliable performance and full data communication capability help improve process control and reduce treatment costs associated with polymer use, digester volume, and sludge handling.

Excellent correlation to laboratory analysis

Solitax sc sensors show an exceptional correlation to laboratory analysis. On-line measurement not only saves time on manual analysis, but also provides critical real-time measurements that can be used to operate the plant more efficiently.

Fully serviceable sensors

Conventional turbidity and suspended solids sensors are potted and are discarded when they no longer function. Solitax sc sensors are fully serviceable, which often doubles the useful life of the sensor.

Easy one-point calibration

Factory calibrated in conformity with DIN EN ISO 7027 for long-term calibration stability. Calibration is easy with a simple correction factor procedure.

Multi-channel, multi-parameter system

Multiple Solitax sc sensors can be installed on one Hach SC Controller. The same controller can also accommodate any combination of parameters. All of Hach's model sc sensors are "plug and play" with no complicated wiring or set-up procedure necessary.

Learn More

Technical Data*

	For insertion in pipes		For immersion in open tanks		
Model	Solitax inline sc	Solitax highline sc	Solitax t-line sc	Solitax ts-line sc	Solitax hs-line sc
Parameter	Suspended Solids, Turbidity	High Range Suspended Solids, Turbidity	Turbidity	Suspended Solids, Turbidity	High Range Suspended Solids, Turbidity
Range	TSS content: 0.001 mg/L - 50 g/L Turbidity: 0.001 - 4000 NTU	TSS-content: 0.001 - 500 g/L; 0.001 - 500,000 mg/L (the upper range is dependent on the sample property) Turbidity: 0.001 - 4000 NTU	Turbidity: 0.001 - 4000 NTU	TSS content: 0.001 mg/L - 50 g/L Turbidity: 0.001 - 4000 NTU	TSS-content: 0.001 - 500 g/L; 0.001 - 500,000 mg/L (the upper range is dependent on the sample property) Turbidity: 0.001 - 4000 NTU
Units	Turbidity: User selectable - NTU, FNU, or TE/F Suspended Solids: User selectable - g/L, mg/L, ppm, or % solids				
Application					
Turbidity - Drinking Water	•	•	•	•	•
Turbidity - Wastewater	•	•	•	•	•
Solids - Primary Sludge		•			•
Solids - Thickened Sludge		•			•
Solids - Active Sludge	•	•		•	•
Solids - Dewatered Return Sludge	•	•		•	•
Solids - Digested Sludge		•			•
Solids - Centrate	•	•		•	•
Solids - Lime Sludge	•	•		•	•
Accuracy	Turbidity up to 1000 NTU: without calibration < 5% of the measured value ±0.01 NTU with calibration < 1% of the measured value ±0.01 NTU				
Repeatability	TSS content: < 3% Turbidity: < 1%				
Response Time T90	1 - 300 s adjustable				
Calibration Method	Turbidity: Formazin or StablCal Standard (at 800 NTU). Suspended Solids: Sample specific, based on gravimetric TSS analysis with a correction factor procedure.				
Certifications	CE, MCERTS				
Flow	Max. 3 m/s (the presence of air bubbles affects the measurement)				
Operating Temperature Range	0 - 40 °C (32 - 104 °F)				
Controller Compatibility	SC4500, SC1000, SC200				
Pressure Range	Stainless steel insertion sensor: <6 bar or <60 m		PVC: <1 bar or <10 m	Stainless steel immersion sensor: <6 bar or <60 m PVC: <1 bar or <10 m	
Material	Optics carrier and sleeve: stainless steel 1.4571 or black PVC Wiper arm: stainless steel 1.4581 Wiper blade: silicone (standard) Optional: FKM/FPM (LZX578) Wiper shaft: stainless steel 1.4571 Threaded cable fitting: stainless steel 1.4305 or white PVC				
Weight	Immersion: Stainless steel: 1.38 kg (3 lb.); PVC: 0.52 kg (1.15 lb.) Insertion: Stainless steel: 2.4 kg (5.3 lb.)				
Cable Length	10 m (33 ft) (optional extension cables available)				

**Subject to change without notice.*

Order Information

Common Configurations: Solitax sc Turbidity and Suspended Solids Sensors with SC4500 Controller

Immersion in Open Tanks Applications

LXV525.97KTO031 Solitax t-line sc Turbidity Immersion Probe (0.001 - 4000 NTU), PVC, with Wiper, SC4500 Controller

LXV525.97KTO018 Solitax t-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) Immersion Probe, SS, with Wiper, SC4500 Controller

LXV525.97KTO035 Solitax hs-line sc Turbidity (0.001 - 4000 NTU) and Suspended Solids (0.001 mg/L- 500 g/L) Immersion Probe, SS, with Wiper, SC4500 Controller

Insertion in Pipes Applications (includes insertion mounting kit)

LXV525.97KTO026 Solitax inline sc Turbidity (0.001 to 4000 NTU) and Suspended Solids (0.001 mg/L to 50 g/L), with wiper, stainless steel

LXV525.97KTO032 Solitax highline sc Turbidity (0.001 to 4000 NTU) and Suspended Solids (0.001 mg/L to 500 g/L), with wiper, stainless steel

NOTE:
1. Power cords must be ordered separately.
2. Fixed point installation kit or handrail mount kit must be ordered separately for all immersion analyzers.

Individual Solitax sc Sensors

Immersion Sensors

LXV423.99.10000 Solitax t-line sc Turbidity immersion probe, 0.001 - 4000 NTU, with wiper, PVC (Standard Drinking Water Application, Clarifiers)

LXV423.99.12000 Solitax t-line sc Turbidity immersion probe, 0.001 - 4000 NTU, w/o wiper, PVC (Standard Drinking Water Application, Clarifiers)

LXV423.99.00100 Solitax ts-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) immersion probe, with wiper, stainless steel

LXV423.99.10100 Solitax ts-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) immersion probe, with wiper, PVC (Standard Wastewater Application)

LXV423.99.12100 Solitax ts-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) immersion probe, w/o wiper, PVC

LXV423.99.02100 Solitax ts-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) immersion probe, w/o wiper, stainless steel

LXV423.99.10200 Solitax hs-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) immersion probe, with wiper, PVC

LXV423.99.12200 Solitax hs-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) immersion probe, w/o wiper, PVC

LXV423.99.00200 Solitax hs-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) immersion probe, with wiper, stainless steel

LXV423.99.02200 Solitax hs-line sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) immersion probe, w/o wiper, stainless steel

Insertion Sensors

LXV424.99.00100 Solitax inline sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) built-in probe, with wiper, stainless steel (Standard Wastewater Application)

LXV424.99.02100 Solitax inline sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-50 g/L) built-in probe, w/o wiper, stainless steel

LXV424.99.00200 Solitax highline sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) built-in probe, with wiper, stainless steel

LXV424.99.02200 Solitax highline sc Turbidity (0.001-4000 NTU) and Suspended Solids (0.001-500 g/L) built-in probe, w/o wiper, stainless steel

Installation Accessories

LZY714.99.53120 Stainless Steel Pole Mounting Kit for Sensors, 10 cm

LZX337 Stainless steel ball valve safety armature/extraction fitting for Solitax inline and highline sc probes, for filled and pressurised pipes, max. operating pressure 6 bar

LZX936 Stainless steel ball valve armature, maximum operation pressure 1 bar/14.5 psi

LZX660 Non-coped stainless steel welding flange for insertion kit

LZX661 Non-coped carbon steel welding flange for insertion kit

5738400 Insertion Mounting Kit for inline and highline insertion sensors (ball valve safety armature and extraction system). Kit includes a 4 inch pre-coped Carbon Steel Flange. Non-coped flanges are available.

AHA033NPT Sensor Adapter, straight 1-1/2 FNPT

AHA045NPT Probe Adapter, elbow 1-1/2 FNPT 90°

Additional Accessories are available, please visit hach.com or contact Hach.

TU5 Series Turbidimeters

The next standard in the evolution of turbidity

Only the TU5 Series Lab & Process Turbidimeters with 360° x 90° Detection™ deliver unprecedented confidence that a change in your reading is a change in your water.

Groundbreaking 360° x 90° Detection Technology

The TU5 Series employs a patented optical design that sees more of your sample than any other turbidimeter, delivering the best low level precision and sensitivity while minimizing variability from test to test.

Matching lab and online results

For the first time you will be able to remove the uncertainty of which measurement to trust, thanks to identical 360° x 90° Detection Technology in both instruments.

Everything about turbidity – faster

The TU5 Series dramatically reduces the time needed to get a turbidity measurement you can rely on, with 98% less online sample surface area to clean, sealed vials for calibration, and the elimination of the need for indexing and silicone oil in the lab. Not to mention, a smaller online sample volume means you will detect events almost immediately.

No surprises

Prognosys™ monitors your TU5 Series online instrument, proactively alerting you to maintenance needs before your measurement becomes questionable. And a Hach Service Agreement protects your investment and helps ensure that you stay in compliance and on budget.

Learn More

Technical Data*

Light Source	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW) or Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)
Range	EPA: 0 - 700 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 175 EBC ISO: 0 - 1000 NTU / FNU / TE/F / FTU 0 - 100 mg/L 0 - 250 EBC
Accuracy	±2% or 0.01 NTU from 0 - 40 NTU ±10% of reading from 40 - 1000 NTU based on Formazin primary standard
Resolution	0.0001 NTU / FNU / TE/F / FTU / EBC
Repeatability	Better than 1% of reading or ±0.002 NTU (TU5300sc) or ±0.0006 NTU (TU5400sc) on Formazin at 25 °C (77 °F), whichever is greater
Stray Light	<10 mNTU
Units	NTU, FNU, TE/F, FTU, EBC
Signal Average Time	TU5300sc: 30 - 90 seconds TU5400sc: 1 - 90 seconds
Response Time	TU5300sc: T90 <45 seconds at 100 mL/min TU5400sc: T90 <30 seconds at 100 mL/min
Sample Temperature	2 - 60 °C (35 - 140 °F)
Sample Pressure	6 bar (87 psi) maximum, compared to air at sample temperature range from 2 - 40 °C (35.6 - 104 °F)
Sample Flow Rate	100 - 1000 mL/min; optimal flow rate: 200 - 500 mL/min
Operating Temperature Range	0 - 50 °C (32 - 122 °F)
Operating Humidity	Relative humidity: 5 - 95% at different temperatures, non-condensing
Storage Conditions	-40 - 60 °C (-40 - 140 °F)
Enclosure Rating	Electronic compartment IP55; all other functional units IP65 with process head/ACM attached to the TU5300sc/ TU5400sc instrument
Certifications	CE compliant US FDA accession number: 1420493-000 EPA version, 1420492-000 ISO version Australian ACMA Marking
Dimensions (H x W x D)	249 x 268 x 190 mm (9.8 x 10.6 x 7.5 in.)
Weight	5.95 lbs. (2.7 kg); 11 lbs. (5.0 kg) with all accessories

**Subject to change without notice.*

Order Information

TU5300sc/TU5400sc Online Laser Turbidimeters

LXV445.99.10112	TU5300sc Low Range Laser Turbidimeter, EPA Version
LXV445.99.10212	TU5400sc Ultra-High Precision Low Range Laser Turbidimeter, EPA Version
LXV445.99.53112	TU5300sc with Flow Sensor, Automatic Cleaning, RFID, and System Check, EPA Version
LXV445.99.53212	TU5400sc with Flow Sensor, Automatic Cleaning, RFID, and System Check, EPA Version

Please note: Other turbidimeter configurations are available and RFID may not be available in all areas. Please visit hach.com or contact your local Hach representative.

Please note: An SC controller is required for operation of the TU5300sc or TU5400sc, controllers are sold separately.

Calibration and Verification

LZY835	StablCal Primary Turbidity Standards Kit, 10/20/600 NTU, with RFID
LZY898	StablCal Primary Turbidity Standards Kit without RFID (10 NTU, 20 NTU, 600 NTU)
LZY901	Glass Rod Secondary Turbidity Standard <0.1 NTU
LZY834	Replacement Vial for TU5300sc and TU5400sc

TU5 Series Accessories

LQV159.97.00002	Automatic Cleaning Module for TU5300sc and TU5400sc
LQV160.99.00002	Flow Sensor for TU5300sc and TU5400sc
LZY876	Desiccant Cartridge for TU5300sc and TU5400sc
LZY907.97.00002	Maintenance kit for TU5300sc and TU5400sc (incl. 20 NTU + 600 NTU vials and <0.1 NTU glass rod)
LZY903	Manual Vial Wiper for TU5200, TU5300sc, and TU5400sc

Part numbers may vary by country.

See also Lab Instruments section for TU5 Series Laboratory Turbidimeters.

Surface Scatter® 7 sc Turbidimeter

Outstanding results in high temperatures: Surface Scatter 7 sc

Use the Hach® Surface Scatter 7 sc Turbidimeter to monitor high range turbidity with greater accuracy and reliability than ever before. The optics never touch the sample in the Hach Surface Scatter 7 Turbidimeter so it's virtually maintenance free.

Less fouling for easy maintenance

The Hach Surface Scatter 7 sc Turbidimeter (SS7) is uniquely designed so that the light source and photocell never come in contact with the sample. In fluids with high loads of suspended solids this makes sample cell cleaning and replacement unnecessary.

Built to Last

All wetted parts of the Hach SS7 turbidimeter are made with corrosion-resistant materials for extended life. The photo-detector and light source assemblies are protected from the effects of corrosive vapors and heated samples. The SS7 turbidimeter is warranted against defects in materials or workmanship for two years from the date of shipment.

Wide Measurement Range

The SS7 turbidimeter can reliably measure turbidity from 0.01 to 9999.9 NTU in samples that vary from clear water to corrosive and high temperature paper mill and oil field samples.

Order Information

Sensor Only

LPV431.99.00002	Surface Scatter 7 sc Turbidimeter

Sample Conditioning Options

4668000	Bubble Trap, Head Regulator
4028400	Flow Meter; 100 to 1600 mL/minute Calibration Standards

Calibration Standards

7121649	StablCal turbidity standard, 400 NTU, 500 mL
246149	Formazin Turbidity Standard, 4000 NTU, 500 mL

Cables

5796000	Digital Extension Cable, 7.7 m (25 ft.)

Optional Accessories

101278	Lamp Assembly, Surface Scatter 7 sc
101279	Detector Assembly, Surface Scatter 7 sc
68700	Bottle Cleaning Brush
4502100	Calibration Cup
2351300	Standardization Plate Kit
9220500	Sun shield

Part numbers may vary by country.

Technical Data*

Range	0.01 - 9999.9 NTU
Accuracy	±5% of reading or ±0.1 NTU (whichever is greater) from 0 - 2000 NTU
Resolution	<1000 NTU: 0.01 NTU 1000 - 9999.9 NTU: 0.1 NTU
Repeatability	1.0% or ±0.04 NTU, whichever is greater
Response Time	Initial response in 45 seconds
Sample Flow Rate	Sample flow required 1.0 - 2.0 L/min
Sample Temperature	0 - 50 °C (32 - 122 °F)
Ambient Temperature	0 - 50 °C (32 - 122 °F)
Relative Humidity	5 - 95% non-condensing
Power Requirements (Voltage)	100/230 VAC
Installation Category	Category II
Enclosure Rating	NEMA 12
Mounting	Wall mount
Dimensions (H x W x D)	685 x 670 x 285 mm (27 x 26.3 x 11.2 in.)
Weight	15.8 kg (34.8 lb)

**Subject to change without notice.*

Learn More

Process Turbidimeters

Quick Reference Guide

Model	TU5300sc/TU5400sc	Solitax t-line sc	Surface Scatter 7 sc
Range	EPA: 0 - 700 NTU ISO: 0 - 1000 NTU	0.001 - 4000 NTU	0.01 - 9999.9 NTU
Regulatory	EPA Approved Hach Method 10258 ISO 7027-1:2016	ISO 7027	None
Light Source	Class 2 laser product, with embedded 650 nm (EPA 0.43 mW) or Class 1 laser product, with embedded 850 nm (ISO), max. 0.55 mW (complies with IEC/EN 60825-1 and to 21 CFR 1040.10 in accordance with Laser Notice No. 50)	LED	Tungsten Bulb
Lifetime of Light Source (estimated)	10 years	3 - 4 years	1 year
Verification	Liquid: StablCal®, Formazin (0.1 - 40 NTU) Dry: Glass Rod at <0.1 NTU		•
Auto Clean Feature	With LQV159.97.00002	•	With flush option
Built-in Bubble Removal System	•		
Rationing/Color Independent	•	•	
Mounting	Wall Mount	Immersion	Wall mount
Installation Requirement	Bypass flow	Insitu	Bypass flow
Calibration	Stablcal or Formazin		
Controller Compatibility	SC Controller		
Application			
Application	TU5300sc: Accurate and simple operation for low level turbidity measurement TU5400sc: Most accurate option for measuring ultra-low turbidity levels. Ideal for membrane filter effluent monitoring and early particle breakthrough detection.	Ideal for in-pipe or immersion applications. Self-cleaning prevents errors due to fouling. Can also display Suspended Solids (mg/L) (calculation based on turbidity).	Ideal for dirtier samples where high solids level can quickly foul a conventional turbidimeter.
Application Range	TU5300sc: Medium to low turbidity (< 40 NTU) TU5400sc: Ultra-low turbidity (< 0.5 NTU)	High turbidity up to 4000 NTU	High turbidity up to 10,000 NTU
USEPA compliant for DWTP	•		
ISO Certified	•	•	
Recommended Applications:			
Drinking Water Treatment Plants	TU5300sc: clarifier effluent; filter effluent; combined filter effluent; distribution system, elevated tank TU5400sc: filter effluent; combined filter effluent; distribution system, elevated tank	Raw water: clarifier effluent; filter backwash	Raw water: clarifier effluent
Wastewater Treatment Plants		Discharge to environment	
Power Plants	In-plant water testing	Raw water inlet when using river water source	
Food & Beverage Plants		Discharge to environment	

**Subject to change without notice.*

BioTector B3500c Online TOC Analyzer

Maximum uptime and reliability for TOC analysis in condensate applications

Using patented technology, only requiring scheduled maintenance every 6 months, allowing for dual stream monitoring, and having one of the most compact analyzer footprints, the Hach® BioTector B3500c delivers 99.86% uptime in condensate applications with the lowest operating cost.

Worry-free TOC

With a patented Two Stage, Advanced Oxidation Technology system, the B3500c provides you with maximum reliability and uptime, without sacrificing accuracy.

Lowest Cost of Ownership

Requiring you to replenish reagents, replace the pump tube, and calibrate only twice a year, the Hach BioTector B3500c has the lowest operating cost available.

Small Footprint = CriticalWall Space Savings

With one of the most compact analyzer footprints, this analyzer frees up wall space for other needed instruments.

Reagent Costs that Don't Kill the Bottom Line

By only needing to replenish reagents every six months, you will see direct bottom line savings in comparison to other systems requiring bi-weekly or monthly replacements.

One Instrument for Multiple Streams

Providing the ability to monitor two streams sequentially, eliminates the double-cost of needing two separate analyzers.

Order Information

Instruments

B5ACAA152AAC2	Hach BioTector B3500c TOC analyzer, 0-25 ppm, 1 stream, grab sample, 115 V AC
B5AFAA152AAC2	Hach BioTector B3500c TOC analyzer, 0-25 ppm with 0-100 ppm range extension, 1 stream, grab sample, 115 V AC
B5ACAA152AAF2	Hach BioTector B3500c TOC analyzer, 0-25 ppm, 2 streams, grab sample, 115 V AC
B5AFAA152AAF2	Hach BioTector B3500c TOC analyzer, 0-25 ppm with 0-100 ppm range extension, 2 streams, grab sample, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-123	Six months spare part kit for BioTector B3500

Reagents

2038062	BioTector Reagent, 4.0 N NaOH
2038162	BioTector reagent, 6.0 N sulfuric acid with Mn catalyst

Part numbers may vary by country.

Learn More

Technical Data*

Parameter	Direct measurement of Total Organic Carbon, Total Inorganic Carbon, Total Carbon Chemical Oxygen Demand, Biological Oxygen Demand via correlation Volatile Organic Carbon via calculation
Measurement Method	Infrared measurement of CO_2 after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Range	0 - 25 mg/L C, 0 - 100 mg/L C
Cycle Time	From 5.5 minutes, depending on range and application
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol) Except for Zone 1 certification then Modbus RTU, Modbus TCP/IP & Modbus TCP/IP Redundant is available
Sample Inlet Temperature	0 - 60 °C (32 - 140 °F)
EExp / Hazardous Location	Certification options are available to European Standards, (ATEX Zone 1, Zone 2), North American Standards (Class I Division 2) and IECEx Zone 1
Particle Size	Up to 100 µm
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 month service intervals
Dimensions (H x W x D)	750 x 500 x 320 mm (29.5 x 19.7 x 12.6 in.)
Weight	46 kg (101.4 lb) (enclosure weight may change depending on system optional features)

**Subject to change without notice.*

BioTector B3500dw TOC Analyzer

Maximum uptime and reliability for TOC analysis in drinking water applications

The Hach BioTector B3500dw uses patented technology that only requires scheduled maintenance every 6 months and delivers 99.86% uptime ensuring total confidence in your TOC measurement.

Rock solid reliability

With patented, EPA method approved Two Stage Advanced Oxidation Technology, the self-cleaning sample reactor of B3500dw delivers maximum reliability.

Lowest cost of ownership

With its 99.86% uptime, semi-annual maintenance and reagent replenishment is all that is needed.

Secure your source water

TSAO technology analyzes organics in your source that are invisible to scanning UV technologies.

Technical Data*

Parameter	TOC (NPOC), TIC, % TOC removal (with 2 streams) and COD, BOD after correlation
Measurement Method	Infrared measurement of CO_2 after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals, Hach Company method 10261 (EPA approved for drinking water)
Range	0 - 25 mg/L C
Cycle Time	From 5.5 minutes, depending on range and application
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol)
Sample Inlet Temperature	0 - 60 °C (32 - 140 °F)
Ambient Temperature	5 - 45 °C (41 - 113 °F)
Particle Size	Up to 100 µm
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 month service intervals
Dimensions (H x W x D)	750 x 500 x 320 mm (29.5 x 19.7 x 12.6 in.)
Weight	46 kg (101.4 lb)

**Subject to change without notice.*

Order Information

Instruments

DWACAA152AAA2	Hach BioTector B3500dw Online TOC analyzer, 0 - 25 ppm, 1 stream, 120 V AC
DWBCAA152AAA2	Hach BioTector B3500dw Online TOC analyzer, 0 - 25 ppm, 1 stream, 230 V AC
DWACAA152AAC2	Hach BioTector B3500dw Online TOC analyzer, 0 - 25 ppm, 2 stream, 120 V AC
DWBCAA152AAC2	Hach BioTector B3500dw Online TOC analyzer, 0 - 25 ppm, 2 stream, 230 V AC

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-123	Six months spare part kit for BioTector B3500

Reagents

2038062	BioTector Reagent, 4.0 N NaOH
2038162	BioTector reagent, 6.0 N sulfuric acid with Mn catalyst

Part numbers may vary by country.

Learn More

BioTector B3500e TOC Analyzer

Highest reliability in TOC analysis for water control meets low cost of ownership.

The Hach® BioTector B3500e delivers the market leading, patentented self-cleaning technology to provide accurate on-line TOC analysis. With 99.86% certified uptime the B3500e delivers maximum availability for reliable results. Ideal for water control, the B3500e helps you to be compliant while minimizing your operating costs.

Ensure environmental compliance

The B3500e is tailor-made for monitoring final wastewater effluent and discharges to meet TOC requirement in water regulations. Being regulatory compliant will save you significant penalty costs while protecting the local environment.

Save with low ownership costs

Requiring you to replace the pump tube and calibrate only twice a year, the Hach BioTector B3500e provides low operating expenses.

Worry-free TOC with smart design

The B3500e comes with a built in self-cleaning sample tube and reactor. This enables the B3500e to deliver trustworthy results even if your water contains some level of fat, oil, greases and sludge or has moderate pH swings.

Information you can rely on

Using BioTector's internationally proven and patented Two Stage Advanced Oxidation technology, the B3500e delivers maximum uptime, reliability and accuracy.

Access your results from everywhere

With the B3500e TOC results can be viewed at your desk, your home, or while you are on the move with the BioTector Network Control Unit remote access.

Order Information

Instruments

BEAAAA152AAA2	Hach BioTector B3500e Online TOC analyzer, 0-250 ppm, 1 stream, grab sample, cleaning, 115 V AC
BEABAA152AAA2	Hach BioTector B3500e Online TOC analyzer, 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, 115 V AC
BEAAAA152AAB2	Hach BioTector B3500e Online TOC analyzer, 0-250 ppm, 1 stream, grab sample, cleaning, sample sensor, 115 V AC
BEABAA152AAB2	Hach BioTector B3500e Online TOC analyzer, 0-250 ppm with 0-1000 ppm range extension, 1 stream, grab sample, cleaning, sample sensor, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

10-SMC-001	Air supply filter pack
19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz

Service Kit

19-KIT-130	B3500e 6 month service kit

Part numbers may vary by country.

Learn More

Technical Data*

Parameter	Direct measurement of Total Organic Carbon, Total Inorganic Carbon Chemical Oxygen Demand, Biological Oxygen Demand via correlation
Range	0 - 250 mg/L C, 0 - 1000 mg/L C
Measurement Method	Infrared measurement of CO_2 after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol)
Cycle Time	Typically 7 minutes 30 seconds
Particle Size	Up to 100 µm
Automatic cleaning	Yes
Sample Inlet Temperature	2 - 60 °C (36 - 140 °F)
Service Interval	6 month service intervals
Power Requirements	115 - 230 VAC; 50/60 Hz
Dimensions (H x W x D)	750 x 500 x 320 mm (29.5 x 19.7 x 12.6 in.)
Weight	46 kg (101.4 lb) (enclosure weight may change depending on system optional features)

**Subject to change without notice.*

BioTector B3500ul Online TOC Analyzer

Precise, low-level TOC measurement that you can trust

Changes in water quality for ultra pure applications are disruptive to plant operations. Accurate, on-line analysis is important to protect critical equipment that depends on ultra pure water resources. Leading manufacturers know that it is critical to analyse for contaminates precisely at ppb levels to maintain water quality. Reliability and effective oxidation of large samples ensures that manufacturers can trust the results reported by the BioTector B3500ul analyzer. With a full picture of organic contaminants in critical water applications manufacturers make water treatment decisions more efficiently.

The Hach® BioTector B3500ul provides reliable and accurate TOC analysis at ppb levels for ultrapure water applications. The patented two stage advanced oxidation technology behind the BioTector thoroughly, and reliably oxidizes samples for valuable real-time water analysis.

Maximum uptime for your process

With uptime certified at 99.86% and and two short, scheduled maintenance events per year, you will not be missing critical process information when you need it the most.

Instant and long term savings

Reduce the costs related to water re-treatment, and save on operational expenses. On-line TOC analysis enables maximum water reuse and keeps critical water resources at their best to maximize the lifetime of high-value capital equipment.

Technical Data*

Parameter	TOC, TIC, TC, VOC, after correlation COD, BOD
Measurement Method	Infrared measurement of CO_2 after oxidation
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Range	0 - 5000 µg/L C
Accuracy	±2 % of reading or ±15 µg/L C, whichever is greater
Limit of quantification	80 µg/L
Calibration	For best performance ultra-pure water (18.2 MΩ*cm, < 5 µg/L TOC) is needed for calibration.
Interferences	TIC Interference: At 500 µg/L TIC (as bicarbonate), 2% carryover into TOC may occur.
pH Range	pH 1-12
Cycle Time	TOC from 5 minutes, depending on application
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol) Except for Zone 1 certification then Modbus RTU, Modbus TCP/IP & Modbus TCP/IP Redundant is available
EExp / Hazardous Location	Certification options are available to European Standards, (ATEX Zone 1, Zone 2), North American Standards (Class I Division 2) and IECEx Zone 1
Sample Inlet Temperature	2 - 60 °C (36 - 140 °F)
Particle Size	Up to 100 µm
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 months service intervals
Dimensions (H x W x D)	1000 x 500 x 320 mm (39.4 x 19.7 x 12.6 in.)
Weight	50 kg (110.2 lb)

**Subject to change without notice.*

Order Information*

Instruments

B5EBAA152EAC2	Hach BioTector B3500ul TOC analyzer, 0 - 5000 µg/L C, 1 stream, grab sample, 115 V AC
B5EBAA152EAF2	Hach BioTector B3500ul TOC analyzer, 0 - 5000 µg/L C, 2 streams, grab sample, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-123	Six months spare part kit for BioTector B3500
19-BAS-031	BioTector sample overflow chamber

Reagents

2985562	BioTector base reagent 1.2 N sodium hydroxide
25255061	BioTector acid reagent 1.8 N sulfuric acid containing 80 mg/L Mn

Part numbers may vary by country.

Learn More

BioTector B7000i Online TOC Analyzer

The ideal online TOC Analyzer to achieve precise results even for your most challenging applications

A patented self-cleaning oxidation technology enables the B7000i analyzer to easily handle difficult samples and significantly reduce the maintenance schedule and costs associated with traditional on-line measurement. This TOC analyzer eliminates build up issues from salts, particulates, fats, oils and greases that lead to drift and high maintenance.

With reliable, continuous environmental monitoring and real-time process control, BioTector analyzers allow plants to optimize processes and reduce product loss.

Worry-free TOC with smart design

The B7000i comes with a built in self-cleaning sample line and reactor. This enables the B7000i to deliver trustworthy results even if your water contains high levels of fats, oils, greases, sludge and particulates or has pH swings.

Easy handling

All B7000i come with unique oversized tubing which eliminated the need for filtration and you can be sure to have a fully representative sample. The special tubing also prevents clogging as well as sample contamination.

Superior reliability

Using BioTector's internationally proven and patented Two Stage Advanced Oxidation technology the B7000i delivers maximum reliability, accuracy and availability with a MCert certified uptime of 99.86%. In addition no calibration or maintenance is required between 6-month service intervals.

Flexible field of application

Depending on the type of application, the instrument can operate across a very wide measuring range. The B7000i analyzer also has multistreaming capabilities with up to 6 process streams possible. Additionally, it can be adapted for indoor or outdoor use.

Low cost of ownership

Installing a B7000i provides cost savings through optimizing processes by decreasing chemical dosing, waste reduction, reducing samples processes and lowering overall plant operation costs.

Order Information

Instruments

B7AAAA052AABAA2	Hach BioTector B7000i Online TOC analyzer, 0 - 10000 mg/L C, 1 channel, 115 V AC
B7ABAA052AABAA2	Hach BioTector B7000i Online TOC analyzer, 0 - 20000 mg/L C, 1 channel, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-131	B7000i 6 month service kit

Reagents

25255061	BioTector acid reagent 1.8 N sulfuric acid containing 80 mg/L Mn
2985562	BioTector base reagent 1.2 N sodium hydroxide

Part numbers may vary by country.

Learn More

Technical Data*

Parameter	TOC, TIC, TC, VOC, after correlation COD, BOD, TOG
Measurement Method	Infrared measurement of CO_2 after oxidation (DIN EN 1484:1997-08, ISO 8245:1999-03, EPA 415.1)
Oxidation Method	Patented Two-Stage Advanced Oxidation Process using Hyroxyl Radicals.
Range	0 - 20000 mg/L C
Cycle Time	From 6.5 minutes, depending on range and application
Permissible Chloride Range	Up to 30%
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol) Except for Zone 1 certification then Modbus RTU, Modbus TCP/IP & Modbus TCP/IP Redundant is available
EExp / Hazardous Location	Certification options are available to European Standards, (ATEX Zone 1, Zone 2), North American Standards (Class I Division 2) and IECEx Zone 1
Sample Inlet Temperature	2 - 60 °C (36 - 140 °F)
Particle Size	Up to 2 mm, soft particulates
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 months service intervals
Dimensions (H x W x D)	1250 x 750 x 320 mm (49.2 x 29.5 x 12.6 in.)
Weight	90 - 120 kg (198.4 - 264.6 lb) Enclosure weight may change depending on system optional features.

**Subject to change without notice.*

BioTector B7000i Dairy Online TOC Analyzer

Maximize your profits by minimizing your product loss.

The Hach® BioTector B7000i Dairy Online TOC Analyzer is the most innovative, maintenance-free TOC analyzer on the market, designed specifically to detect product loss, decrease and conserve water usage and improve production processes.

Industry studies show that lost product can be reduced by over 15% in Dairy Processing Plants by using accurate, reliable and continuous TOC measurement. Further savings of up to 40% can be made in the operating cost of the treatment plant by reducing energy and water consumption.

Reliable measurements, every time

With a patented Two Stage Advanced Oxidation Technology system, a sample injection unit and a self-cleaning sample reactor, as well as tubing designed specifically for dairy applications, the B7000i Dairy analyzer provides you with maximum reliability and uptime so you will be certain to get the measurements you need.

Minimum maintenance, even in the harshest conditions

The B7000i Dairy analyzer comes with self-cleaning technology which limits necessary maintenance to only twice a year, with no calibration requirements between services. Even in the harsh dairy environment, it will handle samples with soft particles up to 2 mm in diameter, including samples with fat, oil, greases, sludge and salts.

One instrument for multiple streams

A single B7000i Dairy TOC analyzer gives you the ability to monitor up to two streams with now added Flow input to enable product management to see actual real time product loss on the BioTector display.

Technical Data*

Parameter	TOC, TIC, TC, VOC, after correlation COD, BOD
Measurement Method	Infrared measurement of CO_2 after oxidation
Oxidation Method	Patented Two-Stage Advanced Oxidation Process using Hyroxyl Radicals
Range	0 - 20000 mg/L C
Cycle Time	From 6.5 minutes, depending on application
Permissible Chloride Range	Up to 30%
Communication	Modbus RTU, Modbus TCP/IP & Profibus
Sample Inlet Temperature	2 - 60 °C (36 - 140 °F)
Particle Size	Up to 2 mm, soft particulates
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 months service intervals
Dimensions (H x W x D)	1250 x 750 x 320 mm (49.2 x 29.5 x 12.6 in.)
Weight	90 - 120 kg (198.4 - 264.6 lb) Enclosure weight may change depending on system optional features.

**Subject to change without notice.*

Order Information

Instruments

BDAAAA052MABAA4	Hach BioTector B7000i Dairy Online TOC Analyzer, 0 - 20000 mg/L C, 1 channel, 115 V AC
BDAAAA052NABAA4	Hach BioTector B7000i Dairy Online TOC Analyzer, 0 - 20000 mg/L C, 2 channels, 115 V AC

There are additional options available. Please contact Hach for more details.

Accessories

19-COM-160	BioTector Compressor 115 V / 60 Hz
19-COM-250	BioTector Compressor 230 V / 50 Hz
10-SMC-001	Air supply filter pack
19-KIT-132	B7000i Dairy 6 month service kit

Reagents

2985562	BioTector base reagent 1.2 N sodium hydroxide
25255061	BioTector acid reagent 1.8 N sulfuric acid containing 80 mg/L Mn

Part numbers may vary by country.

Learn More

BioTector B7000 Online TOC/TN/TP Analyzer

A single analyzer for Carbon contamination and Nitrogen/Phosphorus nutrient levels in water

Improve wastewater treatment process

Capture changes in water quality with a direct analysis of Total Organic Carbon (contamination), Total Nitrogen and Total Phosphorus in the most challenging samples.

Reduce the environmental footprint

Comprehensive information about your incoming sample composition enables improved process control. Knowing TOC + TN and TP allows you to decrease utilities usage and related costs. Optimized processes will reduce effluent environmental impact and minimize the risks of fines and reputation damage.

Protect your WWTP and WWRP

TOC is commonly used as a fast, reliable water analysis metric for water quality. TOC levels are often correlated to lagging water quality metrics such as Chemical Oxygen Demand (COD) and Biochemical Oxygen Demand (BOD).

Superior reliability

With a certified 99.86% uptime critical process information is available when you need it most. Maintenance in most applications is done 2x per year.

Order Information

Analyzers

B4QDDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 25 mg/L
B4QEDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 50 mg/L
B4QFDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 100 mg/L
B4QGDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 500 mg/L
B4QHDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 1000 mg/L
B4QKDF052AECAE2	B7000 TOC/TN/TP Analyzer, 1 channel, 115 V, 0 - 10,000 mg/L

There are additional options available. Please contact Hach for more details.

Accessories

12-AIR-001	Oxygen Concentrator, 115 V, 60 Hz, with compressor
19-OGS-101	Oxygen Concentrator, 115 V, 60 Hz, without compressor
10-SMC-001	Air supply filter pack
19-KIT-119	BioTector TOC/TN/TP Dual Cell 6 month Service Kit
19-KIT-110	KNF300 pump 6 month Service Kit
19-KIT-120	BioTector TOC/TN/TP Dual Cell 12 month Service Kit
19-KIT-111	KNF300 Pump 12 month Service Kit

Reagents

2985462	BioTector acid reagent with catalyst
2985562	BioTector base reagent 1.2 N sodium hydroxide
2985662	BioTector TN cleaning solution, 18.9 L
2986162	BioTector Total Phosphorus reagent, 18.9 L
27362	Deionized water, 18.9 L

Part numbers may vary by country.

Learn More

Technical Data*

Parameter	Direct measurement of TOC, TIC, TC, TN, TP; COD, BOD via correlation; VOC via calculation
Measurement Method	TOC: NDIR measurement of CO_2 after oxidation TN: direct photometric analysis of Nitrate after oxidation TP: colorimetric analysis of Phosphate with standard Vanadomolybdophosphoricacid method after oxidation
Oxidation Method	Patented Two-Stage Advanced Oxidation Process (TSAO) using Hydroxyl Radicals
Range	0 - 10000 mg/L C/N/P
Cycle Time	From 10 minutes, depending on range and application
Permissible Chloride Range	Up to 30%
Communication	Modbus RTU, Modbus TCP/IP & Profibus (when the Profibus option is selected, the digital output signals are sent through the Profibus converter with its specific communication protocol)
EExp / Hazardous Location	Certification options are available to European Standards (ATEX Zone 2 - maximum T3 for TP analyzer) and North American Standards (Class I Division 2)
Sample Inlet Temperature	2 - 60 °C (36 - 140 °F)
Particle Size	Up to 2 mm, soft particulates
Power Requirements	115 - 230 VAC; 50/60 Hz
Service Interval	6 months service intervals
Dimensions (H x W x D)	1500 x 750 x 320 mm (59.1 x 29.5 x 12.6 in.)
Weight	90 - 120 kg (198.4 - 264.6 lb) Enclosure weight may change depending on system optional features.

**Subject to change without notice.*

Filtrax Sample Filtration System

The Filtrax and Filtrax eco Sample Filtration Systems continually extract samples directly from process effluent and pull the water through ultra-filtration membranes (0.15 µm) that are immersed in the aeration basin or primary settling tank.

Once filtered, the samples can be analyzed with one of Hach's analyzers, such as the Amtaxs sc or Phosphax sc, when used in flow through installations. The control unit of both the Filtrax and the Filtrax eco can be placed outdoor in any climate and is virtually maintenance free, all tubing is completely accessible and easy to replace.

A programmable alarm relay alerts operators to inspect the system when flow decreases, and a second relay can shut the unit down if flow decreases further.

Technical Data*

Sample Flow Rate	Approx. 900 mL/h
Sample Temperature	5 - 40 °C (41 - 104 °F)
Ambient Temperature	-20 - 40 °C (-4 - 104 °F)
Sample Suction Hose	5 m (heated)
Sample Delivery Hose Options	2 m (heated or unheated), 10 m (heated), or 20 m (heated)
Enclosure Rating	IP55
Power Requirements	115 VAC/230 VAC; 50/60 Hz; 6 A
Dimensions (H x W x D)	Control unit: 510 x 370 x 220 mm (20 x 14.6 x 8.7 in.) Module carrier: 500 x 340 x 92 mm (19.7 x 13.4 x 3.6 in.)
Weight	Up to 9 kg (20 lb) depending on delivery hose option

**Subject to change without notice.*

Order Information

5738900	Filtrax sample filtration system, 2 m unheated hose, 115 VAC
5739200	Filtrax sample filtration system, 2 m heated hose, 115 VAC
5739000	Filtrax sample filtration system, 10 m heated hose, 115 VAC
5739100	Filtrax sample filtration system, 20 m heated hose, 115 VAC

The Hach Filtrax Sample Filtration System includes: module holder, control unit, sample delivery hose, manual

Part numbers may vary by country.

Learn More

FX610 / FX620
Sample Filtration Systems

The FX610 and FX620 are lightweight, sample filtration systems for the NH6000sc ammonia analyzer with a sample pump and compressor directly integrated into the analyzer. The filter system collects a sample from the basin and the integrated sample pump moves the sample to the measuring chamber.

The FX610 and FX620 offer lower user maintenance, each with one membrane that requires cleaning only every 3 months and a large diameter air supply tube. The FX620 has an air bubble cleaning module below the filter system to decrease the collection of solids on the filter membrane.

Order Information

LXV464.97.11021	FX610 Sample Filtration System, 5 m heated hose, 115 VAC
LXV464.97.12021	FX610 Sample Filtration System, 10 m heated hose, 115 VAC
LXV464.97.21021	FX620 Sample Filtration System, rough samples, 5 m heated hose, 115 VAC
LXV464.97.22021	FX620 Sample Filtration System, rough samples, 10 m heated hose, 115 VAC

Part numbers may vary by country.

Technical Data*

Dimensions (H x W x D)	FX610: 348 x 287 x 81 mm (13.7 x 11.3 x 3.19 in.) FX620: 424 x 408 x 86 mm (16.6 x 16.1 x 3.4 in.)
Weight	FX610: 2.2 kg (4.9 lb) with filter module FX620: 3.5 kg (7.7 lb) with filter module
Sample Volume	Delivers a sample volume of ~1 L/h
Hose Length	5 m or 10 m heated sample hose
Maintenance Requirements	Approximately 30 minutes/3 months in standard municipal wastewater aeration basin applications
Sample Temperature	4 - 40 °C (39.2 - 104 °F) in basin
Ambient Temperature	-20 - 45 °C (-4 - 113 °F)
pH Range	5 - 9 pH
Power Requirements	115 - 230 VAC; 50/60 Hz, supplied by analyzer
Certifications	CE, UKCA, CMIM, FCC, ISED, certified to UL and CSA safety standards by TÜV

**Subject to change without notice.*

The NH6000sc can be retrofit with the integrated FX610 or FX620 filtration systems. Contact Hach for more information.

EZ Series Online Analyzers and Sample Preconditioning Units

The Hach EZ Series covers a unique range of parameters on a single analyzer platform. Five measurement technologies (colorimetry, titration, ion-selective electrode, voltammetry, and chemiluminescence) allow for a wide selection of measuring ranges and applications.

All instruments come in the same rugged mainframe with a compact footprint. Their common user interface on industrial panel PCs is easy to use and keeps training efforts low. Administrator access and activated/deactivated menu keys provide security. Various analog and digital communication outputs support easy integration into your systems. Discontinuous analysis at programmable intervals assures low reagent consumption and eliminates cross-contamination.

EZ Series analyzers share wear and spare parts thus requesting less inventory. Similar maintenance steps again bring down training efforts. Optional Hach service agreements protect your investment and help ensure compliance.

All relevant parameter groups in water analysis are covered by the EZ Series: Nutrients, Organics, Inorganics, Metals / Trace Metals

EZ Series Analyzers can be combined with sample preconditioning units for external dilution or filtration to meet the requirements of the individual application. All systems are designed for fully automatic operation and require virtually no human intervention.

EZ Series Analyzer Models:

EZ1000 Series - online colorimetric analyzers

EZ2000 Series - online colorimetric analyzers with digestion

EZ3000 Series - online ion-selective (ISE) analyzers

EZ4000 Series - online titrimetric analyzers

EZ5000 Series - online titrimetric analyzers, multiparameter

EZ6000 Series - online voltammetry analyzers for heavy/trace metal analysis

EZ7000 Series - online analyzers for industrial and sum parameter applications

EZ Series Sample Preconditioning Units:

EZ9010 - universal self-cleaning filtration system, for immersion

EZ9020 - universal self-cleaning filtration system, fast loop

EZ9110 - heavy-duty filtration system

EZ9120 - heavy-duty filtration system for sludge applications (to be combined with EZ7900 toxicity analyzer)

EZ9130 - heavy-duty filtration system for anaerobic applications (to be combined with EZ7200 VFA analyzer)

EZ9200 - microfiltration system, for immersion

EZ9250 - microfiltration system, for bypass

EZ9750 - external dilution unit

Learn More

Technical Data*

	EZ1000 Series	EZ2000 Series	EZ3000 Series	EZ4000 Series	EZ5000 Series	EZ6000 Series	EZ7000 Series
	Colorimetric	Colorimetric with digestion	Ion-Selective (ISE)	Titrimetric	Titrimetric, multiparameter	Voltammetry	Industrial and sum-parameter applications
Alkalinity				•	•		
Aluminum	•	•					
Ammonium	•			•			
Arsenic						•	
ATP							•
Boron	•						
Chloride	•		•	•			
Chromium	•	•					
Color Pt-Co	•						
Copper	•	•					
Cyanide	•	•					
Fluoride			•				
Hardness	•			•	•		
Hydrogen Peroxide	•						
Iron	•	•					
Manganese	•	•					
Nickel	•	•					
Nitrate	•						•
Nitrite	•						•
Phenol	•						
Orthophosphate	•						•
Silica	•						
Sodium			•				
Sulfate	•						
Sulfide	•		•	•			
Total Nitrogen (TN)							•
Total Phosphorus (TP)							•
Toxicity							•
Volatile Fatty Acids (VFA)							•
Zinc	•						

Subject to change without notice.

Order Information

Parameter	Model
Alkalinity	**EZ4003/EZ4004/EZ5001**
Aluminum	**EZ1001/EZ2000/EZ2300**
Ammonium	**EZ1102/EZ4005**
Arsenic	**EZ6000/EZ6001/EZ6200**
ATP	**EZ7300**
Boron	**EZ1004**
Chloride	**EZ1005/EZ3003/EZ3004/EZ3005/ EZ3503/EZ3504/EZ3505/EZ4006**
Chromium	**EZ1009/EZ2001/EZ2301/EZ2400**
Color Pt-Co	**EZ1008**
Copper	**EZ1010/EZ1011/EZ2002/EZ2302**
Cyanide	**EZ1012/EZ2500**
Fluoride	**EZ3007/EZ3507/EZ3508**
Hardness	**EZ1016sc/EZ1017/EZ4041/EZ4043/ EZ4044/EZ5002**
Hardness, Alkalinity	**EZ5003/EZ5004/EZ5005/EZ5006/ EZ5010/EZ5011**
Hydrogen Peroxide	**EZ1022**
Iron	**EZ1024/EZ2005/EZ2306**

Parameter	Model
Manganese	**EZ1025sc/EZ2003/EZ2303**
Nickel	**EZ1027/EZ2004**
Nitrate	**EZ1029**
Nitrate, Nitrite	**EZ1301**
Nitrite	**EZ1028**
Phenol	**EZ1030**
Orthophosphate (PO_4-P)	**EZ1031/EZ1032**
Silica	**EZ1035**
Sodium	**EZ3015/EZ3016**
Sulfate	**EZ1036**
Sulfide	**EZ1037/EZ3018/EZ4032**
Total Nitrogen (TN)	**EZ77xx**
Total Nitrogen (TN), Nitrate, Nitrite	**EZ7750**
Total Nitrogen (TN), Total Phosphorus (TP)	**EZ76xx**
Total Phosphorus (TP)	**EZ782x**
Total Phosphorus (TP), Orthophosphate (PO_4-P)	**EZ786x**
Toxicity; respiration rate	**EZ7900**
Volatile fatty acids (VFAs), total alkalinity	**EZ725x**
Zinc	**EZ1040**

EZ Series Reagents

Hach EZ reagents are ready-to use with EZ Series Online Analyzers. Since there is no additional preparation needed this eliminates an additional error source when using the EZ instruments and reagents system.

Order Information

Prod. No.	Description
14049	Iron Standard Solution, 10 mg/L
17149	Phosphate Standard Solution, 50 mg/L
23249	Fluoride Standard Solution, 100 mg/L, 500 mL
35949	Fluoride Standard Solution, 10 mg/L, 500 mL
1279142	Manganese Standard Solution, 1000 mg/L
2305442	Calcium Standard Solution, 10 mg/L
2826253	Alkalinity Standard Solution, 500 mg/L
APPC1016-01	EZ1016 Total Hardness Acid Solution
APPC1016-02	EZ1016 Total Hardness Buffer Solution
APPC1016-03	EZ1016 Total Hardness Color Solution
APPC1016-04	EZ1016 Total Hardness EDTA Solution
APPC1016KTO	Reagent Kit for EZ1016 Total Hardness Analyzer
APPC1022-01	EZ1022 H_2O_2 Buffer Solution
APPC1022-02	EZ1022 H_2O_2 Color Solution
APPC1022-DPD	EZ1022 H_2O_2 DPD Powder
APPC1022KTO	Reagent Kit for EZ1022 H_2O_2 Analyzer
APPC1024-01	EZ1024 Iron Buffer Solution
APPC1024-02	EZ1024 Iron Color TPTZ Solution
APPC1024-03	EZ1024 Iron Reducing Reagent
APPC1025-01	EZ1025 Manganese Buffer Solution
APPC1025-02	EZ1025 Manganese Color Solution
APPC1025-03	EZ1025 Manganese Reducing Reagent

Prod. No.	Description
APPC1025-04	EZ1025 Manganese EDTA Solution
APPC1025KTO	Reagent Kit for EZ1025 Manganese Analyzer
APPC1031-01	EZ1031 Phosphate Color Solution
APPC3007-01	EZ3007 Fluoride Buffer Solution (TISAB)
APPC3507-01	EZ3507 Fluoride Buffer Solution (TISAB)
APPC4004-01	EZ4003/EZ4004 Total Alkalinity Acid Solution, 0.025 N HCl
APPC4004-02	EZ4004 Total Alkalinity Acid Solution, 0.05 N HCl (25-1250 mg/L)
APPC4004-03	EZ4004 Total Alkalinity Acid Solution, 0.1 N HCl (50-2500 mg/L)
APPC4004-04	EZ4004 Total Alkalinity Acid Solution, 0.2 N HCl (100-5000 mg/L)
APPC4041-01	EZ4041 Total Hardness Acid Solution
APPC4041-02	EZ4041 Total Hardness Buffer Solution
APPC4041-03	EZ4041 Total Hardness Color Solution
APPC4041-04	EZ4041 Total Hardness EDTA Solution, 0.005 M
APPC4041-05	EZ4041 Total Hardness EDTA Solution, 0.01 M
APPC4041-06	EZ4041 Total Hardness EDTA Solution, 0.02 M
APPC4041KTOL	Reagent Kit for EZ4041 Total Hardness Analyzer (10-250 mg/L)
APPC4041KTOM	Reagent Kit for EZ4041 Total Hardness Analyzer (50-500 mg/L)
APPC4041KTOS	Reagent Kit for EZ4041 Total Hardness Analyzer (100-1000 mg/L)
APPC4043KTO	Reagent Kit for EZ4043 Total Hardness Analyzer (0.25-10 mg/L)
APPC4043-04	EZ4043 Total Hardness EDTA Solution, 0.005 N
4457649	Calcium Standard Solution, 100 mg/L, 500 mL
APPC1022KTO4L	Reagent Kit for EZ1022 H_2O_2 Analyzer, 4 L (2 bottles of each reagent)

Order Information

Prod. No.	Description
APPC1024KTO	Reagent Kit for EZ1024 Iron Analyzer
APPC1031KTO	Reagent Kit for EZ1031 Phosphate Analyzer
APPC3007KTO	Reagent Kit for EZ3007 Fluoride Analyzer
APPC3507KTO	Reagent Kit for EZ3507 Fluoride Analyzer
APPC4004KTOL	Reagent Kit for EZ4003 & EZ4004 Total Alkalinity Analyzer (10-500 mg/L)
APPC7621-07	EZ7621 TN/TP Reference Solution 2, 1 L
APPC7632-07	EZ7632 TN/TP Reference Solution 2, 1 L
APPC7641-07	EZ7641 TN/TP Reference Solution 2, 1 L
APPC7642-07	EZ7642 TN/TP Reference Solution 2, 1 L
APPC7652-07	EZ7652 TN/TP Reference Solution 2, 1 L
APPC7653-07	EZ7653 TN/TP Reference Solution 2, 1 L
APPC7654-07	EZ7654 TN/TP Reference Solution 2, 1 L
APPC7663-07	EZ7663 TN/TP Reference Solution 2, 1 L
APPC7664-07	EZ7664 TN/TP Reference Solution 2, 1 L
APPC7665-07	EZ7665 TN/TP Reference Solution 2, 1 L
APPC7675-07	EZ7675 TN/TP Reference Solution 2, 1 L
APPC7676-07	EZ7676 TN/TP Reference Solution 2, 1 L
APPC7685-07	EZ7685 TN/TP Reference Solution 2, 1 L
APPC7686-07	EZ7686 TN/TP Reference Solution 2, 1 L
APPC76NP-01	EZ7600 TN/TP Series Colour Solution
APPC76NP-02	EZ7600 TN/TP Series Persulfate Solution
APPC76NP-03	EZ7600 TN/TP Series NaOH Solution
APPC76NP-04	EZ7600 TN/TP Series HCl Solution
APPC76NP-05	EZ7600 TN/TP Series Reducing Reagent
APPC76NP-06	EZ7600 TN/TP Series Reference 1 Solution
APPC2003KTO	Reagent Kit for EZ2003 Total Manganese Analyzer
APPC2003-05	EZ2003 Total Manganese Nitric Solution
APPC1001-01	EZ1001 Aluminium Buffer Solution
APPC1001-02A	EZ1001 Aluminium Color Indicator
APPC1001-03A	EZ1001 Aluminium Mixed Reagent
APPC1001-03B	EZ1001 Aluminium Ascorbic Acid
APPC1001KTO	Reagent Kit for EZ1001 Aluminium Analyzer
APPC100401	EZ1004 Boron Buffer Solution
APPC100402	EZ1004 Boron Glycerol Solution
APPC100402A	EZ1004 Boron Color Indicator
APPC1004KTO	Reagent Kit for EZ1004 Boron Analyzer
1417442	Aluminium Standard Solution, 100 mg/L
2305842	Aluminium Standard Solution, 10 mg/L, 100 mL
APPC1036-01	EZ1036 Sulfate Buffer Solution
APPC1036-02	EZ1036 Sulfate Barium Chloride Solution
APPC1036-03	EZ1036 Sulfate EDTA Solution
APPC1036KTO	Reagent Kit for EZ1036 Sulfate Analyser

**Part numbers may vary by country.*

Hach Single, Dual, and Multi Parameter Panels

SAVE TIME
Pre-assembled for simplified installation, up in minutes not days

SAVE MONEY
No engineering costs to design

LONG-TERM SUPPORT
Entire panel and components all from one vendor

Single Parameter Monitoring Panel (SPMP)
Our preassembled, ready-to-use Panels streamline the process of purchasing and startup. Available with SC4500 controller and your choice of CL17sc or TU5300sc EPA.

Dual Parameter Monitoring Panel (DPMP)
Hach Panels provide you with an expertly designed solution that makes installation straightforward and user friendly. Our most popular pairings of SC4500 with a Differential pH Probe and your choice of CL17sc or TU5300 EPA.

Dual Parameter Monitoring Panels Continued (Phosphax sc)
The Phosphax Panel combines the Phosphax sc, Filtrax, and SC1000 Controller into one convenient, pre-engineered, out-of-the-box solution for both indoor and outdoor use. It ensures compliance with evolving nutrient regulations, making it a complete package for efficient and effective phosphorus management.

Multi Parameter Panels (WDMP & WQMP)
Hach Multi Parameter Panels provide the same benefits of our Single and Dual Parameter Panels while saving you more time and more money. Several combinations of vital parameters with up to six sensors in multiple options to fit your unique needs.

Learn More

Samplers

AS950 Automatic Samplers Overview
All Weather & Refrigerated
Portable

HACH®
Be Right™

www.newteclab.mx
Tel. 667 7161023, 7160188
email: ecommerce@newteclab.mx

AS950 Automatic Samplers

Sampling has never been this easy.

Hach AS950 Automatic Samplers collect and store representative water samples for lab analysis. AS950 samplers are available in three bases: portable, indoor refrigerated, and all-weather refrigerated and are compatible with bottle sets of varying size, quantity, and material.

The AS950 is configurable to meet all sampling needs by combining a controller, base, bottle set, accessories and sampling program features.

Every AS950 is equipped with a peristaltic pump with spring-mounted rollers providing long tubing life and a liquid detect sensor for best-in-class volume accuracy, a USB connection and an auxiliary port for pulse or 4-20 inputs. Factory-installed options include sensor ports for Hach water quality, level or flow, a port for Modbus RS485 communication or rain sensor and an alternate non-contact liquid detect sensor.

Finally, inputs and outputs can be extended with the IO9001 for a single high-voltage relay or the IO9004 for a comprehensive set of analog and digital outputs and relays.

Easiest and most intuitive operation

The large full color display and intuitive programming give you access to all your programmable criteria on a single screen - eliminating scrolling through menus and supporting error-free operation.

Most convenient data transfer and programming available

The AS950 is the only sampler that utilizes a USB drive to upload and download data and copy programs from one sampler to another.

Confidence in your sampling process

The program status screen instantly communicates alarms, missed samples and program progress for quick and easy troubleshooting.

Resists corrosion

The All-Weather Refrigerated (AWR) sampler base is designed to endure humid and highly corrosive environments, minimizing damage caused by corrosive gases, rodents, and standing water to guarantee environmental integrity.

Accurate and consistent sample preservations

The custom-designed air-sensing thermostat controls temperature in accordance with USEPA and international guidelines, preserving samples regardless of outside temperatures and conditions.

Technical Data*

Sampling Features (all Samplers)	
Programs	Dual Programs: Up to 2 sample programs can be run sequentially, in parallel, or according to day of week scheduling; enabling a single sampler to function like multiple samplers
Sampling Mode	Pacing: Time Weighted, Flow Weighted, Time Table, Flow Table, Event Distrib.: Single bottle composite, multi-bottle composite, multi-bottle discrete, bottles per sample, samples per bottle or a combination of bottles per sample and samples per bottle
Flow Pacing	Sample Trigger with Pulse or 4-20 mA when using optional I/O accessory
Operating Mode	Continuous or non-continuous
Status Messages	Communicates what program is running, if there are any missed samples, when the next sample will be taken, how many samples remain, number of logged channels, time of last measurement, memory available, number of active channels, if alarms were triggered, when alarms were triggered, active sensors and cabinet temperature
Alarm	Configurable alarms that show on status screen and are recorded in diagnostics alarm logs. Alarms can be set for system diagnostics and logging such as program end, sample complete, missed samples and full bottle. Channel alarms are setpoint alarms for the recorded measurements (channels), such as pH, level and power supply voltage.
Manual Sampling	Initiates a sample collection independent of program in progress
Automatic Shutdown	Multiple Bottle Mode: After complete revolution of distributor arm (unless Continuous Mode is selected) Composite Mode: After preset number of samples have been delivered to composite container, from 1 to 999 samples, or upon full container.
Sample Volume	Programmable in 10 mL increments from 10 - 10,000 mL
Sample Interval	Select. in single increments from 1 to 9,999 flow pulses or 1 to 9,999 mins in one minute increments
Sample Trigger	When equipped with flow sensor or pH/temperature sensor or peripheral monitoring options, sampling can be triggered upon an upset condition when field selectable limits are exceeded
Data Logging	SAMPLE HISTORY - Stores up to 4000 entries for sample time stamp, bottle number and sample status (success, bottle full, rinse error, user abort, distributor error, pump fault, purge fail, sample timeout, power fail and low main battery). MEASUREMENTS - Stores up to 325,000 entries for selected measurement channels in accordance with the selected logging interval. EVENTS - Ability to store up to 2000 entries in Sample History logging. Records Power On, Power Fail, Firmware Updated, Pump Fault, Distributor Arm Error, Low Memory Battery, Low Main Battery, User On, User Off, Program Started, Program Resumed, Program Halted, Program Completed, Grab Sample, Tube Change Required, Sensor Communication Errors, Cooling Failed, Heating Failed, Thermal Error Corrected.
Diagnostics	View event and alarm logs as well as maintenance diagnostics
Sample Pump and Strainer (all Samplers)	
Sample Pump	High-speed peristaltic, dual roller, with 0.95 ID x 0.16 OD cm (3/8 ID x 5/8-in. OD) pump tube; Pump body IP37, Polycarbonate cover
Vertical Lift	8.5 m using 8.8 m maximum of 3/8-in. vinyl intake tube at sea level at 20 - 25 °C (68 - 77 °F)
Tubing	Pump tubing: 9.5 mm ID x 15.9 mm OD (3/8" ID x 5/8" OD) Silicone Intake tubing: 1.0 - 4.75 m minimum length, 1/4" or 3/8" ID Vinyl or 3/8" ID PTFE-lined Polyethylene with protective outer cover (black or clear)
Sample Volume Repeatability	Typical: ±5% of 200 mL sample volume with: 4.6 m (15 ft) vertical lift, 4.9 m (16 ft) of 3/8- in vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m (5000 ft) elevation
Sample Volume Accuracy	Typical: ±5% of 200 mL sample volume with: 4.6 m (15 ft) vertical lift, 4.9 m (16 ft) of 3/8- in. vinyl intake tube, single bottle, full bottle shut-off at room temperature and 1524 m (5000 ft) elevation
Sample Transport Velocity	0.9 m/s with 4.6 m vertical lift, 4.9 m of 3/8 inch vinyl intake tubing, 21 °C (69.8 °F) and 1524 m (5000 ft) elevation
Pump flow rate	4.8 L/min (1.25 gpm) at 1 m (3 ft) vertical lift with 3/8-in intake tube typical
Internal Clock	±1 second per day at 25 °C (77 °F)
Intake	Strainers: Choice of PTFE and 316 stainless steel construction, or all 316 stainless steel in standard size, high velocity, and low profile for shallow depth applications Purge: Air purged automatically before and after each sample; duration automatically compensates for varying intake line lengths Rinse: Intake line automatically rinsed with source liquid prior to each sample, from 1 to 3 rinses Retries or Fault: Sample collection cycle automatically repeated from 1 to 3 times if sample not obtained on initial attempt

**Subject to change without notice.*

AS950 All Weather Refrigerated Sampler

The AS950 All-Weather Refrigerated Sampler simplifies sampling with a large, full-color display for intuitive, single-screen programming, USB upload and download capabilities and the ability to copy programs sampler to sampler to save time on tedious programing, and an error alert and status screen to eliminate uncertainty and simplify troubleshooting.

The custom-designed air-sensing thermostat controls temperature in accordance with USEPA and international guidelines, preserving samples regardless of outside temperatures and conditions.

Hach's AWRS cabinet is designed to withstand harsh environments, while maintaining sample integrity. The cabinet itself features:

- An energy efficient top-mounted compressor that allows heat to escape into the air, rather than into the sampler cabinet
- IP24 rated enclosure that keeps out water and debris
- Optional battery backup and controller compartment heater

Learn More

AS950 Refrigerated Sampler

The AS950 Refrigerated Sampler is an easy and reliable solution for sample collection. With its large and intuitive display, USB data transfer capabilities, and simple one-screen programming, you can save time and streamline the entire sampling process.

Additionally, the AS950 Refrigerated Sampler accurately preserves your samples with an air-sensing thermostat designed to meet international and USEPA guidelines.

Equipped with an error message for easy troubleshooting and corrosion-resistant materials, the AS950 Refrigerated Sampler is the ideal choice for consistent and accurate sampling. Its large, color display, and USB upload and download capabilities make sampling more convenient and efficient.

Even in challenging environments, the AS950 Refrigerated Sampler ensures sample preservation and eliminates uncertainty with an available error warning and status screen.

Learn More

Technical Data*

	AS950 All-Weather Refrigerated Sampler (AWRS)	AS950 Refrigerated Sampler
Body material	Low-density Polyethylene with UV inhibitor	22 Gauge Steel (optional Stainless Steel) with vinyl laminate over-coating (Sampler)
Refrigeration Components and Plumbing	Corrosion protected with conformal all exposed copper tubing is insulated to avoid sweating and condensation	Corrosion protected with conformal all exposed copper tubing is insulated to avoid sweating and condensation
Cooling system	Top mounted compressor and fan-forced air cooled condenser; 11/5 HP 115 VAC: 115 °C (239 °F) thermal overload protector, 7.1 locked rotor amps; 230 VAC: 120 °C (248 °F) thermal overload protector, 7.6 A peak start current; 3-sided wraparound plate type evaporator; Rigid foam insulation: 3 in. (7.6cm) sides, 5 in. (12.7cm) top, 6 in. (15.2cm) bottom; Lockable lid to prevent tampering with programming; Recovery Time: Sampler temperature recovers to 4°C within 5 minutes after door has been held open for one minute in 24°C (75°F) ambient environment while in an active cooling cycle; Pull Down Time: from 24°C (75°F) to 4°C (39°F), 20 minutes; Temperature Control: 4 (±0.8) °C (39 (±1.5) °F)	1/7 HP, 75 Watt, 400 BTU/hr compressor, 120 CFM condenser fan, three-sided wraparound plate type evaporator, rigid foam insulation, air sensing thermostat capable of maintaining sample liquid at 4°C (39°F) in ambient temperature to 49°C (120°F) maximum; accurate to ±0.8°C (1.5°F), magnetic door seal
Temperature	Operating: AWRS: 0 - 50 °C (32 - 122 °F) AWRS with optional controller compartment heater: -40 - 50 °C (-40 - 122 °F) AWRS with controller compartment heater and AC battery back up: -15 - 40 °C (5 - 104 °F) Storage: -30 - 60 °C (-22 - 140 °F)	Operating: 0 - 50 °C (32 - 122 °F) Storage: -40 - 60 °C (-40 - 140 °F)
Dimensions	76 x 81 x 130 cm (30 x 32 x 51 in.)	61 x 61 x 112 cm (24 x 24 x 44 in.)
Weight	86 kg (189.6 lbs)	63 kg (138.9 lbs)
Certifications	cETLus (115 V, 60 Hz model) CE (230 V, 50 Hz model)	Refrigerator: cULus (115 V, 60 Hz model) CE (230 V, 50 Hz model) 15 V Power Adapter: cETLus (115 V, 50/60 Hz model) CE (230 V, 50 Hz model)
Sample Container	SINGLE BOTTLE: (1) 10 L (2.5 gal) glass or polyethylene or (1) 21 L (5.5 gal) polyethylene MULTIPLE BOTTLES: (2) 10 L (2.5 gal) polyethylene or glass (4) 10 L (2.5 gal) polyethylene or glass (8) 2.3 L (0.6 gal) polyethylene or (8) 1.9 L (0.5 gal) glass (12) 2 L (0.5 gal) polyethylene (24) 1 L (0.3 gal) polyethylene or (24) 350 mL (12 oz.) glass	
Power Requirements (Voltage)	115/230 VAC	
Power Requirements (Hz)	50/60 Hz	
AS950 Controller		
Housing Material	PC/ABS blend, NEMA 4X, 6, IP68, corrosion and ice resistant (Controller)	
Display	1/4 VGA, Color; self-prompting/menu-driven program	
User Interface	Membrane switch keypad with 2 multiple function soft keys	
Lock Function	Access code protection prevents tampering	
Memory	Sample history: 4000 records; Data log: 325,000 records; Event log: 2000 records	
Communication Capabilities	USB and optional RS485 (Modbus)	
Inputs	One 0/4-20 mA input for flow pacing	
Certifications	Controller: CE, KC, RCM	

**Subject to change without notice.*

Order Information

ASA.XXXXXXXXXX	All-Weather Refrigerated Sampler with AS950 Controller, available in various configurations and with several factory installed options. Please visit hach.com or contact Hach for more information.
ASR.XXXXXXXXXX	Refrigerated Sampler with AS950 Controller, available in various configurations and with several factory installed options. Please visit hach.com or contact Hach for more information.

Bottle Options and Accessories

1918	Bottle, 2.5 Gallon/10L, Polyethylene With Cap
737	Set of (24) 1 Liter Polyethylene Bottles with Caps
2318	Bottle Set of 2, 2.5 Gallon Glass with Caps
	Other container options are available.
1511	Bottle Tray for 8/24 Bottle Sampling
1322	Retainer for (24) 1 L polyethylene bottles and (8) bottle sets
3527	Composite Sampling Extension Tube
8838	Composite Sampling Tube Support with Tube
8847	Full Container Shut-off for Refrigerated and All Weather Samplers
8986	Composit Tube Support

Distributors

8562	Distributor with arm for 12 and 24 bottle configurations
8565	Distributor with Arm for 8 Bottle Sampling in Refrigerated Base
8568	Distributor with Arm for 2 and 4 Bottle Configurations

Tubing and Strainers

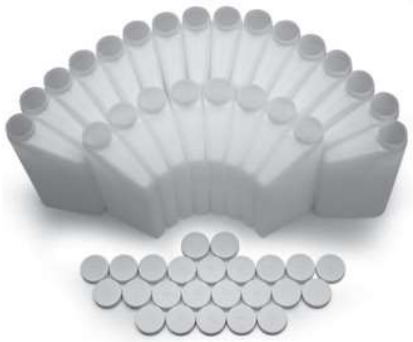
920	Vinyl Tubing, Intake, 3/8 inch Interior Diameter, 25 ft
922	7 m PTFE-lined Polyethylene tubing, 3/8" ID (requires Connection Kit 2186)
926	Strainer, PTFE/Stainless Steel
2070	Strainer, 1" outer diameter x 8" long, 316 SS
2071	Strainer, .406 Outer Diameter., 316 SS
2186	Connection Kit, PTFE/Polyethylene Tubing
4600-15	Silicone Pump Tubing, 3/8" Inner Diameter, 15 ft. Roll
4600-50	Silicone Pump Tubing, 3/8" Interior Diameter, 50 ft. Roll
8957	Pump Tube Insert, 900 Refrigerated Samplers
9501400	Pump tube insert, non-contact liquid detect

Inputs/Outputs

9494500	IO9001 Module (connects through auxiliary port), includes 1 relay (high voltage)
9494600	IO9004 Module (connects through auxiliary port), includes multiple 0/4-20 mA outputs and inputs
8528500	Cable, auxiliary, multi-purpose half, 7 pin, 2.7 m (9 ft)
8528501	Cable, auxiliary, multi-purpose half, 7 pin, 7.6 m (25 ft)

Accessories

6613100	Anchor Kit Set
6989	Insulated Weatherguard Enclosure
9504700	USB Cable, A to A



AS950 Portable Sampler

The AS950 Portable Sampler's lightweight design, low power requirements, and mobility make it a reliable collection tool for the field. Applications include stormwater, environmental, industrial pre-treatment, and evidence-gathering for viral assessment (COVID-19).

The AS950 is an essential tool for viral detection in wastewater:

- Representative sampling is critical to a reliable COVID-19 community spread program.
- COVID-19 sampling of wastewater helps in detection (days before symptoms).
- Simple setup with multiple power options:
  - Portable Compact Sampler Bundle, 12V, with 2.5 Gallon Bottle
  - Portable Compact Sampler Bundle, 115V, with 2.5 Gallon Bottle

For stormwater sampling, the Portable Sampler provides:

- Up to two different programs defined by user conditions (Rainfall or pH thresholds).
- Varying sample sizes at user-specified time intervals:
- Time-weighted or flow volume increments.
- Flow-weighted.
- Collection over an entire run-off event (determined by rain or flow sensor).

For industrial pre-treatment monitoring, the Portable Sampler features:

- A non-contact liquid detect to prevent cross-contamination.
- Quick pump tubing replacement with-out any tools.
- Optional pH sensor to initiate sampling when thresholds exceed your limits.

Key features:

- Standard memory and USB allow program uploads and data to be logged and transferred - no laptop needed!
- Large full-color intuitive display for virtually error-free programming.
- A rugged and reliable pump minimizes maintenance and downtime.

Three base sizes to meet various applications:

- Compact, for smaller, maintenance hole sampling.
- Standard, for the majority of applications.
- Large, for high capacity bottle composite sampling.

Learn More

Technical Data*

Sampler	
Body material	Impact resistant ABS plastic, 3-section construction Double-walled base with 2.54 cm insulation, direct ice contact with bottles (Sampler)
Sample Container	STANDARD BASE CAPACITY: (24) 1 L (0.26 gal) polyethylene or (24) 350 mL (11.83 oz) glass bottles (8) 2.3 L (0.6 gal) polyethylene or (8) 1.9 L (0.5 gal) glass bottles (4) 3.8 L (1 gal) polyethylene or (4) 3.8 L (1 gal) glass bottles (2) 3.8 L (1 gal) polyethylene or (2) 3.8 L (1 gal) glass bottles (1) 21 L (5.5 gal) polyethylene composite bottle or (1) 15 L (4 gal) polyethylene composite bottle or (1) 20 L (5.25 gal) polyethylene or (1) 10 L (2.5 gal) polyethylene or (1) 10 L (2.5 gal) glass COMPACT BASE CAPACITY: (24) 575 mL (19.44 oz) polyethylene bottles (8) 950 mL (32.12 oz) glass bottles (1) 10 L (2.5 gal) polyethylene bottle (1) 10 L (2.5 gal) glass bottle COMPOSITE BASE CAPACITY: (1) 21 L (5.5 gal) polyethylene bottle ICE CAPACITY: Compact Base: 3.9 kg (8.5 lb.) with (24) 575 mL PE bottles Standard Base: 14.5 kg (32 lb.) with (24) 350 mL glass bottles
Temperature	Operating: 0 - 49 °C (32 - 120.2 °F) Storage: -40 - 60 °C (-40 - 140 °F)
Power Requirements (Voltage)	12 VDC
Dimensions	Standard Base: 50.5 cm x 69.4 cm (19.9 x 27.3 in.) Compact Base: 44.1 x 61 cm (17.4 x 24 in.) Composite Base: 50.28 x 79.75 cm (19.8 x 31.4 in.)
Weight	Standard: 15 kg (33.1 lbs) with 24x 1 L (0.26 gal) Polyethylene bottles; 14.8 kg (32.6 lbs) with 1x10 L (2.5 gal) Polyethylene bottle Compact Base: 12.2 kg (26.9 lbs) with 24x 575 mL (19.44 oz) Polyethylene bottles; 12.9 kg (28.4 lbs) with 1x 10 L (2.5 gal) Polyethylene bottle Composite Base: 15 kg (33.1 lbs) with 1x 21 L (5.5 gal) Polyethylene bottle
AS950 Controller	
Housing Material	PC/ABS blend, NEMA 4X, 6, IP68, corrosion and ice resistant (Controller)
Display	1/4 VGA, Color; self-prompting/menu-driven program
User Interface	Membrane switch keypad with 2 multiple function soft keys
Lock Function	Access code protection prevents tampering
Memory	Sample history: 4000 records; Data log: 325,000 records; Event log: 2000 records
Communication Capabilities	USB and optional RS485 (Modbus)
Inputs	One 0/4-20 mA input for flow pacing
Certifications	Controller: CE, KC, RCM

**Subject to change without notice.*

Order Information

ASP.XXXXXXXXXX Portable Sampler with AS950 Controller, available in various configurations and with several factory installed options. Please visit hach.com or contact Hach for more information.

Bases for Portable Sampler

8975	Compact insulated base for 900 series portable sampler
8976	Standard Insulated Base for 900 Series Portable Sampler
8561	Composite insulated base for 6 gallon polyethylene container.

Bottle Options and Accessories

1918	Bottle, 2.5 Gallon/10L, Polyethylene With Cap
6494	Container, 5.5 Gallon (21 Liter) Polyethylene
737	Set of (24) 1 Liter Polyethylene Bottles with Caps
1369	Bottle Set of 24, 575 mL, Polyethylene With Caps
2348	Bottle Set of 8, 950 mL, Glass with Caps
2189	Retainer for Set of 24 350 mL Glass Bottles
1422	Retainer for 8 or 24 Set Polyethylene/Glass Bottles
2347	Retainer/Positioner,(8) 950 mL Glass
1502	Container Support
8996	Tubing Support, full bottle shut off

Distributors

8582	Distributor for 24 Bottle Standard and 12 Bottle Bases
8580	Distributor with Arm for 24 Bottle Portable Compact Sampling
8584	Distributor with Arm for 2, 4 or 8 Bottle Sampling with Compact Portable Base

Tubing and Strainers

920	Vinyl Tubing, Intake, 3/8 inch Interior Diameter, 25 ft
922	7 m PTFE-lined Polyethylene tubing, 3/8" ID (requires Connection Kit 2186)
926	Strainer, PTFE/Stainless Steel
2070	Strainer, 1" outer diameter x 8" long, 316 SS
2071	Strainer, .406 Outer Diameter., 316 SS
2186	Connection Kit, PTFE/Polyethylene Tubing
4652	Strainer For High Velocity/Shallow Depth Applications
4600-15	Silicone Pump Tubing, 3/8" Inner Diameter, 15 ft. Roll
4600-50	Silicone Pump Tubing, 3/8" Interior Diameter, 50 ft. Roll
8964	Pump Tube Insert for Model 900 Portable Sampler
9501400	Pump tube insert, non-contact liquid detect

Inputs/Outputs

9494500	IO9001 Module (connects through auxiliary port), includes 1 relay (high voltage)
9494600	IO9004 Module (connects through auxiliary port), includes multiple 0/4-20 mA outputs and inputs
8528500	Cable, auxiliary, multi-purpose half, 7 pin, 2.7 m (9 ft)
8528501	Cable, auxiliary, multi-purpose half, 7 pin, 7.6 m (25 ft)

Accessories

1355	Portable Sampler Suspension Harness
9542	Manhole Support Bracket/Spanner, 18-27 Inches
9557	Manhole Support Bracket/Spanner, 28-48 Inches
5713000	Manhole Support Bracket, 18-27", for Portable Sampler
6987	Insulated Weatherguard Enclosure
6992	Insulated Weatherguard Enclosure
8713200	Solar Module, 10 Watt with Regulator
8754400	12 Volt Lead Acid Battery with 3 pin connector

Service, Training & Methods

Hach Service Overview

The Plus Program

Care Advantage

Hach Customer Training

Hach Methods Quick Reference Guide

Pick & Ship

HACH®

Be Right™

www.newteclab.mx
Tel. 667 7161023, 7160188
email: ecommerce@newteclab.mx

HACH® SERVICE

Get the Service You Need from the Experts You Trust

Having a service plan on your Hach instruments is akin to adding another team member. That's because we're here to help you maintain operational stability, reduce compliance risk, maximize instrument uptime, and ensure data integrity. With regular maintenance visits and validating documentation, you're safeguarding your instrument's accuracy and meeting compliance requirements.

Plus, our expertise runs deep. Technical support is a quick call away and our bench and field service teams have you on the radar.

Confidence delivered, that's Hach Service.

Service Overview

	Essential Protection	Premium Protection	Customized Protection
Benefits	Maximum uptime Extend instrument lifetime Confidence in your results	No unexpected costs Priority scheduling Fully covered repairs	User maintenance Flexible financing options Tailored service options
Included In Plan	Instrument calibration Preventative maintenance Automatic alerts Software updates Smart monitoring Proactive support Wear parts included	Instrument calibration Preventative maintenance Start up Automatic alerts Software updates Smart monitoring Proactive support Wear parts included	Instrument calibration Preventative maintenance Start up Automatic alerts Software updates Smart monitoring Proactive support Wear parts included
Repairs	Billable repairs	Instrument repairs Spare part replacement	Instrument repairs Spare part replacement
Customization	—	—	Embedded service experts Financing options Tenders Multi-site service support

Service Partnership Overview

Hach provides flexible solutions that are tailored to your needs from full coverage, on-site support to economical, comprehensive service at the Hach Service Center. No matter your selection, you get expert care, advanced diagnostics, and priority support to keep your instruments running smoothly. Simply choose the **Field Service** or **Bench Service** option that meets the unique needs of your instruments and facility.

Field Service Partnership

The Field Service Partnership (FSP) is a full coverage plan available for instruments that can be repaired on site. This plan is typically purchased for online instruments that are outside of the factory warranty period. This is the ideal option for those who value on-site service and are looking for all-inclusive service that eliminates unplanned expenses.

Field Service Partnership includes:

- On-site maintenance, calibration, and certification service according to the specific instrument requirements
- Advanced maintenance utilizing special tools and in-depth diagnostics exclusive to Hach Service
- Full coverage for on-site repairs
- Priority response time
- Travel cost
- Priority status for remote troubleshooting with live technical specialists

Bench Service Partnership

The Bench Service Partnership (BSP) provides all-inclusive service at the Hach Service Center. This plan is available for most instruments but is typically purchased for laboratory instruments and online probes that are easy to ship. This is a great option for those looking for the most economical full-coverage plan or those with a small number of instruments.

Bench Service Partnership includes:

- Maintenance, calibration, and certification at the Hach Service Center according to the specific instrument requirements
- Full coverage for repairs at the Hach Service Center
- Free loaner instruments during service (subject to availability)
- Advanced maintenance utilizing special tools and in-depth diagnostics exclusive to Hach Service
- Priority 5-business-day turnaround and free 2-day return shipping
- Priority status for remote troubleshooting with live technical specialists

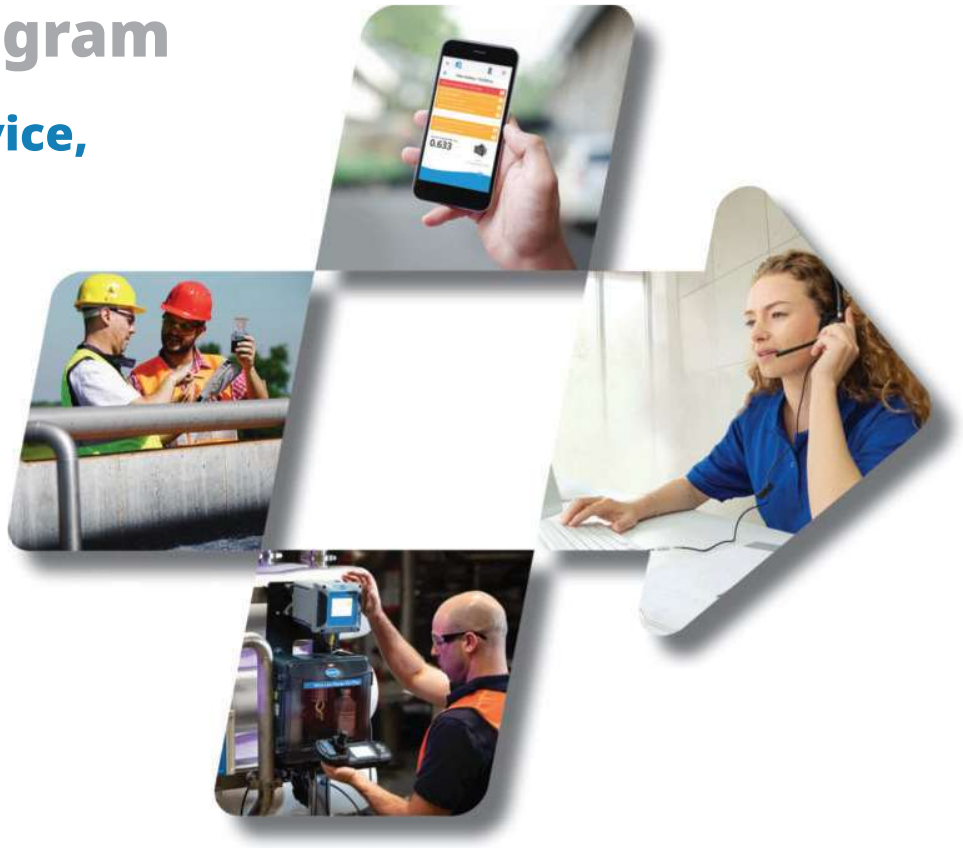
Additional Service Partnership Options

WarrantyPlus Partnership	Preventative Maintenance Partnership	BenchPlus Partnership
The WarrantyPlus Partnership adds value to a factory warranty in year one, similar to an FSP, with commissioning and start-up included.	The Preventative Maintenance Partnership provides on-site maintenance service and is available for most instruments.	The BenchPlus Partnership is a full coverage option available for instruments that can be maintained, but not repaired, on site.
(Available for select instruments)	(Also available for Bench Service)	(Available for select instruments)

Learn More

The Plus Program

Equipment, Service, Commissioning, and Supplies In One Monthly Subscription



The Plus Program™ is your comprehensive water monitoring bundle that provides you Hach's collection of innovative instruments and measurement technologies, expert customer support and maintenance, and on-demand supplies and consumables all in a budget-friendly monthly subscription.

Minimized Upfront Costs

The Plus Program's flexible subscription structure lets you buyout, renew, or return your instrument at the end of your contract, reducing your upfront costs and maximizing your budget.

World Class Support

Hach's worldwide fleet of technical support, field service, and central service teams are available to you for product questions, field maintenance, and repairs so you can maximize your uptime.

Connected Instrumentation

Unlock your facility's full potential with Hach's expansive collection of enabled water monitoring devices, giving you full visibility into your plant's health and identify problems before they happen.

On-Demand Supply Delivery

Get your supplies, including reagents, maintenance kits, and other essentials, delivered on-demand to take out all the stress of your processes and have everything you need shipped to your door.

Learn More

Care Advantage

The Complete Service Solution For All Your Instruments

The all-inclusive Hach package of preventative and scheduled regular maintenance, remote monitoring, training, servicing, and repairs of all your Hach instruments, at all your sites, in one convenient agreement. Not only do you ensure the longevity and optimum functioning of your fleet of Hach equipment, but you take away the hassle, cost, and risk of finding the resources to do so.

From set-up to routine maintenance, and everything in between, your Care Advantage contract ensures your instruments, software, and chemistries are always available and working—including:

- Replacement of parts, hardware checks, and inspection of internal components.
- Onsite or virtual training of your internal teams by dedicated Hach specialists.
- Routine checks to assure your critical instruments are working at peak efficiency.
- Cleaning tasks, routine inspections, and calibrations of your Hach instruments.
- Work order and logbook evaluation to keep you audit ready and compliant.
- Ongoing reports and maintenance schedules to provide your team with the insights they need.

Care Advantage is Hach's comprehensive solution to optimizing the performance and reliability of your equipment. By choosing Care Advantage, you eliminate the complexity and costs of managing your resources in-house, ensure you are in front of any costly downtime, and equip your team with actionable insights so they can keep your facility operational and compliant.

Learn More

Hach Customer Training

Training for the Way You Want to Learn

Our instructors combine their expertise with Hach's storied legacy as a water analysis leader. You'll learn with people who understand water and your goals.

Hachtraining@hach.com

Customized Trainings: Our Most Popular Option

Let us design a course to meet your needs at a time and place that is convenient for you.

- Onsite at Your Facility
- Hach Facility-Loveland, CO
- Virtually with Real-Time, Live Instructors

Choose from any combination of these options:

Lab/Portable Hach Instruments
Process/Online Hach Instruments
Parameters for Your Industry

Learn More

Chlorine Analysis Workshop: Monthly Virtual Course with Live Instructor

- Course includes the DR300 Pocket Colorimeter (LR/HR or MR/HR), reagents, accessories, and training.
- Already have the DR300 Pocket Colorimeter? Use *CLASSONLY* code at signup for the discounted workshop only!

This workshop is designed to offer a simple overview of the use of chlorine disinfectants. We will discuss the proper sampling techniques, colorimetry theory, and hand-held instrument measuring procedures. The theory will be demonstrated with hands-on testing that includes unknown samples, spiking and standards. At the conclusion of the course the attendee will have the tools needed to sample and report disinfection values with confidence.

Learn More

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- Controllers
- Lab Products
- Process Products
- Water Quality Parameter Training
- Water Quality Technology Training

1 Year Access Per Person

Learn More

Hach Methods Quick Reference Guide

The tables on the following 4 pages list test ranges, methods of analysis, and corresponding reagent set Product Numbers.

The complete procedures are available on www.hach.com. The ranges given are for the pre-calibrated instrument readout; higher ranges can be analyzed by sample dilution.

Parameters marked "EPA" are EPA-approved, accepted, or equivalent for reporting purposes; sample pretreatment may be required on some procedures. If no reagent set is listed for a parameter, order needed reagents and supplies separately.

Part numbers may vary by country.

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
Alkalinity, Total		TNTplus	Colorimetric	10239	25 - 400 mg/L $CaCO_3$	•	•	•					**TNT870**
Alkalinity, LR		Chemkeys	Colorimetric	10280	20 - 200 mg/L $CaCO_3$						•	•	**8636200**
Alkalinity, HR		Chemkeys	Colorimetric	10283	200 - 700 mg/L $CaCO_3$						•	•	**8636100**
Aluminum		Powder Pillows	Aluminon	8012	0.008 - 0.800 mg/L Al	•	•	•	•	•			**2242000**
Aluminum		Powder Pillows	Eriochrome Cyanine R	8326	0.002 - 0.250 mg/L Al	•	•	•					**2603700**
Aluminium		TNTplus	Chromazurol S	10215	0.02 - 0.50 mg/L Al	•	•	•					**TNT848**
Ammonia		Powder Pillows	Salicylate	8155	0.01 - 0.50 mg/L NH_3-N	•	•	•	•	•			**2668000**
Ammonia	Yes	Solution	Nessler	8038	0.02 - 2.50 mg/L NH_3-N	•	•	•					**2458200**
Ammonia		Test 'N Tube	Salicylate	10023	0.02 - 2.50 mg/L NH_3-N	•	•	•	•				**2604545**
Ammonia		Test 'N Tube	Salicylate	10031	0.4 - 50.0 mg/L NH_3-N	•	•	•	•				**2606945**
Ammonia, Nitrogen	Yes	TNTplus	Salicylate	10205	0.015 - 2.00 mg/L NH_3-N	•	•	•					**TNT830**
Ammonia, Nitrogen		TNTplus	Salicylate	10205	0.50 - 5.00 mg/L NH_3-N	•	•	•					**TNT829**
Ammonia, Nitrogen	Yes	TNTplus	Salicylate	10205	1 - 12 mg/L NH_3-N	•	•	•					**TNT831**
Ammonia, Nitrogen	Yes	TNTplus	Salicylate	10205	2 - 47 mg/L NH_3-N	•	•	•					**TNT832**
Ammonia, Nitrogen		TNTplus	Salicylate	10205	10 - 100 mg/L NH_3-N	•	•	•					**TNT837**
Ammonia, Nitrogen	Yes	TNTplus	Salicylate	10205	47 - 130 mg/L NH_3-N	•	•	•					**TNT833**
Ammonia, Nitrogen	Yes	TNTplus	Salicylate	10301	100 - 1800 mg/L NH_3-N	•	•	•					**TNT834**
Anammox Activity		TNTplus	Heme	10304	0 - 1000 mAbs	•	•	•					**TNT882KTO**
Ammonia, Free; Monochloramine		Chemkeys	Indephenol	10269	Free Ammonia: 0.05 - 0.50 mg/L NH_3-N Monochloramine: 0.04 - 4.00 mg/L Cl_2						•		**9429600**
Ammonia, Total		Chemkeys	Indophenol	10268	0.05 - 1.50 mg/L NH_3-N						•	•	**9425200**
Barium		Powder Pillows	Turbidimetric	8014	2 - 100 mg/L Ba	•	•	•					**1206499**
Benzotriazole, Tolyltriazole		Powder Pillows	UV Photolysis	8079	1.0 - 20.0 mg/L Tolyltriazole	•	•	•	•				**2141299**
Boron		TNTplus	Azomethine-H	10274	0.05 - 2.50 mg/L B	•	•	•					**TNT877**
Total Chlorine, Bromine, Iodine	Yes	Powder Pillows	DPD	8167	0.02 - 2.00 mg/L Cl_2	•	•	•	•	•			**2105669**
Total Chlorine, Bromine, Iodine	Yes	Accuvac	DPD	8167 Chlorine	0.02 - 2.00 mg/L Cl_2	•	•	•	•	•			**2503025**
Cadmium		Powder Pillows	Dithizone	8017	0.7 - 80 µg/L Cd	•	•	•					**2242200**
Cadmium		TNTplus	Cadion	10217	0.02 - 0.30 mg/L Cd	•	•	•					**TNT852**
Oxygen Scavengers		Solution	Iron Reduction	8140	5 - 600 Carbohydrazide	•	•	•	•				**2446600**

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
Chloramine, Mono		Powder Pillows	Indophenol	10171	0.04 - 4.50 mg/L Cl_2	•	•	•	•	•			2802246
Monochloramine		Chemkeys	Indophenol	10270	0.04 - 4.00 mg/L Cl_2						•	•	9429400
Chloride		Solution	Mercuric Thio-cyanate	8113	0 - 25.0 mg/L Cl^-	•	•	•					2319800
Chloride		TNTplus	Iron(III)-thiocy-anate	10291	1 - 70 mg/L Cl 70 - 1000 mg/L Cl	•	•	•					TNT879
Free Chlorine, Chlorine Dioxide	Yes	Powder Pillows	DPD	8021	0.02 - 2.00 mg/L Cl_2	•	•	•	•	•			2105569
Free Chlorine, Chlorine Dioxide	Yes	Accuvac	DPD	8021	0.02 - 2.00 mg/L Cl_2	•	•	•	•	•			2502025
Chlorine, Free		Solution	DPD	10059	0.03 - 5.00 mg/L Cl_2 for CL17, 0.03 - 10.00 mg/L Cl_2 for CL17sc	•	•	•					2556900
Chlorine, Free	Yes	TNTplus	DPD	10231	0.05 - 2.00 mg/L Cl_2	•	•	•					TNT866
Chlorine, Free	Yes	Powder Pillows	DPD	8021	0.1 - 10.0 mg/L Cl_2	•	•	•	•	•			1407099
Chlorine, Total	Yes	TNTplus	DPD	10231, 10232	0.05 - 2.00 mg/L Cl_2	•	•	•					TNT867
Chlorine, Free		Chemkeys		10260	0.04 - 4.00 mg/L Cl_2						•	•	9429000
Chlorine	Yes	Solution	DPD	8370	2 - 500 µg/L Cl_2	•	•	•					2563000
Chlorine, Total		Solution	DPD	8370	0.03 - 5.00 mg/L Cl_2 for CL17, 0.03 - 10.00 mg/L Cl_2 for CL17sc	•	•	•					2557000
Total Chlorine, Bromine, Iodine	Yes	Powder Pillows	DPD	8167 LR	0.02 - 2.00 mg/L Cl_2	•	•	•	•	•			1406499
Chlorine, Total		Chemkeys		10260	0.04 - 10 mg/L Cl_2						•	•	9429100
Chlorine Dioxide	Yes		DPD/Glycine	10126	0.04 - 5.00 mg/L ClO_2	•	•	•	•	•			2770900
Chlorine Dioxide			Chlorophenol Red	8065	0.01 - 1.00 mg/L ClO_2	•	•	•					2242300
Chromium	Yes	Powder Pillows	1,5-Diphenyl-carbohydrazide	8023	0.010 - 0.700 mg/L Cr^{6+}	•	•	•	•				1271099
Chromium, Hexavalent Chromium, Total	Yes	TNTplus	1,5-Diphenyl-carbohydrazide	10218 (Cr^{6+})	0.03 - 1.00 mg/L Cr	•	•	•					TNT854
Chromium, total		Powder Pillows	Alkaline Hy-pobromite Oxidation	8024	0.01 - 0.70 mg/L Cr	•	•	•	•				2242500
Cobalt, Nickel			PAN	8078	0.01 - 2.00 mg/L Co	•	•	•					2651600
COD (Chemical Oxygen Demand)		Test 'N Tube	Reactor Digestion	8000	0.7 - 40.0 mg/L	•	•	•					2415825
COD (Chemical Oxygen Demand)	Yes	Test 'N Tube	Reactor Digestion	8000	3 - 150 mg/L	•	•	•	•				2125825
COD (Chemical Oxygen Demand)	Yes	Test 'N Tube	Reactor Digestion	8000	20 - 1500 mg/L	•	•	•	•				2125925
COD (Chemical Oxygen Demand)		Test 'N Tube	Reactor Digestion	8000	200 - 15,000 mg/L	•	•	•	•				2415925
COD (Chemical Oxygen Demand)		Test 'N Tube	Manganese III Reactor Digestion	10067	30 - 1000 mg/L	•	•	•	•				2623425
Chemical Oxygen Demand (COD), Mercury-Free		TNTplus	Reactor Digestion	8000	25 - 1000 mg/L COD	•	•	•					TNT825
COD (for samples up to 20000 mg/L Chloride)		TNTplus	Reactor Digestion	10299	7 - 70 mg/L COD	•	•	•					TNT815

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
COD (for samples up to 20000 mg/L Chloride)		TNTplus	Reactor Digestion	10299	70 - 1000 mg/L COD	•	•	•					TNT816
COD (Chemical Oxygen Demand)		TNTplus	Reactor Digestion	10211	1 - 60 mg/L COD	•	•	•					TNT820
COD (Chemical Oxygen Demand)	Yes	TNTplus	Reactor Digestion	8000	3 - 150 mg/L COD	•	•	•					TNT821
COD (Chemical Oxygen Demand)	Yes	TNTplus	Reactor Digestion	8000	20 - 1500 mg/L COD	•	•	•					TNT822
COD (Chemical Oxygen Demand)		TNTplus	Reactor Digestion	10212	250 - 15000 mg/L COD	•	•	•					TNT823
COD		TNTplus	Reactor Digestion	10212	5,000 - 60,000 mg/L	•	•	•					TNT824
Copper		Powder Pillows	Porphyrin	8143	2 - 210 µg/L Cu	•	•	•	•				2603300
Copper	Yes	Powder Pillows	Bichinchon-inate	8506	0.04 - 5.00 mg/L Cu	•	•	•	•				2105869
Copper		TNTplus	Bathocuproin	10238	0.1 - 8.0 mg/L Cu	•	•	•					TNT860
Copper		Chemkeys		10272	0.06 - 5.00 mg/L Cu						•	•	9429200
Cyanide		Powder Pillows	Pyridine-Pyrazalone	8027	0.002 - 0.240 CN^-	•	•	•	•				2430200
Cyanide	Yes	TNTplus	Pyridine barbituric acid	10265	0.01 - 0.6 mg/L CN	•	•	•					TNT862
Cyanuric Acid		Powder Pillows	Turbidimetric	8139	5 - 50 mg/L		•	•	•				246066
Dissolved Oxygen		Accuvac	Indigo Carmine	8316	6 - 800 µg/L O_2	•	•	•	•				2501025
Dissolved Oxygen		Accuvac	HRDO	8166	0.3 - 15.0 mg/L O_2	•	•	•	•	•			2515025
Dissolved Iron		Chemkeys		10281	0.05 - 3.00 mg/L Fe						•	•	8636000
Fluoride	Yes	Solution	SPADNS 2	10225	0.02 - 2.00 mg/L F^-	•	•	•	•				2947549
Fluoride	Yes	TNTplus	SPADNS 2	10225	0.02 - 2.00 mg/L F^-	•	•	•	•				2527025
Fluoride	Yes	TNTplus	SPADNS 2	10225	0.1 - 2.5 mg/L F	•	•	•					TNT878
Fluoride	Yes	Solution	SPADNS	8029	0.02 - 2.00 mg/L F^-	•	•	•	•				44449
Fluoride	Yes	LCK	SPADNS	8029	0.02 - 2.00 mg/L F^-	•	•	•	•				2506025
Formaldehyde		Solution	MBTH	8110	3 - 500 µg/L CH_2O	•	•	•					2257700
Formaldehyde		TNTplus	Acetylacetone	10295	0.5 - 10 mg/L H_2CO	•	•	•					TNT871
Hardness		Colorimeter	Chlorophos-phonazo	8374	8 - 1000 µg/L $CaCO_3$	•	•	•					2603100
Hardness, Ca and Mg		Solution	Calmagite Colorimetric	8030	0.05 - 4.00 mg/L $CaCO_3$	•	•	•	•				2319900
Hardness, LR		Chemkeys		10284	3 - 100 mg/L $CaCO_3$						•	•	8636400
Hardness, HR		Chemkeys		10285	90 - 750 mg/L $CaCO_3$						•	•	8636300
Water Hardness		TNTplus	Metalphthalein	10293	20 - 350 mg/L as $CaCO_3$ 5 - 100 mg/L Ca 3 - 50 mg/L Mg	•	•	•					TNT869
Hydrazine		Solution	p-Dimethylam-inobenzalde-hyde	8141	4 - 600 µg/L N_2H_4	•	•	•	•				179032
International Bitter Units		TNTplus	Analogous MEBAK and ASBC	10288	≥2 International Bitter Units	•	•						TNT817
Iron, Ferrous Iron, Total	Yes	TNTplus	1, 10 Phenanthroline	10229	0.2 - 6.0 mg/L Fe	•	•	•					TNT858
Iron		Solution	FerroZine	8147	0.009 - 1.400 mg/L Fe	•	•	•	•				230166
Iron		Solution	FerroZine	8147	0.009 - 1.400 mg/L Fe	•	•	•					230149

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
Iron, Ferrous		Powder Pillows	1, 10 Phenan-throline	8146	0.02 - 3.00 mg/L Fe^{2+}	•	•	•	•				103769
Iron		Powder Pillows	FerroMo	8365	0.01 - 1.80 mg/L Fe	•	•	•	•				2544800
Iron		Powder Pillows	TPTZ	8112	0.012 - 1.800 mg/L Fe	•	•	•	•	•			2608799
Iron	Yes	Powder Pillows	FerroVer	8008	0.02 - 3.00 mg/L Fe	•	•	•	•	•			2105769
Iron	Yes	Accuvac	FerroVer	8008	0.02 - 3.00 mg/L Fe	•	•	•	•	•			2507025
Iron			1.10-Phenanth-roline		0.01 - 1 mg/L Fe	•	•						HPT251
Lead		Solution	LeadTrak	8317	5 - 150 µg/L Pb	•	•	•					2375000
Lead	Yes		Dithizone	8033	3 - 300 µg/L Pb	•	•	•					2243100
Lead		TNTplus	PAR	10216	0.1 - 2.0 mg/L Pb	•	•	•					TNT850
Manganese		LCW	PAN	8149	0.006 - 0.700 mg/L Mn	•	•	•	•				2651700
Manganese		Solution		10286	0.005 - 0.500 mg/L Mn	•	•	•					HPT291
Manganese	Yes	Powder Pillows	Periodate Oxidation	8034	0.1 - 20.0 mg/L Mn	•	•	•	•	•			2430000
Magnesium		TNTplus	Metalphthalein	10292	0.5 - 50 mg/L Mg	•	•	•					TNT849
Mercury			Cold Vapor Concentration	10065	0.1 - 2.5 µg/L Hg	•	•	•					2658300
Molybdenum, Molybdate			Ternary Complex	8169	0.02 - 3.00 mg/L Mo	•	•	•	•	•			2449400
Molybdenum		Powder Pillows	Mercaptoacetic Acid	8036	0.3 - 40.0 mg/L Mo	•	•	•	•				2604100
Nickel	Yes	Solution	Heptoxime	8037	0.02 - 1.80 mg/L Ni	•	•	•					2243500
Nickel		TNTplus	Dimethylgly-oxime	10220	0.1 - 6.0 mg/L Ni	•	•	•					TNT856
Nitrate, Nitrogen		Powder Pillows	Cadmium Reduction	8192	0.01 - 0.50 mg/L NO_3-N	•	•	•	•				2429800
Nitrate, Nitrogen	Yes	TNTplus	Dimethylphe-nol	10206	0.23 - 13.50 mg/L NO_3-N	•	•	•					TNT835
Nitrate		Powder Pillows	Cadmium Reduction	8039 HR	0.3 - 30.0 mg/L NO_3-N	•	•	•	•				2106169
Nitrate		Accuvac	Cadmium Reduction	8039	0.3 - 30.0 mg/L NO_3-N	•	•	•	•	•			2511025
Nitrate		Test 'N Tube	Chromotropic Acid	10020	0.2 - 30.0 mg/L NO_3-N	•	•	•	•				2605345
Nitrate, Nitrogen	Yes	TNTplus	Dimethylphenol	10206	5 - 35 mg/L NO_3-N	•	•	•					TNT836
Nitrite	Yes	Powder Pillows	Diazotization	8507	0.002 - 0.300 mg/L NO_2^--N	•	•	•	•				2107169
Nitrite		Test 'N Tube	Diazotization	10019	0.003 - 0.500 mg/L NO_2-N	•	•	•	•				2608345
Nitrite, Nitrogen	Yes	TNTplus	Diazotization	10207	0.015 - 0.600 mg/L NO_2-N	•	•	•					TNT839
Nitrite, Nitrogen	Yes	TNTplus	Diazotization	10237	0.6 - 6.0 mg/L NO_2-N	•	•	•					TNT840
Nitrite, Nitrogen		TNTplus	Diazotization	10296	2 - 90 mg/L NO_2-N	•	•	•					TNT841
Nitrate, Nitrogen		TNTplus	Dimethylphenol	10206	15 - 150 mg/L NO_3-N								TNT838
Nitrite		Powder Pillows	Ferrous Sulfate	8153	2 - 250 mg/L NO_2	•	•	•	•				2107569
Nitrite		Chemkeys		10271	0.005 - 0.600 mg/L NO_2-N						•	•	9429300
Nitrogen, total		Test 'N Tube	Persulfate Digestion	10071	0.5 - 25.0 mg/L N	•	•	•	•				2672245
Nitrogen, Total		TNTplus	Persulfate Digestion	10208	1 - 16 mg/L N	•	•	•					TNT826
Nitrogen, Total		TNTplus	Persulfate Digestion	10208	5 - 40 mg/L N	•	•	•					TNT827
Nitrogen, total		Test 'N Tube	Persulfate Digestion	10072	2 - 150 mg/L N	•	•	•	•				2714100
Nitrogen, Total		TNTplus	Persulfate Digestion	10208	20 - 100 mg/L N	•	•	•					TNT828

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
Nitrogen, Total		TNTplus	Persulfate Digestion	10208	100 - 250 mg/L N								TNT818
Nitrogen		Test 'N Tube	Titanium Trichloride Reduction		0.2 - 25.0 mg/L	•	•	•	•				2604945
Nitrogen, Simplified Total Kjeldahl	Yes	TNTplus	Simplified TKN (s-TKN™)	10242	0 - 16 mg/L N	•	•	•					TNT880
Nitrogen		Solution	Nessler	8075	1 - 150 mg/L TKN	•	•	•	•				2495300
Ozone		Accuvac	Indigo	8311	0.01 - 0.25 mg/L O_3	•	•	•	•	•			2516025
Ozone		Accuvac	Indigo	8311	0.01 - 0.75 mg/L O_3	•	•	•	•	•			2517025
Ozone		Accuvac	Indigo	8311	0.01 - 1.50 mg/L O_3	•	•	•	•				2518025
Peracetic Acid		Chemkeys		10297	0.04 - 50.0 mg/L PAA						•	•	8635200
pH		Chemkeys		10298	pH 6.3 - 9.0						•	•	9759000
pH		Solution	Colorimetric Phenol Red		6.5 - 8.5				•				2657512
Phenols	Yes		4-Aminoantipyrine	8047	0.002 - 0.200 mg/L	•	•	•					2243900
Phenols	Yes	TNTplus	4-Aminoantipyrine	10266	5 - 150 mg/L	•	•	•					TNT868
Phosphonates		Powder Pillows	Persulfate UV Oxidation	8007	0.02 - 2.50 mg/L PO_4	•	•	•	•				2429700
Phosphorus, reactive	Yes	Powder Pillows	Ascorbic Acid	8048	0.02 - 2.50 mg/L PO_4	•	•	•	•	•			2106069
Phosphate, Reactive		Accuvac	Ascorbic Acid	8048	0.02 - 2.50 mg/L PO_4	•	•	•	•	•			2508025
Phosphate, ortho		Test 'N Tube	Ascorbic Acid	8048	0.06 - 5.00 mg/L PO_4	•	•	•	•				2742545
Phosphorus		Solution	Amino Acid	8178	0.23 - 30.00 mg/L PO_4	•	•	•	•				2244100
Phosphorous, reactive		Solution	Phosphormolybdenum Blue		0.01 - 0.5 mg/L PO_4-P	•	•						HPT487
Orthophosphate, LR		Chemkeys		10279	0.20 - 4.00 mg/L PO_4						•	•	8636600
Orthophosphate, HR		Chemkeys		10282	2.0 - 30.0 mg/L PO_4						•	•	8636500
Phosphorus, Reactive		Solution	Molybdovanadate	8114	0.3 - 45.0 mg/L PO_4	•	•	•	•				2076032
Phosphate, ortho		Test 'N Tube	Molybdovanadate	8114	1.0 - 100.0 mg/L PO_4	•	•	•	•				2767345
Phosphorus		Solution	Molybdovanadate	8114	0.3 - 45.0 mg/L PO_4	•	•	•					2076049
Phosphorus		Solution	Ascorbic Acid	10055	19 - 3000 µg/L PO_4	•	•	•					2678600
Phosphorus, Reactive (Ortho)		TNTplus	Molybdovanadate	10214	1.6 - 30 mg/L PO_4-P; 5 - 90 mg/L PO_4	•	•	•					TNT846
Phosphate, ortho + total		Test 'N Tube	Ascorbic Acid	8180	0.06 - 5.00 mg/L PO_4	•	•	•	•				2742745
Phosphate, total		Test 'N Tube	Ascorbic Acid	8190	0.06 - 3.50 mg/L PO_4	•	•	•	•				2742645
Phosphate, total		Test 'N Tube	Molybdovanadate	10127	1.0 - 100 mg/L PO_4	•	•	•	•				2767245
Phosphorus, Acid Hydrolyzable Phosphorus, Reactive (Ortho) Phosphorus, Total	Yes	TNTplus	Ascorbic Acid	10209	0.05 - 1.5 mg/L PO_4-P; 0.15 - 4.5 mg/L PO_4	•	•	•					TNT843
Phosphorus, Acid Hydrolyzable Phosphorus, Reactive (Ortho) Phosphorus, Total	Yes	TNTplus	Ascorbic Acid	10209	0.5 - 5.0 mg/L PO_4-P (1.5 - 15.0 mg/L PO_4)	•	•	•					TNT844

Parameter	EPA	Method/ Technology	Method Name	Method Number	Range	DR6000	DR3900	DR1900	DR900	DR300	SL1000	SL250	Prod. No.
Phosphorus, Acid Hydrolyzable Phosphorus, Reactive (Ortho) Phosphorus, Total	Yes	TNTplus	Ascorbic Acid	10209	2 - 20 mg/L PO_4-P; 6 - 60 mg/L PO_4	•	•	•					TNT845
Potassium		Powder Pillows	Tetraphenyl-borate	8049	0.1 - 7.0 mg/L K	•	•	•					2459100
Quaternary Ammonium Compounds		Powder Pillows	Direct Binary Complex	8337	0.2 - 5.0 mg/L as CTAB	•	•	•					2459200
Silica		Solution	Heteropoly Blue	8282	3 - 1000 µg/L SiO_2	•	•	•					2553500
Silica		Solution	Heteropoly Blue	8282	3 - 1000 µg/L SiO_2	•	•	•					2678500
Silica		Powder Pillows	Heteropoly Blue	8186	0.010 - 1.600 mg/L SiO_2	•	•	•	•				2459300
Silica		Powder Pillows	Silicomolyb-date	8185	1 - 100 mg/L SiO_2	•	•	•	•				2429600
Sulfate	Yes	Powder Pillows	SulfaVer 4	8051	2 - 70 mg/L SO_4^{2-}	•	•	•	•				2106769
Sulfate		TNTplus	Turbidimetric	10227	40 - 150 mg/L SO_4	•	•	•					TNT864
Sulfate		TNTplus	Turbidimetric	10227	150 - 900 mg/L SO_4	•	•	•					TNT865
Sulfide	Yes	TNTplus	Dimeth-yl-p-phenyl-enediamine	10294	0.1 - 2.0 mg/L S^{2-}	•	•	•					TNT861
Surfactants, Anionic		TNTplus	Methylene Blue (MBA)	10278	0.1 - 4.0 mg/L	•	•	•					TNT874
Surfactants, Cationic		TNTplus	Bromophenol Blue	10305	0.2 - 2 mg/L as CTAB	•	•	•					TNT885
Surfactants, Nonionic		TNTplus	TBPE	10275	0.2 - 6.0 mg/L as Triton x 100	•	•	•					TNT875
Surfactants, Nonionic		TNTplus	TBPE	10275	6 - 200 mg/L as Triton X-100	•	•	•					TNT876
Tannin & Lignin		Solution	Tyrosine	8193	0.1 - 9.0 mg/L as Tannic Acid	•	•	•	•				2244600
TOC (Total Organic Carbon)		Test 'N Tube	Direct	10129	0.3 - 20.0 mg/L	•	•	•	•				2760345
TOC (Total Organic Carbon)	Yes	TNTplus	Direct Method	10267	1.5 - 30.0 mg/L C	•	•	•					TNT810
TOC (Total Organic Carbon)		Test 'N Tube	Direct	10173	15 - 150 mg/L	•	•	•	•				2815945
TOC (Total Organic Carbon)		Test 'N Tube	Direct	10128	100 - 700 mg/L	•	•	•	•				2760445
TOC (Total Organic Carbon)	Yes	TNTplus	Direct Method	10267	30 - 300 mg/L C	•	•	•					TNT811
Toxicity				10017	0 - 100 % Inhibition	•	•	•	•				2597200
Trihalomethanes		Solution	THM Plus	10132	10 - 600 µg/L $CHCl_3$	•	•	•					2790800
Vicinal diketones (VDK)		TNTplus	Analogous MEBAK and ASBC	10276	0.015 - 0.5 mg/kg Diacetyl	•	•						TNT819
Volatile Acids		Solution	Esterification	8196	27 - 2800 mg/L Acetic Acid	•	•	•	•				2244700
Volatile Acids	Yes	TNTplus	Esterification	10240	50 - 2,500 mg/L Acetic Acid	•	•	•					TNT872
Zinc	Yes	Solution	Zincon	8009	0.01 - 3.00 mg/L Zn	•	•	•	•	•			2429300