

LaMotte



Water Quality Testing Products

Welcome to the newest edition of our primary catalog, *Water Quality Testing Products*. It represents our most extensive listing of water analysis instruments, test kits, reagents, test strips and sampling equipment offered in our eighty-six year history. In addition to the products presented in this catalog for testing water in industrial, drinking and other applications, we offer Application Specific Catalogs for many industries such as swimming pool and environmental education. These industry specific catalogs are free and are featured on page 91.

We are very excited to present in this issue our new TC-3000 Combination Colorimeter & Turbidimeter (pages 8-9) and our new line of turbidity meters (pages 20-21), which we believe are the best portable turbidity meters available today. The new TC-3000 Tri-Meter tests Chlorine, Turbidity and Color in one small instrument. Chlorine is tested over the range of 0-10 ppm with 0.05 ppm accuracy and turbidity is measured up to 4000 NTU with superior accuracy in the 0-1 NTU range. Two versions are offered, one complying with the USEPA 180.1 turbidity standard and one meeting the ISO 7027 turbidity standard. The popular Model 2020 Turbidity Meter has been redesigned with a number of improvements centered on the same, patented focusing optics used in the new TC-3000. It too is now available in two models, the 2020e and 2020i to comply with USEPA and ISO standards.

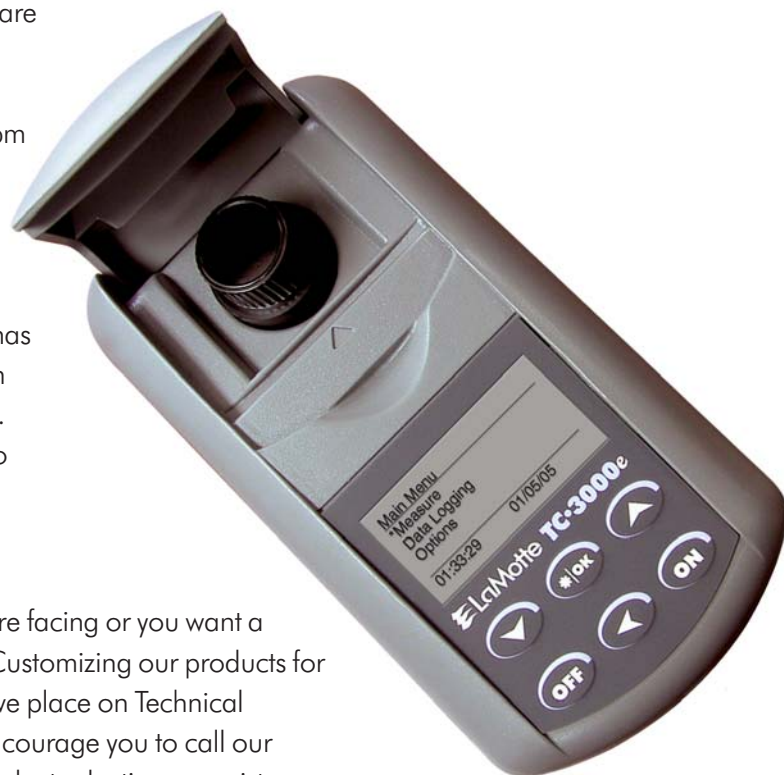
If you don't see a solution to a water analysis challenge you are facing or you want a custom configuration or private labeling, please contact us. Customizing our products for your needs is one of our strengths. We believe the emphasis we place on Technical Support and Customer Service helps distinguish LaMotte. I encourage you to call our Technical Support staff's toll-free number for guidance on product selection or assistance with any questions regarding purchased LaMotte products.

Please visit our website at www.lamotte.com where you can see all of our product catalogs, newsletters, MSDS, new product information, technical tips, and instructions.

If for any reason you are not satisfied with our products you may return the product within 30 days for a full refund; please call for return authorization. We know that when you buy analysis products from us, you purchase solutions to your challenge, not simply hardware.



David LaMotte
PRESIDENT



TO ORDER: SEE BACK COVER

Check out our new
 tablet packaging



NEW
 INNOVATIVE

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CUSTOM TEST KITS

CUSTOM TEST KIT SERVICES

WE CAN design a kit that combines any grouping of parameters you need.

WE CAN develop new test methods for new proprietary compounds or for control of specialized treatment programs.

WE CAN alter existing graphics and packaging or design something new for private labeling purposes.

If your needs go beyond our standard product line, then our Custom Test Kit Services Department can design a custom kit to meet your needs.

How The Custom Test Kit Service Works

1. Contact our Customer Service or International Sales departments by phone, fax, or email.
Tell us how you plan to use the product, the level of accuracy and range you need, how many kits, and any limitations such as size, weight, cost, or skill level of the end user (i.e. student, consumer, technician).
2. We will prepare a quote for you.
Based on the information you provide, we will suggest one of our non-catalog test kits or develop a kit to suit your needs.
3. Once you order, we immediately begin the development process, subject to final approval before beginning production.



Test Method Development

LaMotte's staff of specialists are highly skilled in the science of developing practical test methods. Many satisfied clients regularly depend on LaMotte as an integral part of their own research and production departments. While some projects might require original investigations, LaMotte often draws upon our broad experience in related test development for the answers to your special needs.

Test Kit Design & Packaging

From a mailable plastic pouch to a complete portable laboratory, LaMotte's broad experience in packaging options means that we can meet your requirements precisely and economically. We select appropriate reagent containers and design an efficient kit layout. Our in-house design department adds that finishing touch to the total package with unique label graphics and instructions.

Production Facilities

LaMotte's plant includes specialized apparatus for mixing and filling liquid reagents, blending and packaging powdered reagents, and tableted reagents. Specialty services also include private labeling, production of permanent color standards, custom bulk reagents, and specialized fabrication capabilities.

Service

We take pride in the personal service we give our customers. You can discuss test parameters, concentration ranges, and test methodology with a LaMotte team of specialists dedicated to satisfying your specific proprietary test kit needs. LaMotte will continue to provide this personal attention when it's time for additional kits, reagent refills, or parts. We also provide technical assistance for your own staff as needed.

INTERNATIONAL SALES

EXPORT

Our International Sales Department processes orders for all countries outside the United States and Canada. We have comprehensive knowledge of current regulations and procedures necessary to pack and ship international orders. Specialized packing and documentation services are automatically provided for all international customers, and available upon request to U.S. customers shipping overseas.

LaMotte has distributors in many countries worldwide; some of the countries served are shown on the map below. We will be happy to refer your inquiry to a distributor, in your country, who can provide local sales, service, and application assistance.



Internet

www.clarksonlab.com

LaMOTTE TEST METHODS

TEST METHODS: COLORIMETRIC

Colorimetric

There are two basic types of colorimetric tests:

1

Tests which determine the concentration of a substance are based on Beer's Law. Simply stated, this says that the higher the concentration of a substance, the darker the color developed in the test, so more light is absorbed by the sample.

2

pH tests use an indicator which changes color with changes in the concentration of hydrogen ions, or the acidity of the solution.

OCTA-SLIDE COMPARATOR

The eight color standards in the Octa-Slide are placed in a bar so that they can be compared to the sample individually.



COLOR CHART COMPARATOR

Color charts are laminated color standards. The reacted sample is held against the panel and compared to the color standards.



TEST STRIPS

Test strips are either dipped or swirled in test solutions. The resulting color reaction is compared to a color chart provided.



OCTET COMPARATOR

The Octet Comparator contains eight color standards. The color standards are arranged so that the sample can be compared to four standards at once.

There are two accessories which may be used with an Octet Comparator. The Bi-Color Reader (Code 2150) neutralizes sample color and/or turbidity to give more accurate readings.



The Axial Reader (Code 2070) uses a mirror to extend the viewpath and intensify faint colors of low concentrations for easy distinction. Both accessories attach directly to the comparator and come with complete instructions for use.

Octet comparator with Axial Reader

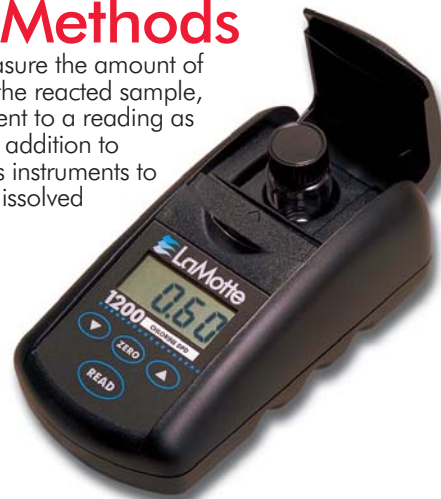
LaMOTTE TEST METHODS

TEST METHODS: ELECTRONIC • TITRIMETRIC



Electronic Methods

Electronic colorimeters measure the amount of light which travels through the reacted sample, and convert the measurement to a reading as ppm, absorbance or %T. In addition to colorimeters, LaMotte offers instruments to test pH, TDS/conductivity, dissolved oxygen, and turbidity.



Titrimetric

Titrimetric tests can be used to determine the concentration of a substance in a sample solution. After the sample is treated with an indicator, a standard titrant is added until a color change indicates a completed reaction. LaMotte offers four separate types of titration methods, allowing a choice of precision and convenience.

DIRECT READING TITRATOR

The Direct Reading Titrator is a 1.0 mL microburet calibrated to allow direct reading of the test result. Each Titrator has a specific range, but may be refilled to test higher concentrations.



AUTOMATIC BURET

The self-zeroing automatic buret is calibrated from 0 to 10 mL in 0.1 mL increments. It is available with a squeeze valve (pinchcock), glass stopcock, or Teflon® stopcock. **See page 85 for full line of automatic burets.**



DROPPER PIPET

The drop count test uses a pipet to provide fast, reliable measurements in the field. The number of drops used to obtain a color change is multiplied by a given factor to produce the test result.



DROPPER BOTTLE

The dropper bottle test uses bottle tips which deliver a consistent standard drop size to add titrant to the sample. As with the drop count test, the number of drops used to complete the reaction is multiplied by a given equivalence factor to determine the concentration. Many dropper bottle tests use different sample sizes for different equivalences.



INSTRUMENTATION

TC-3000 TRI-METERS Turbidity, Color, & Chlorine - ALL IN ONE METER!

Industry leading precision, sensitivity and dependability in one of the most innovative meters available on the market for the measurement of: Turbidity, Color, and Chlorine.



Code 1964-EPA

LaMotte offers 2 versions of the TC-3000. The TC-3000i uses an IR LED and meets the requirements of the ISO 7027 Standard. The TC-3000e uses a tungsten lamp and meets the specifications of EPA 180.1.

- Ideally suited for both low-level drinking water applications as well as monitoring high turbidity in the field
- Six detector design allows for long term stability over a wide range of operational conditions
- Special focusing optics
- Advanced IR emitter (3000i version)
- Tube positioning ring to limit tube variability enabling maximum sensitivity and accuracy
- MSP430 micro controller used is the most advanced controller on the market for hand held applications enabling use of advanced calibration algorithms
- Supports 6 languages: English, French, Spanish, Japanese, Portuguese and Italian
- Data logging up to 4000 points with a date and time stamp - stored tests can be viewed on the meter or downloaded to a PC
- Compatibility with existing Smart Link 2 software
- Easy to read graphic LCD display
- Easy menu-driven operation

Meter Features

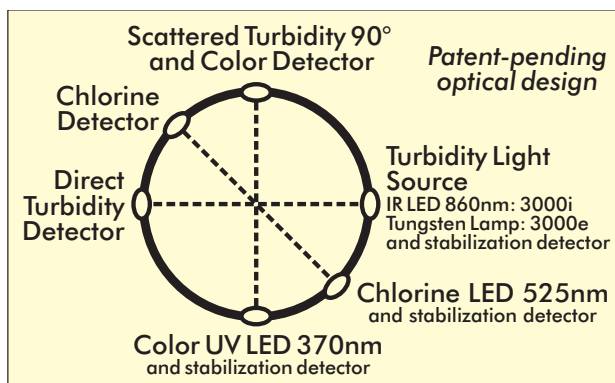
Battery	9V
AC Power	Optional
Data Logging	4000 points
Auto Shut-Off	Disabled, 5, 10, 30
Languages	English, French, Spanish, Japanese, Italian, Portuguese
Response Time	<5 Seconds

Code 1964-ISO

2-YEAR WARRANTY

Ultra-Rugged Carrying Case!

Kit supplied with 0, 1, and 10 NTU standards, sample bottle, 4 sample tubes, DPD tablets, and extra battery.



INSTRUMENTATION

TC-3000 TRI-METERS Turbidity, Color, and Chlorine

Turbidity

- Meets design criteria for quantitative methods of turbidity using optical turbidimeters as specified by ISO 7027/EPA 180.1
- Uses micro focusing optics
- Two user selected factory calibration modes:
 - Formazin
 - Polystyrene Japanese Turbidity Unit (Japanese Water Works Regulation)
- Supplied with formazin verified styrene divinylbenzene bead suspensions (AMCO) for easy and accurate field calibration
- User selected signal averaging (disabled, 2, 5 or 10 measurements)
- Blanking with turbidity-free water allows a zero point calibration for increased accuracy at very low turbidity levels

Unit of Measure	NTU, FNU, FAU, ASBC, EBC
Range	0-4000
Resolution	0.01 NTU/FNU 0.00-10.99 0.1 NTU/FNU 11.00-109.9 1 NTU/FNU 110-4000
Range Selection	Automatic
Accuracy	±2%
Detection Limit	0.05 NTU/FNU
Reproducibility	0.02 NTU/FNU 0.5 FAU
Stray Light	<0.02 NTU FNU
Light Source	860nm LED (ISO) Tungsten (EPA)
Signal Averaging	Disabled, 2, 5, 10

Chlorine

- Liquid and tablet DPD calibrations for Free and Total Chlorine measurement.
- Wide-range accomplished with same cell and reagent dosage.
- Low level detection.
- User selected units ppm or mg/L

Range	0-10 ppm
Resolution	0.01 ppm (0-5)/0.1 ppm (5-10)
Accuracy	0.05 or ±2%
Detection Limit	0.02 ppm
Response Time	<5 Seconds
Light Source	525 nm LED

Color

- UV LED and micro-focusing optics enable low level detection.
- Uses same sample vial as turbidity and chlorine tests

Range	0-500 cu
Resolution	0.1 cu (0-99.9 cu)
Accuracy	±0.5 cu or 2%
Detection Limit	0.2 cu
Response Time	<5 Seconds
Light Source	UV LED 375 nm

Kits & Accessories

TC3000e USEPA Compliant Order Code 1964-EPA

Turbidity (180.1), Chlorine (330.5),
Color (Modified 2120B)

TC3000i ISO Compliant Order Code 1964-ISO

Turbidity (ISO 7027), Chlorine (330.5),
Color (Modified 2120B)

1964-EPA	TC-3000 Kit, EPA version	4140	DPD Chlorine secondary standards kit
1964-ISO	TC-3000 Kit, ISO version	3176-01	FAS-DPD Titration kit for chlorine titration
1754†	AC adapter (variable 100-240V AC)	6973-H	Standard chlorine solution, 250 ppm, 60 mL
0641	Vial Ring (2-pk)	6973-L	Standard chlorine solution, 250 ppm, 475 mL
0475	Six pack of vials	3858-H	Permanganate solution, 1000 ppm, 60 mL
1480	0 NTU Standard (ISO and EPA), 60 mL	3858-L	Permanganate solution, 1000 ppm, 60 mL
1481	1 NTU Standard (ISO), 60 mL	6903A-J	Chlorine DPD #1 instrument grade tablets (100/box)
1482	10 NTU Standard (ISO), 60 mL	6197A-J	Chlorine DPD #3 instrument grade tablets (100/box)
1483	100 NTU Standard (ISO), 60 mL	P-6740-H*	Liquid DPD 1A reagent, 60 mL
1484	1 NTU Standard (EPA), 60 mL	P-6741-H*	Liquid DPD 1B reagent, 60 mL
1485	10 NTU Standard (EPA), 60 mL	P-6743-H*	Liquid DPD 3 reagent, 60 mL
1486	100 NTU Standard (EPA), 60 mL		
6195-H	Formazin standard solution, 4000 NTU, 60 mL		

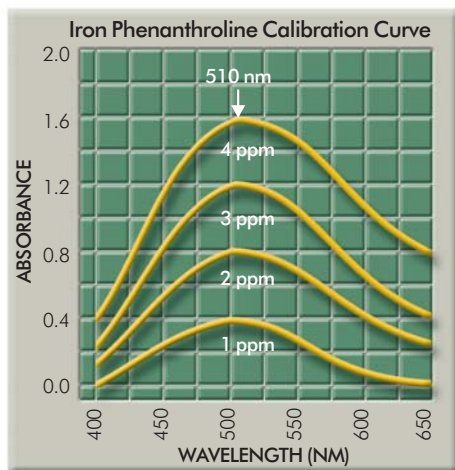
*Note: DPD 1A and DPD 1B are both required to test free residual chlorine and DPD1A, DPD1B and DPD 3 are required for testing total residual chlorine.

†Optional - not included in kit

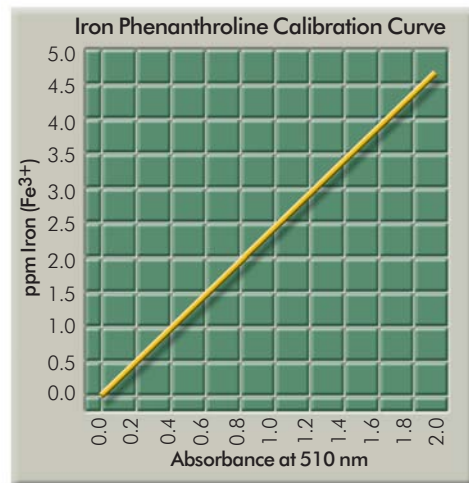
INSTRUMENTATION

SMART SPECTRO™ SPECTROPHOTOMETER

A portable spectrophotometer that is easier to use and more accurate than anything in its price range. With automatic wavelength selection, pre-programmed tests, and superior performance - this is the best spectrophotometer for the money!



Fully functional spectrophotometer allows the user to select the optimum wavelength for creating calibration curves.



The user calibration software automatically calculates the best straight line fit.

1 MAIN MENU 09:50
 * CALIBRATE WL
 PROGRAMMED TESTS
 %T/ABS

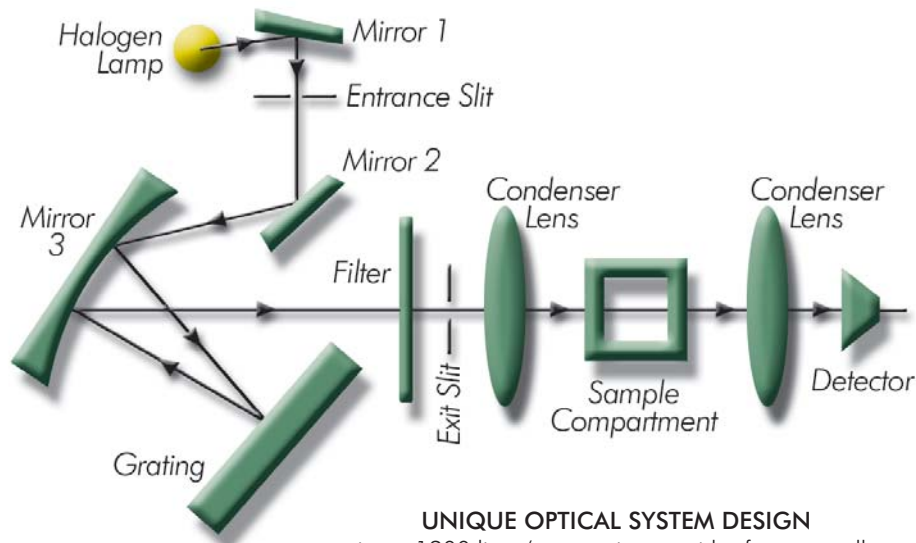
Select from main menu

2 15. CHLORINE
 * SCAN BLANK
 SCAN SAMPLE
 END 515NM

Scan blank and sample

3 * 15. CHLORINE
 12.5 %T 0.9031A
 1.51 PPM
 PRINT PRESS ENTER

Results shown as %T, ABS, ppm



UNIQUE OPTICAL SYSTEM DESIGN
 using a 1200 lines/mm grating provides for an excellent range, greater accuracy, and high resolution.

Create

* EDIT USER TEST 1
 NAME THE TEST
 SELECT WL
 NEW CALIBRATION

Create new tests

Customize

SEQUENCE 1
 * 9. BROMINE-LR
 32. COPPER DDC
 64. NITRATE-N LR

Customize test sequences

MENU DRIVEN DISPLAY

Tests and functions are selected from scrolling menus for ultimate simplicity. Results are displayed as %T, absorbance, and concentration.

PRE-PROGRAMMED TESTS, USER TESTS & AUTOMATIC WAVELENGTH SELECTION

Over 80 pre-programmed tests. Up to 25 calibrations for additional tests can be entered into the memory. The user can also customize sequences for frequently run tests. The meter automatically moves the grating to the required wavelength.

INSTRUMENTATION

SMART SPECTRO™ SPECTROPHOTOMETER

A wider wavelength range	The same accuracy, every test	Extremely high resolution	Holds calibration longer	Better for higher absorbance samples	Better linearity for higher concentrations
350-1000 nm	±2 nm continuous wavelength accuracy	1 nm resolution with 5 nm (max) bandpass over entire range	Modified Ebert mounting, 1200 lines/mm grating	-0.1 to 2.5A photometric range	±0.005A continuous photometric accuracy

TO ORDER:

ORDER CODE 2000 (120V/60Hz and 220V/50Hz)

ORDER CODE 2000-EX2 (220V/50Hz)

Includes 6 sample cells (25mm round), 2 sample cell holders (25mm round and COD, 10mm cuvettes), power supply, battery charger, and diagrammed manual.

OPTIONS:

- **Carrying Case** • ORDER CODE 2000-CS
- **Battery Pack with holder (rechargeable)**
ORDER CODE 2000-BP
- **SMARTLink 2 Software with cable**
See page 13
ORDER CODE 1912-3 or 1912-CD



Wavelength Range:	350-1000 nm
Wavelength Accuracy:	±2 nm
Wavelength Resolution:	1 nm
Wavelength Bandwidth:	5 nm (max)
Photometric Range:	0-125%T, -0.1-2.5A
Photometric Accuracy:	±0.005A
Photometric Noise:	<0.001A at 0A, <0.002A at 2A
Photometric Drift:	±0.002A/hr @500 nm
Photometric Stray Light:	<0.5 %T
Dispersive Device:	Grating - based system
Optical Mount:	Modified Ebert
Grating:	1200 grooves/mm ruled grating
Light Source:	Quartz halogen
Bulb Life:	1000 hours minimum
Sample Chambers:	25 mm round cell, 10 mm square cuvette UDV, COD
Detector:	Silicon photodiode
Temperature Range:	0-40°C
Modes:	Conc., %T, ABS
Pre-Programmed Tests:	Yes
Wavelength Selection:	Automatic
User Tests:	Yes, up to 25 can be entered and edited
Datalogging:	Yes, RS-232
Diagnostics:	Yes
Power:	110/220 volt or battery pack (rechargeable)
Weight:	4.65 kgs (10.3 lbs)
Size (WxDxH:)	35 cm x 28 cm x 17 cm



See pages 15-16 for complete reagent system listing

An error-free design	Much easier to operate	A full function display screen	Truly superior utility	Download results	Portable design
Wavelength selection is fully automatic	Menu prompting with six-button simplicity	Display %T, ABS, concentration; 4 line, 40 character	Pre-programmed tests, additional 25 user tests	RS232 compatible	Optional battery pack, rugged optical bench

INSTRUMENTATION

SMART2 & COD PLUS COLORIMETERS

The user-friendly SMART2 Colorimeter and COD PLUS colorimeter are the ideal direct reading colorimeters for complete on-site water analyses. All pre-programmed tests can be run on these compact instruments and each test features automatic wavelength selection. The entire multi-LED optical system is embedded in the light chambers and optimized for LaMotte test reagent systems. The analyst can simply select the test and put in the sample with reagent. The microprocessor, which selects the wavelength, also allows the user to load up to 10 tests for analyzing custom reagent systems. *LaMotte stands behind every system we provide.*

See
pages 15-16
for complete
reagent system
listing



**OVER 70
PRE-PROGRAMMED
TESTS!**

Order Code 1919



Order Code 1922

These portable colorimeters have the user in mind with these advanced features:

- Simple, menu-driven operation
- Alphabetical test selection
- User-selected test sequences
- Self diagnostics with error/warning messages
- Instant readiness without "count down" delays; achieved by active stabilization of lamp intensity
- Auto-blank; Auto-off
- European CE mark

The user may select any of the wavelengths in each meter to determine the absorbance or %T of a sample at the desired wavelength.

Additional advancements include:

- Superior narrow band-width interference filters
- New Super Twist LCD display for improved readability
- RS-232 interface
- Optional computer cable and software for data storage and manipulation
- 9-Volt battery and AC adapter are included

As well as the incorporated features:

- All wavelength filters - 430, 520, 570, 620 nm (SMART2 only)
- RS-232 serial port
- and more...

SMART Colorimeter® is a registered trademark of LaMotte Company.

INSTRUMENTATION

SMART2, COD PLUS COLORIMETERS, & SMARTLink 2

Range:	0-125%T
Resolution:	1% FS
Accuracy:	2% FS
CE Mark:	Yes
Light Source:	COD PLUS: LED/Filter setup at 430nm and 620nm SMART2: LED/Filter setup; 430nm, 520nm, 570nm, 620nm
Detector:	Photodiode
Display:	122x32 LCD, 16x4 line graphics display
Sample Cell:	25 mm round cell, 10 mm square cuvette, 16 mm COD tubes
Datalogging:	RS-232, time and date stamped
Keypad:	6-button membrane switch
Calibration:	Factory set
Power:	9V or AC adapter; battery life 500 tests
Dimensions:	15 x 8 x 5.5 cm; 6 x 3.25 x 2.5 inches
Weight:	11 ounces

SMART2 (120V/60Hz) • Code 1919

Comes with 4 sample tubes, AC adapter and manual

SMART2 (230V/50Hz) • Code 1919-EX2

Comes with 4 sample tubes, AC adapter and manual

COD PLUS (120V/60Hz) • Code 1922

Comes with COD adapter, 4 sample tubes, AC adapter and manual

COD PLUS (230V/50Hz) • Code 1922-EX2

Comes with COD adapter, 4 sample tubes, AC adapter and manual

Options:

Small Carrying Case (37.5 x 27.5 x 13.75 cm)

Code 1919-GCS150

Large Carrying Case (45 x 32.5 x 20 cm) • Code 1919-GCS440

COD Adapter • Code 5-0087

UDV Adapter • Code 5-0086



SMARTLink 2 Program & Interface Cable

ORDER CODE 1912-3 or 1912-CD

Interface the SMART Spectro, SMART2, COD Plus Colorimeters, and TC-3000 meters with a Windows-based personal computer. The program can be used to download data stored in the dataloggers of these meters. The program allows the user to identify, organize, view, manipulate and store data as a database on a PC. Data can also be copied and pasted or exported to other applications as an ASCII tab delimited text file.

INSTRUMENTATION

COD REAGENTS & HEATER BLOCKS

Digestion Tubes for Total Nitrogen and Total Phosphorus

LaMotte offers low and high Total Phosphorus and a Total Nitrogen test that are reacted in a heater block and are then tested using a colorimeter or spectrophotometer. All kits ship as R1.

Code	Description	Range	# of Tests
4024	Low Total Phosphorus	0-3.5 mg/L	25
4025	High Total Phosphorus	0-100 mg/L	25
4026	Total Nitrogen	0-25 mg/L	25



Multi-Range COD Reagent Systems

LaMotte-manufactured Chemical Oxygen Demand reagent systems used with our COD PLUS Colorimeter, SMART 2 Colorimeter or SMART Spectro Spectrophotometer are an easy and precise way to measure critical COD levels. Measure low, medium or high levels of COD using your choice of mercury (USEPA approved method) or non-mercury reagent systems. Each package contains 25 ready to use vials. All kits ship as R1.



Mercury based systems

Code	Range
0075-SC	0-150 ppm (EPA approved)
0076-SC	0-1500 ppm (EPA approved)
0077-SC	0-15,000 ppm

Mercury-free systems

Code	Range
0072-SC	0-150 ppm
0073-SC	0-1500 ppm
0074-SC	0-15,000 ppm

COD Heater Block

COD Heater Block, 120V and 230V, 12-tube capacity
Code 5-0102 (120V) • Code 5-0102-EX2 (230V)

This COD heater block features digital microprocessor control, programmable time and temperature settings, and a dual LED display to monitor both temperature and timer. Perfect for COD, Total Phosphorus, and Total Nitrogen testing PLUS other tests requiring digestion.

Feature	
Temperature:	30-200°C
Timer:	0-999 minutes
Vial Capacity:	12 (16 mm tubes)
Stability:	±0.1°C@100°C
Weight:	3.6 kg
Dimensions	310x250x80mm (LxWxH)
CE Mark:	Yes
Oven Temp Cutoff:	212°C



INSTRUMENTATION

INSTRUMENT REAGENT LISTING

New tests are being developed for the SMART Spectro and SMART 2. Please contact our Technical Service Department for information regarding additions of new tests to the SMART2.

Test Name	Test Method (# of reagents)	Spectro Range	Smart 2 Range	COD Plus Range	# of Tests	Order Code#	Ship Code
Alkalinity UDV	UDV (1)	0-200	0-200	---	50	4318-H	NH
Aluminum	Eriochrome Cyanine R (4)	0-0.3	0-0.3	---	50	3641-SC	NH
Ammonia Nitrogen (Fresh/Salt)	Salicylate (3)	0-1.0	0-1.0	0-1.0	25	3659-01-SC	R2
Ammonia Nitrogen HR	Nesslerization (2)	0-4.0	0-4.0	0-4.0	50	3642-SC	R2
Benzotriazole	UV Oxidation/Dichromate	0-30	0-30	---	50	4047	R1
Biguanide	Colorimetric	0-70	0-70	---	50	4044	NH
Boron	Azomethine-H	0-0.8	0-0.8	0-0.8	50	4868	NH
Bromine LR	DPD Tablets (2)	0-9.0	0-9.0	---	100	3643-SC	NH
Bromine UDV	Unit Dose Vial DPD (1)	0-22	0-22	---	50	4311-H	NH
Cadmium	PAN (4)	0-1.0	0-1.0	---	50	4017	R1
Ca & Mg Hardness UDV	UDV (1)	10-500	10-500	---	50	4309-H	NH
Carbohydrazide	Iron Reduction (3)	0-0.9	0-0.9	---	100	4857	R1
Chloride TT	Test Tab	0-50	0-50	---	50	3693-SC	NH
Chlorine - Free & Total	DPD Tablets (3)	0-4	0-4	---	100	3643-SC	NH
Chlorine - Free UDV	Unit Dose Vial (1)	0-10	0-10	---	50	4311-H	NH
Chlorine - Liquid DPD	DPD (3)	0-4	0-4	---	144	4859	R1
Chlorine - Total UDV	Unit Dose Vial (1)	0-10	0-10	---	50	4312-H	NH
Chlorine Dioxide	DPD tablet/Glycine (2)	0-7.0	0-8.0	---	50	3644-SC	NH
Chromium Hexavalent	Diphenylcarbohydrazide (1)	0-1.0	0-1.0	---	100	3645-SC	HA
Chromium TT	TestTab	0-1.0	0-1.0	---	50	3889-H	NH
Chromium (Total, Hex & Trivalent)	Diphenylcarbohydrazide (1)	0-1.0	0-1.0	---	100	3698-SC	HF
Cobalt	PAN	0-2.0	0-2.0	0-2.0	50	4851	HF
COD LR 0-150 w/ Mercury**	Digestion (1)	0-150	0-150	0-150	25	0075-SC	R1
COD LR 0-150 w/o Mercury**	Digestion (1)	0-150	0-150	0-150	25	0072-SC	R1
COD SR 0-1500 w/ Mercury**	Digestion (1)	0-1500	0-1500	0-1500	25	0076-SC	R1
COD SR 0-1500 w/o Mercury**	Digestion (1)	0-1500	0-1500	0-1500	25	0073-SC	R1
COD HR 0-15,000 w/ Mercury**	Digestion (1)	0-15,000	0-15,000	0-15,000	25	0077-SC	R1
COD HR 0-15,000 w/o Mercury**	Digestion (1)	0-15,000	0-15,000	0-15,000	25	0074-SC	R1
Color	Platinum Cobalt	0-1000	0-1000	0-1000	∞	NA	NH
Copper BCA - LR	Bicinchoninic Acid (1)	0-3.5	0-3.5	---	50	3640-SC	NH
Copper Cuprizone	Cuprizone (2)	0-2.0	0-2.0	---	50	4023	R1
Copper DDC	Diethyldithiocarbamate (1)	0-6.0	0-6.0	0-6.0	100	3646-SC	NH
Copper UDV	UDV, Bicinchoninic acid (1)	0-4.0	0-4.0	---	50	4314-H	NH
Cyanide	Pyridine-Barbituric Acid (5)	0-0.50	0-0.35	---	50	3660-SC	R1
Cyanuric Acid	Melamine (1)	0-200	0-200	0-200	50	3661-SC	NH
Cyanuric Acid UDV	Melamine, UDV (1)	0-150	0-150	---	50	4313-H	NH
DEHA	Iron Reduction (3)	0-0.7	0-0.7	---	100	4857	R1
Dissolved Oxygen (DO)	Winkler Colorimetric (3)	0-12	0-11	0-11	200	3688-SC	R1
Erythorbic Acid	Iron Reduction (3)	0-3.0	0-3.0	---	100	4857	R1
Fluoride	SPADNS (2)	0-2.0	0-2.0	0-2.0	50	3647-01-SC	R1
Hydrazine	P-dimethylaminobenzaldehyde (2)	0-0.75	0-1.0	0-1.0	50	3656-SC	R2
Hydrogen Peroxide LR	DPD Tablets (2)	0-1.5	0-1.5	---	100	3662-SC	NH
Hydrogen Peroxide HR	DPD (2)	0-60	0-60	---	50	4045	NH
Hydrogen Peroxide Shock	DPD (2)	0-225	0-225	---	100	4045	NH
Hydroquinone	Iron Reduction (3)	0-1.8	0-2.0	---	100	4857	R1

**Requires COD Heater Block, not included

Continue next page...

INSTRUMENTATION

INSTRUMENT REAGENT LISTING



Test Name	Test Method (# of reagents)	Spectro Range	Smart 2 Range	COD Plus Range	# of Tests	Order Code#	Ship Code
Iodine	DPD Tablets (2)	0-14	0-14	---	100	3643-SC	NH
Iron	Bipyridyl (2)	0-6	0-6	---	50	3648-SC	R1
Iron UDV	Bipyridyl UDV (1)	0-10	0-10	---	50	4315-H	NH
Iron Phen	1,10 Phenanthroline (2)	0-4.5	0-5.0	---	50	3668-SC	R1
Lead	PAR (5)	0-5.0	0-5.0	---	50	4031	R1
Manganese LR	PAN (3)	0-0.50	0-0.7	---	50	3658-SC	HF
Manganese HR	Periodate (2)	0-15	0-15	---	50	3669-SC	R1
Mercury	TMK	0-1.5	0-1.5	---	50	4861	HF
Methylethylketoxime	Iron Reduction (3)	0-3.0	0-3.0	---	100	4857	R1
Molybdenum HR	Thioglycolate (3)	0-30	0-50	0-50	50	3699-02-SC	R1
Nickel	Dimethylglyoxime (6)	0-8.0	0-8.0	---	50	3663-SC	HF
Nitrate Nitrogen LR	Cadmium Reduction (2)	0-3.0	0-3.0	---	20	3649-SC	R1
Nitrate TT	Zinc Reduction (1)	0-100	0-100	---	50	3689-SC	NH
Nitrite Nitrogen LR	Diazotization (2)	0-0.8	0-0.8	---	20	3650-SC	NH
Nitrite TT	Diazotization (1)	0-1.6	0-1.6	---	50	3886-H	NH
Nitrogen, Total**	CTA/Digestion (7)	0-25	0-25	---	25	4026	R1
Ozone LR	Indigo Trisulfonate (3)	0-0.4	0-0.4	0-0.4	100	3651-SC	NH
Ozone HR	Indigo Trisulfonate (3)	0-1.5	0-2.5	0-2.5	20	3651-SC	NH
pH CPR (Chlorphenol Red)	Colorimetric (3)	5-7	5-6.8	---	100	3700-SC	NH
pH PR (Phenol Red)	Colorimetric (3)	6.6-8.4	6.6-8.4	---	100	3700-SC	NH
pH TB (Thymol Blue)	Colorimetric (3)	8-9.5	8-9.6	---	100	3700-SC	NH
Phenol	4-Aminoantipyrine (3)	0-6	0-6	---	50	3652-SC	NH
Phosphate LR	Ascorbic Acid Reduction (2)	0-3.0	0-3.0	0-3.0	50	3653-SC	R2
Phosphate HR	Molybdovanadate (1)	0-70	0-70	0-70	50	3655-SC	HF
Phosphorus, Total - LR**	Ascorbic Acid/Digestion (5)	0.0-3.0	0.0-3.5	---	25	4024	R1
Phosphorus, Total - HR**	Molybdovanadate/Digestion (5)	0-100	0-100	---	25	4025	R1
Potassium	Tetraphenylboron (2)	0-10	0.5-10.0	0.5-10.0	100	3639-SC	R1
Silica LR	Heteropoly Blue (4)	0-2.5	0-4.0	0-4.0	100	3664-SC	R1
Silica HR	Silicomolybdate	0-50	0-75	0-75	50	3687-SC	R1
Sulfate HR	Barium Chloride (1)	5-100	0-100	0-100	100	3665-SC	R1
Sulfide LR	Methylene Blue (3)	0-1.0	0-1.5	0-1.5	50	3654-01-SC	R1
Surfactants	Ion Pair Extraction (3)	0-8.0	0-8.0	---	100	4876	HF
Tannin	Tungsto-Molybdophosphoric Acid (2)	0-10	0-10	0-10	50	3666-SC	R1
Tolytriazole	UV Oxidation/Dichromate	0-30	0-30	---	50	4047	R1
Turbidity	Absorptimetric	0-400	0-400	0-400	∞	NA	NH
Zinc LR	Zincon (6)	0-3.0	0-3.0	0-3.0	50	3667-SC	HF

**Requires COD Heater Block, not included

Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 *(NPDWR) EPA Accepted • †(NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

INSTRUMENTATION

Model 1200 • SINGLE TEST COLORIMETER LABS

The 1200 Series of single test, direct reading colorimeters incorporates design advances that enhance reliability, improve accuracy, and simplify the calibration process, all in a portable, hand-held package.

Instrument Type:	Single wavelength, direct-reading colorimeter
Readout:	3½ digit LCD
Photometric Accuracy:	±0.001 Absorbance Unit
Detector:	Silicon Photodiode
Sample Chamber:	Accepts 25mm diameter flat-bottom, tubes with screwcaps (6 included)
Light Source:	LED
Interface:	RS-232 serial interface
Power:	Alkaline 9-volt DC battery, 3.5 mm jack for optional AC adapter
Size (LxWxH):	15 x 8 x 5.5 cm; 6 x 3¼ x 2½ inches



OPTIONS:

- **AC Power Adapter** • ORDER CODE 1726-110 (110V) • ORDER CODE 1726-220 (220V)
- **RS232 Cable** • ORDER CODE 1772

WATER RESISTANT DESIGN

Designed with excessive exposure to moisture in mind, the 1200 colorimeters deliver trouble-free performance in the field and lab.

FIELD & LAB USE

An optional AC adapter is available to save battery life when in the laboratory.

IMPROVED ACCURACY

The microprocessor enables the factory programmed calibrations to optimally match non-linear curves.

LARGE DISPLAY

The large 3½ digit display presents measurements in absorbance, and indicates low battery warnings.

AUTO-ZERO

Simply insert the sample blank and press the zero key. No more dialing in the zero.

RS-232 INTERFACE

An RS-232 port is provided to interface with a datalogger or computer. Optional cable available.

HINGED LIGHT COVER

Flip-top lid over sample chamber prevents any stray light, especially in the field, and avoids misplacing separate light caps.

EUROPEAN CE MARK

The 1200 has been independently tested and has earned the European CE Mark of compliance for electromagnetic compatibility and safety.

INSTRUMENTATION

Model 1200 • SINGLE TEST COLORIMETER LABS

**EPA
COMPLIANT**

Employing the proper wavelength and the DPD test method, the 1200 Chlorine Colorimeter Kit meets or exceeds EPA design specifications for NPDWR and NPDES chlorine monitoring programs (EPA 330.5).

**0-4 PPM
Chlorine**

No need to select a low or high range. The 1200 covers the entire critical chlorine range of 0-4 ppm with a 0.05 sensitivity.

**A GREAT
VALUE!**

Complete, economical package! The 1200 Chlorine Colorimeter Kit comes with enough tablets for 100 tests or liquid reagents for 140 tests, six sample vials with screw caps, instruction manual, and sturdy carrying case.



Other Single Test Colorimeter Kits Available...

TEST FACTOR	ORDER CODE	MODEL	RANGE (ppm)	DETECTION LIMIT	TEST METHOD (# OF REAGENTS)	SHIP CODES
Ammonia Nitrogen	3680-01	DC1200-NH	0-5.0	0.05	Nessler (2)	R1
Bromine	3672-01	DC1200-BR	0-7.0	0.05	DPD Tablets (1)	NH
Chlorine (Free & Total)	3670-01	DC1200-CL	0-4.0	0.05	DPD Tablets (2)	NH
Chlorine (Free & Total)	3670-01-LI	DC1200-CL-LI	0-4.0	0.05	DPD Liquid (3)	R1
Chlorine Dioxide	3671-01	DC1200-CLO	0-7.0	0.05	DPD with Glycine Solution (2)	NH
Copper	3673-01	DC1200-CO	0-6.0	0.03	Diethyldithiocarbamate (1)	NH
Fluoride	3674-01	DC1200-FL	0-2.0	0.028	Alizarin-Zirconyl (2)	HF
Iron	3681-01	DC1200-FE	0-4.0	0.25	1,10 Phenanthroline (2)	R1
Manganese	3682-01	DC1200-MN	0-0.7	0.02	PAN (3)	R2
Molybdenum	3676-01	DC1200-MO	0-30	0.5	Thioglycolate (3)	R3
Nitrate Nitrogen	3677-01	DC1200-NA	0-3.0	0.05	Cadmium Reduction (2)	R1
Ozone	3678-01	DC1200-OZ	0-0.4	0.04	Indigo Blue (3)	NH
Phosphate	3679-01	DC1200-PLR	0-3.0	0.07	Ascorbic Acid (2)	R2
Sulfate	3683-01	DC1200-SU	0-100	1.0	Barium Chloride (1)	R1

Powder Pop® Dispenser

LaMotte now offers the Powder Pop Dispenser - a hand held, single-dose dispenser for 10 mL samples that delivers a precise pre-measured dose of DPD reagent directly to your sample. Each Powder Pop kit includes enough reagent for 400 tests.

TO ORDER:

Free Chlorine Powder Pop Dispenser • ORDER CODE 3-0032

Total Chlorine Powder Pop Dispenser • ORDER CODE 3-0033



INSTRUMENTATION

Model 1200 & 1200 UDV • ABSORBANCE COLORIMETERS



The versatile 1200 Series of single wavelength colorimeters now comes with the capability to display readings directly in absorbance units. Six different wavelengths are available, with two sample vial options, to provide maximum flexibility for your analytical procedures. Microprocessor control and advanced design assure accuracy, easy operation, and durability.

Absorbance colorimeter kits are supplied with vials or cuvettes, water sample collecting bottle, 3 mL syringe (1200-UDV only), all in a sturdy carrying case.

TO ORDER:

Model 1200 Meter

For 25mm vials

ORDER CODES

Listed by wavelengths:

3627-420

3627-460

3627-510

3627-530

3627-570

3627-605

Model 1200-UDV Meter

For 10mm cuvettes

ORDER CODES

Listed by wavelengths:

3627-420-UDV

3627-460-UDV

3627-510-UDV

3627-530-UDV

3627-570-UDV

3627-605-UDV



Instrument Type:	Single wavelength, absorbance colorimeter
Measurement Wavelengths:	420nm, 460nm, 510nm, 530nm, 570nm, or 605nm
Readable Resolution:	0.01 Absorbance Unit
Photometric Precision:	±0.001 Absorbance Unit
Range:	0-2.00 Absorbance Units
Display:	3½ digit LCD
Response Time:	2 seconds
Detector:	Silicon Photodiode
Sample Chamber:	Meters are available with one of two chambers to accept 25mm flat-bottomed glass vials (1200) or 10 mm square polystyrene cuvettes (1200-UDV)
Light Source:	LED
Interface:	RS-232 serial interface, 8 pin mDIN, 9600b, 8 data bits, 1 stop bit, no parity
Power:	Battery Operation: Alkaline 9-volt DC battery Line Operation: 120V/60Hz, 220V/50Hz with adapter



Chlorine Standards for Model 1200

For use with the 1200 series of chlorine colorimeters. Secondary standards provide a fast way to check calibration without the burden of making primary standards.

Based on Standard Methods for the Examination of Water and Wastewater, the operator can calibrate a colorimeter using a permanganate primary standard or a chlorine primary standard. Once the meter is calibrated using the primary standard, the operator can insert secondary standards periodically to evaluate the calibration of the instrument.

- Secondary standard kit contains a blank and 3 standards for low, mid-range, and high chlorine calibrations.
- Packaged in a small plastic case with Certificate of Analysis stating range of each standard.

TO ORDER:

DPD Chlorine Secondary Standards Kit
 ORDER CODE 4140

FAS-DPD Titration Kit for Chlorine Titration
 ORDER CODE 3176-01

Standard Chlorine Solution, 250 ppm

ORDER CODE 6973-H (60 mL)

ORDER CODE 6973-L (475 mL)

Permanganate Solution, 1000 ppm

ORDER CODE 3858-H (60 mL)

ORDER CODE 3858-L (475 mL)

INSTRUMENTATION

2020 PORTABLE TURBIDITY METERS

The newly redesigned 2020 combines an advanced microprocessor with a patent-pending optical chamber resulting in higher accuracy and a wider range.

The multi-detector optical configuration assures long term stability and minimizes stray light and color interferences. All readings are determined by the process of signal averaging over a 5 second period. This minimizes fluctuations in readings attributed to large particles and results in rapid, highly repeatable measurements. Ideally suited for both low-level drinking water applications as well as monitoring high turbidity in the field.



- Patent pending optical design features focusing optics for **low level precision** and accuracy.
- Six user selected languages – English, Spanish, French, Japanese, Italian, and Portuguese
- MSP430 Microcontroller used is the most advanced controller on the market for hand held applications.
- Advanced calibration algorithms
- Tube positioning ring limits vial variability.
- Easy menu driven operation and large LCD display.
- 4000 point data log, stored results can be viewed directly on instrument or downloaded to a computer via RS232 cable.

2020e version meets **USEPA design** criteria as specified by USEPA method 180.1.

2020i version meets design criteria for quantitative methods of turbidity using optical turbidimeters as specified by **ISO 7027**.

Kits are supplied with 0, 1, and 10 NTU standard, sample bottle, four sample tubes, and an extra battery.



INSTRUMENTATION

2020 PORTABLE TURBIDITY METER



Turbidity Specifications:

Unit of Measure	NTU, FNU, FAU, ASBC, EBC
Range	0-4000
Resolution	0.01 NTU/FNU 0.00-10.99 0.1 NTU/FNU 11.00-109.9 1 NTU/FNU 110-4000
Accuracy	±2%
Detection Limit	0.05 NTU/FNU
Range Selection	Automatic
Reproducibility	0.02 NTU/FNU 0.5 FAU
Light Source	860nm LED (ISO) Tungsten (EPA)

Meter Features:

Signal Averaging	Disabled, 2, 5, 10
Battery	9V
AC Power	Optional
Data Logging	4000 points
Auto Shut-Off	Disabled, 5, 10, 30
Optional Software	SmartLink 2
Languages	English, French, Spanish, Japanese, Italian, Portuguese
Response Time	<5 Seconds

TO ORDER:

Model 2020e Kit • ORDER CODE 1979-EPA

Model 2020i Kit • ORDER CODE 1979-ISO

OPTIONS:

- 0 NTU Standard (ISO and EPA), 60 mL • ORDER CODE 1480
- 1 NTU Standard (ISO), 60 mL • ORDER CODE 1481
- 10 NTU Standard (ISO), 60 mL • ORDER CODE 1482
- 100 NTU Standard (ISO), 60 mL • ORDER CODE 1483
- 1 NTU Standard (EPA), 60 mL • ORDER CODE 1484
- 10 NTU Standard (EPA), 60 mL • ORDER CODE 1485
- 100 NTU Standard (EPA), 60 mL • ORDER CODE 1486
- Formazin Standard Solution, 4000 NTU, 60 mL • ORDER CODE 6195-H
- AC Power Adapter (variable 100-240 V AC) • ORDER CODE 1754
- Vial Ring (2-pk) • 0641
- Six-pack of vials • 0475
- RS232 Cable • ORDER CODE 1772

INSTRUMENTATION

TRACER POCKETESTERS

The world's first pocket-sized ISE meter for measuring total chlorine. Use it to test pH and ORP with interchangeable flat surface sensors.

Total Chlorine TRACER

ORDER CODE 1740

- Read Total Chlorine from 0.00-9.99 ppm
- Readings are not affected by sample color or turbidity
- Automatic self calibration
- Extra bold display includes an analog bar graph feature
- Memory can store up to 15 readings
- Chlorine and pH modes also display sample temperature
- Unit identifies which probe is in use and retains calibrations
- Waterproof design
- Automatic shut-off and Low Battery indicator; uses four SR-44W batteries
- Includes 100 reagent tablets at almost half the price of similar Chlorine ISE reagents
- Follows EPA protocol for ISE methods

pH TRACER

ORDER CODE 1741

- Waterproof design
- Provided with 4, 7, and 10 pH buffer tablets
- Rugged flat surface electrode will alert user when it's time to "RENEW"
- A "CAL" indicator shows when to recalibrate and user can select a 1, 2, or 3 point calibration
- Includes Automatic Temperature Compensation and displays temperature while showing pH result

Range:	0.00 to 14.00 pH
Temp:	23° to 194°F (-5° to 90°C)
Resolution:	0.01 pH
Accuracy:	±0.01 pH



EPA Approved
(NPDES Monitoring)

ORP TRACER

ORDER CODE 1742

- High resolution to 1 mV
- Automatic self calibration
- Waterproof design

Range:	-999 to 999 mV
Resolution:	1 mV
Accuracy:	±4 mV

OPTIONS

Additional Probes

1733	pH Sensor	0-14.00/±0.01 pH
1734	ORP Sensor	1734 ±999mV/±4mV
1732	Cl ₂ Sensor	0-10.00/±10% of reading

Chlorine Test Tablets

ORDER CODE 7044-J

Specially formulated just for the TRACER, these deliver a precise amount of iodide for a 20 mL sample. Available in packages of 100.

Weighted Stand

ORDER CODE 1746

Ideal for precise and stable Total Chlorine readings. Prevents unit from tipping over during analysis. Stand comes with five 20 mL sample cups. Weight 165 grams.



INSTRUMENTATION

TRACER POCKETESTERS

The Tracer PockeTester offers direct reading of Conductivity, Total Dissolved Solids, Salinity, and Temperature with one electrode. The conversion ratio of TDS to conductivity may be adjusted from 0.4 to 1.0 for various water.



*Not interchangeable with Cl/pH/ORP TRACER



EC/TDS/SALT TRACER

Code 1749

- Easy to use, waterproof design
- 2% accuracy for EC, TDS, and Salt modules
- Automatic temperature compensation
- Self calibration
- Memory can store up to 15 readings
- Automatic shut-off and low battery indicator; uses four SR-44W button batteries
- Auto-Power Off after 10 minutes of no button presses

EC/TDS/SAL Replacement Electrode* • Code 1765

Weighted Stand w/Sample Cups (5) • Code 1746

Sample Cups w/caps (24) • Code 1745-24

Conductivity Standard, 84 μ S • Code 6312-G

Conductivity Standard, 1413 μ S • Code 6354-G

Conductivity Standard, 12,880 μ S • Code 6317-G

Conductivity:	0 to 199.9 μ S, 200 to 1999 μ S, 2.00 to 19.99 mS
TDS:	0 to 99.9 ppm (mg/L), 100 to 999 ppm (mg/L), 1.00 to 9.99 ppt (g/L)
Salinity:	0 to 99.9 ppm, 100 to 999 ppm, 1.00 to 9.99 ppt
Accuracy:	EC, TDS, Salt: \pm 2% FS; Temperature: \pm 1°C (1.8°F)

pH/CONDUCTIVITY TRACER

Code 1766

- Measures five parameters including Conductivity, TDS, Salinity, pH, and Temperature using one electrode
- Units of measure: pH, μ S, mS, ppm, ppt, mg/L, g/L, °C, °F
- Memory stores up to 25 labeled readings
- Adjustable Conductivity to TDS ratio
- Auto power off and low battery indicator
- Waterproof to IP67

Replacement Electrode* • Code 1755

Weighted Stand w/Sample Cups (5) • Code 1746

Sample Cups w/caps (24) • Code 1745-24

Conductivity Standard, 84 μ S • Code 6312-G

Conductivity Standard, 1413 μ S • Code 6354-G

Conductivity Standard, 12,880 μ S • Code 6317-G

	Range	Resolution	Accuracy
Conductivity	0 to 199.9 μ S, 200 to 1999 μ S, 2.00 to 19.99 mS	0.1 μ S	\pm 1%
TDS/Salinity	0 to 99.9 ppm (mg/L), 100 to 999 ppm (mg/L), 1.00 to 9.99 ppt	0.1 ppm (mg/L)	\pm 2%
pH	0.00 to 14.00 pH	0.01 pH	\pm 0.01 pH
Temperature	32° to 149°F (0 to 65°C)	0.1°F/°C	\pm 1.8°F/°C

INSTRUMENTATION

DISSOLVED OXYGEN METERS

DISSOLVED OXYGEN TRACER



Code 1761

- Oxygen level displayed as % Saturation from 0 to 200.0% or Concentration from 0 to 20.00 ppm (mg/L)
- Adjustable Altitude Compensation (0-20,000 ft in 1,000 ft increments)
- Adjustable Salinity Compensation from 0 to 50 ppt
- Memory stores up to 25 data sets with DO and Temperature reading
- Self-calibration on power up; Data, Hold, Auto power off, Low battery indicator
- Waterproof to IP67
- Optional 3 ft (1m) or 16 ft (5m) extension cable
- Complete with DO electrode, protective sensor cap, spare membrane cap, electrolyte, four 1.5V SR44W batteries, and 48" (1.2m) neckstrap

	Range	Resolution	Accuracy
DO (sat. mode)	0 to 200.0%	0.1%	±2% FS
DO (conc. mode)	0 to 20.00 ppm (mg/L)	0.01 ppm (mg/L)	0.4 ppm (mg/L)
Temp.	32 to 122°F (0 to 50°C)	0.1°F/°C	±1.8°F (1°C)
Dimensions	1.4x6.9x1.6" (36x176x41 mm)		
Weight	3.8 oz (110g)		

- DO Sensor Module • ORDER CODE 1762
- DO Membrane Kit (6 screw-on membranes and solution) • ORDER CODE 1761M
- DO Extension Cable (1 meter) • ORDER CODE 1763
- DO Extension Cable (5 meters) • ORDER CODE 1764

Dissolved Oxygen Meter

Model DO 4000 with 3 meter cable (10 ft) ORDER CODE 1903

Model DO 4000 with 15 meter cable (50 ft) ORDER CODE 1905

Optional AC adapter 120V/60Hz ORDER CODE 1744

Optional AC adapter 220V/50Hz ORDER CODE 1778

Portable hand-held dissolved oxygen meter designed to provide measurements for the most critical water quality parameter. Digital readout provides mg/L, % saturation, and temperature readings by selecting a mode. Features automatic temperature compensation (ATC) for mg/L and % saturation; salinity compensation is manual by direct dial. Meter comes packaged in a convenient carrying case with 2 replacement membrane cartridges, electrolyte, and protective probe storage bottle.

TEMPERATURE MEASUREMENT

Range:	0°C to 40°C
Resolution:	0.1°C



OXYGEN MEASUREMENT

Range:	0–19.99 mg/L; 0–200% Sat.
Resolution:	0.01 mg/L; 1% Sat.
Compensation:	Automatic temperature compensation (ATC) for mg/L and % saturation. Manual setting for salinity 0-30 ppt in 5 ppt increments.
Probe:	Polarographic type, Delrin® body, 2 mil Teflon® membrane, 3m (10 ft) or 15m (50 ft) cable with connector.
Readout:	3½ digit LCD
Controls:	O ₂ , % Sat, °C, Off, Salinity Comp, Slope
Response Time:	90% in 10 seconds at a constant temperature of 21°C. Response at low dissolved oxygen levels typically 90% in 30 seconds.
Power:	Alkaline 9V DC battery, 3.5 mm jack for optional AC adapter.
Size (LxWxH):	Meter: 15x8x5.5 cm; 5¼ x 3¼ x 2½" Probe: 1.3x10.6 cm; ½ x 4¾"
Weight:	340 g; ¾ lbs.

OPTIONS

- Replacement 3 membrane pack with KCl Solution ORDER CODE 1914
- 4 membranes (no solution) • ORDER CODE 1907
- Filling Solution • ORDER CODE 2787-G
- Probe with 10' cable • ORDER CODE 1913
- Probe with 50' cable • ORDER CODE 1915

INSTRUMENTATION

POCKETESTERS



pH Pocketester 10

Code 5-0103 (Replacement Electrode, Code 5-0097)

- ± 0.1 pH accuracy

pH Pocketester 20

Code 5-0104 (Replacement Electrode, Code 5-0097)

- ± 0.01 pH accuracy

Both meters feature automatic temperature compensation, and buffer recognition for three point calibration based on US (pH 4.01, 7.00, 10.01) or NIST (pH 4.01, 6.86, 9.18) systems. The sensor is a double junction Ag/AgCl system with polymer gel. The IP67 rated housing features a 1.0625" display, which also displays diagnostic messages. Auto-off after 8.5 minutes to conserve battery life.



Double Junction ORP Pocketester

Code 5-0079

- 99 to 1000 mV range
- Large surface area platinum band sensor
- 1 mV resolution, 2 mV accuracy
- HOLD function, Auto-off

Salt Pocketester

Code 5-0078

- 0 – 10 ppt (0.10 ppt resolution)
- Two calibration standards included

"Min-Max" Memory Thermometer

Code 5-0095

- Range: 14 – 392°F or -10 – 200°C
- °F or °C selectable scale
- Recalls minimum and maximum temperature



INSTRUMENTATION

POCKETESTERS



Microprocessor-Based TDS PockeTesters

- ±1% full-scale accuracy
- Automatic temperature compensation (ATC)
- Replacement electrode
- Push-button calibration
- Auto shut-off
- Full reading displayed - no need to multiply

Model	Code	Range
TDS Tester Low	5-0080	0-1990 ppm (10 ppm resolution)
TDS Tester High	5-0081	0-10.00 ppt (0.10 ppt resolution)
Replacement Electrode	5-0084	

Microprocessor-Based EC Conductivity PockeTesters

- ±1% full-scale accuracy
- Automatic temperature compensation (ATC)
- Replacement electrode
- Push-button calibration
- Auto shut-off
- Full reading displayed - no need to multiply

Model	Code	Range
EC Tester Low	5-0082	0-1990 μ S (10 μ S resolution)
EC Tester High	5-0083	0-19.90 mS (0.10 mS resolution)
Replacement Electrode	5-0084	



INSTRUMENTATION

POCKETESTER SPECIFICATIONS

Specifications for pH Pocketesters			Specification for Specialty Pocketesters		
Model	pH Pocketester 10	pH Pocketester 20	Memory Thermometer	ORP Pocketester	Salt
Code	5-0103	5-0104	5-0095	5-0079	5-0078
Range	-1.0 to 15.0 pH; extended range		-10 to 200°F, 14 to 392°C	-50 to +1050 mV	0-10.00 ppt salinity
Resolution	0.1 pH	0.01 pH	0.1°F to 199.9°, 1°C above 200°	5 mV	0.10 ppt salinity
Accuracy	±0.1 pH	±0.01 pH	±1.8°F / ±1.0°C	±5 mV	±10% full-scale
Calibration	Select up to 3 points (4.0, 7.0, 10.0 or 4.01, 6.86, 9.18)		Factory calibrated; fine adjustment through keypad	Offset calibration to ORP standard or work standard	One-point with trimpot
Operating Temperature	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C	32 to 122°F; 0 to 50°C
Temperature Compensation	Automatic(ATC) 0 to 50°C		—	—	Automatic(ATC) 0 to 50°C
Special Functions	On/Off or Auto-Off after 8.5 min.; HOLD; CALibrate; CONFirm		On/Off or Auto-Off after 8.5 min.; HOLD; °F or °C scale selectable; factory calibration maintained when batteries are replaced	On/Off or Auto-Off after 8.5 min.; CALibrate; CONFirm; HOLD (HO) and HOLD/ CANCEL (HC)	
Power & Battery Life	Four 1.5V alkaline button cell batteries (supplied), 500 hour use		Three 1.5V alkaline batteries (supplied) 20 hrs. use; Eveready A76BP, 100 hrs.; Eveready 303, 70 hrs. use.	Three 1.5V alkaline batteries (supplied) 55 hrs. use; Eveready A76BP, 100 hrs.; Eveready 303, 70 hrs. use.	Four 1.5V alkaline batteries (supplied) 55 hrs. use; Eveready A76BP, 100 hrs.; Eveready 303, 70 hrs. use.
Waterproof Dimensions & Weight	8.5"L x 2.4"W x 2.5"H (boxed); 6.5"L x 1.5" Dia. (unit only) / 4.5 oz./125 gms (boxed); 3.25 oz./90 gms (unit only) Memory Thermometer Probe: 4.3" x 0.14"; top is 1.8"; weight 3 oz				
Non-Waterproof Dimensions & Weight	8.5"L x 2.75"W x 1.3"H (boxed); 5.9"L x 1.6"W x 0.94"H (unit only) / 4.5 oz./125 gms (boxed); 3.25 oz./90 gms (unit only)				

Model	Specifications for TDS & EC Waterproof Pocketesters			
	TDS Low	TDS High	EC Low	EC High
Code	5-0080	5-0081	5-0082	5-0083
Replacement Electrode	5-0084	5-0084	5-0084	5-0084
Range	0-1990 ppm	0-10.00 ppt	0-1990 μS	0-19.90 mS
Resolution	10 ppm	0.1 ppt	10 μS	0.1 mS
Accuracy	±1%FS			
Calibration	One-point, push-button calibration using buttons inside battery compartment			
Operating Temp.	32 to 122°F; 0 to 50°C			
Temperature Comp.	Automatic (ATC) 0 to 50°C			
Special Functions	Full reading displayed			
Power & Battery Life	Four 1.5V alkaline batteries (supplied); Eveready A76BP, 100 hrs. use; Eveready 303, 140 hrs. use			
Waterproof Dimensions & Weight	8.5"L x 2.4"W x 2.5"H (boxed); 6.5"L x 1.5" Dia.(unit only) / 4.5 oz./125 gms (boxed); 3.25 oz./90 gms (unit only)			
Non-Waterproof Dimensions & Weight	8.5"L x 2.75"W x 1.3"H (boxed); 5.9"L x 1.6"W x 0.94"H (unit only) / 4.5 oz./125 gms (boxed); 3.25 oz./90 gms (unit only)			

INSTRUMENTATION

TEMPERATURE MEASUREMENT

TempTestr® IR Meter

Code 5-0056

Optional Carrying Case Code 5-0062

The convenience of non-contact temperature measurements, now with a laser sighting!

Industrial/Electrical Applications:

Monitor steam systems, boiler operations, and motor/engine cooling systems performance; detect hot spots in electrical systems, panels, and motor bearings. Widely used in all types of industries such as food, veterinary, paper, rubber, textiles, gas/electric utilities, cement, chemical, pharmaceutical, asphalt, roofing, electronics, glass, plastics, metals, carpet/floor covering, tires and many more.

Heating and Air Conditioning Applications

Monitor furnace and duct leakage; detect insulation breakdown; check ceilings, walls, and floors for proper room temperature, heat loss and gain.

Food Safety Applications

Fast and convenient screening tool for both cold and hot foods for Food Safety and HACCP. No contamination or damage to the product. Easily take temperature of products moving on conveyors or hard-to-reach places. Verify equipment performance, sanitation and process temperature conditions. Scan cooling systems, refrigerated display cases, trucks and storage areas before loading and stacking.

Agriculture Applications

Monitor plant temperature for stress, monitor animal bedding to detect spoiling.



Range:	-18 to 260°C/0 to 500°F
Resolution:	1°C/1°F
Accuracy:	25 to 260°C (77 to 500°F): ±2% or ±2°C (±3°F) whichever is greater -1 to 25°C (30 to 77°F): ±3°C (±5°F) -18 to -1°C (0 to 30°F): ±4°C (±7°F)
Repeatability:	±2% of reading, or ±2°C (±3°F)
Operating Temperature:	0 to 50°C (32 to 120°F) 10 to 95% RH noncondensing, at up to 30°C (86°F)
Storage Temperature:	-20 to 65°C (-4 to 150°F) without battery
Response Time:	500mSec, 95% response
Spectral Response:	7 to 18mm
Emissivity:	pre-set at 0.95
Distance-to-Spot Size:	6:1
Power:	One 9V alkaline or NiCd battery
Battery Life (alkaline):	12 hours
Dimensions:	7¼ x 1¾ x 1½ inches (8.4 x 4.5 x 3.8 cm)
Weight:	0.5 lbs. (227g)

INSTRUMENTATION

ECONOMICAL FIELD METERS



LaMotte 5 Series

Features:

- Push button operation
- Three point calibration
- Temperature readout
- Automatic Temperature Compensation
- Auto-off after 17 minutes
- Hold function
- Buffer recognition (pH 5 meter)
- Adjustable conductivity to TDS factor (TDS 5 meter)

Microprocessors have enabled meter manufacturers to combine many features into smaller designs with better accuracy. The 5 Series meters are good examples (see specifications below). All meters include electrodes and temperature probes, and are available with or without a carrying case.

- The pH 5 without case includes pH 4, 7 and 10 buffer tablets.
- The pH 5 with case includes pH 4, 7 and 10 buffer liquids.
- The TDS 5 and Con 5 with carrying cases include two calibration standards.
- All meters have two-year warranties.

SPECIFICATIONS

Model	pH 5 (pH)	pH 5 (Temperature)	CON 5 Meter (Conductivity)	TDS 5 Meter (TDS)	CON 5 & TDS 5 Meters (Temperature)
Order Code	w/out case 5-0034 with case 5-0035		w/out case 5-0038 with case 5-0039	w/out case 5-0036 with case 5-0037	
Range:	0.00 to 14.00 pH	0.0 to 100.0°C	0.0 to 199.9 μ S 200 to 1999 μ S 2.00 to 19.99 mS	0.0 to 99.9 ppm 100 to 999 ppm 1.00 to 9.99 ppt	0.0 to 100.0°C
Resolution:	0.01 pH	0.1°C	0.1 μ S 1 μ S 0.01 mS	0.1 ppm 1 ppm 0.01 ppt	0.01°C
Accuracy:	\pm 0.01 pH	\pm 0.5°C	\pm 2% full scale	\pm 2% full scale	\pm 0.5°C
Calibration:	Up to 3 Buffer Values (pH 4.01, 7.00, 10.0)	Offset 0.1°C increments	1 to 3 points (push button; 1 point per range)		Offset 0.1°C increments
Temperature Compensation:	Automatic Temperature Compensation (ATC)		Automatic Temperature Compensation (ATC) fixed 2% per °C factor		
Power:	Four AAA alkaline batteries (supplied) >70 hours continuous use		Four AAA alkaline batteries (supplied) >60 hours continuous use		
Display:	Single Custom LCD		Single Custom LCD		
Auto shut-off:	After 17 minutes		After 17 minutes		
Operating Temperature:	32 to 122°F; 0 to 50°C		32 to 122°F; 0 to 50°C		

INSTRUMENTATION

pHPLUS DIRECT - DIGITAL pH METER with direct reading ISE display

pHPLUS DIRECT Digital pH/ISE Meter

- pH with ± 0.002 pH accuracy PLUS...
- MV with ± 0.1 mV accuracy PLUS...
- Temperature
- Concentration with $\pm 0.5\%$ accuracy
- Memory for 25 test results
- Water-resistant and impact-resistant housing

The pH PLUS DIRECT allows the analyst to use ISEs to read concentration in ppm. The microprocessor makes the unit easy to use in any test mode.

pH

Range: 0.00 to 14.00

Resolution: 0.01

Slope: 80 to 120%

Accuracy: ± 0.02

Calibration: 3 point manual or automatic

Electrode: Epoxy, Ag/AgCl

Temperature

Range: 0.00 to 100°C

Resolution: 0.1°C

Accuracy: $\pm 1^\circ\text{C}$

Concentration

Range: 0.0000 to 19999

Resolution: ± 1 LSD

Accuracy: $\pm 0.5\%$ or ± 1 LSD

mV

Range: ± 1999.9

Accuracy: ± 0.1 mV

Resolution: 0.1 mV

Inputs: 1 BNC, Temp probe, power, ref.

Power: 9V alkaline or line for 110 or 220V



pHPLUS DIRECT Meter

Code	Description
1936	pHPLUS DIRECT Meter, liquid buffers (4, 7, 10) w/case
1904	pH Electrode, gel-filled
1909	Temperature Probe
1726-110	Optional AC Adapter, 110V/60Hz
1726-220	Optional AC Adapter, 220V/50Hz

INSTRUMENTATION

ION SPECIFIC ELECTRODES

LaMotte offers ion specific electrodes that are high quality and economically priced. These may be used with the pHPLUS Direct or other millivolt meters. Accessory kit required for each probe, sold separately.

Ammonia

Gas Sensing Single-Junction, Epoxy Body Code 5-0043

This ISE features a gas sensing membrane. Measuring range is 1.0 to 5×10^{-7} M and 17,000 to 0.01 ppm. Interfering ions include volatile amines. Ideal for high purity power station water, fish tanks, sea water, wastewater, plating baths, air/stack gases, and biological samples.

Temperature Range: 0 to 50°C (32 to 122°F)

pH Range: above pH 11

Nitrate

Economy Double-Junction, Epoxy Body Code 5-0052

This ISE features polymer membrane sensors. Measuring range is 1.0 to 7×10^{-6} M and 62,000 to 0.5 ppm. Interfering ions include ClO_4^- , I^- , CN^- and BF_4^- . Ideal for surface/drinking water, sewage effluent, soil extracts, fertilizers, soils, plant tissue, meat, potatoes, spinach, beets, baby food.

Temperature Range: 0 to 50°C (32 to 122°F)

pH Range: 2.5 to 11 pH

Fluoride

Economy Double-Junction, Epoxy Body Code 5-0048

This ISE features solid state sensors. Measuring range saturated to 1×10^{-6} M and saturated to 0.02 ppm. Interfering ions include OH^- . Ideal for drinking/natural water, wastewater, air/stack gases, acids, sea water minerals, soils, food, biological fluids, toothpaste/mouthwash, coal, carbonated beverages, and bone.

Temperature Range: 0 to 80°C (32 to 176°F)

pH Range: 5 to 8 pH

Accessory Kits

Although the pHPLUS Direct reads directly in ppm, an initial calibration is required. The standard solution, replacement electrolyte, ionic strength adjustor and a pipet are included in the accessory kit. The ammonia accessory kit also contains replacement membranes.

Code	Description
5-0098	Ammonia
5-0099	Fluoride
5-0100	Nitrate



INSTRUMENTATION

pH BUFFERS/ELECTRODE SOAKER



Standardized pH Buffer Solutions

For use in calibration of pH meters. Ordering information for all buffers is listed below.

pH VALUE	CODE	SIZE	pH VALUE	CODE	SIZE
4.00	2866-J	120 mL	7.00	2881-J	120 mL
	2866-L	500 mL		2881-L	500 mL
4.01	2807-J	120 mL	9.18	2809-J	120 mL
	2807-L	500 mL		2809-L	500 mL
6.86	2808-J	120 mL	10.00	2896-J	120 mL
	2808-L	500 mL		2896-L	500 mL

Note: Other pH values available

Buffer Tablets

Add one tablet to 20 mL of Deionized Water to produce buffers. Available in 50, 100, and 1000 tablet packs. In foil strips of 10 tablets each.

pH VALUE	CODE
4.0	3983
7.00	3984
10.0	3985



Color-Coded pH Buffer Solutions

Minute amount of color permits immediate visual distinction of different buffer values.

pH VALUE	CODE	COLOR	SIZE
4.01	3771-L	Red	500 mL
7.00	3772-L	Yellow	500 mL
10.0	3773-L	Blue	500 mL

Electrode Soaker Bottle

ORDER CODE 0668

Continuously soaks pH electrode in a storage solution to prevent probe dry out. Twist top "O" ring seal prevents leaks.



INSTRUMENTATION

CONDUCTIVITY SOLUTIONS



Conductivity/ TDS Solutions

The following potassium chloride solutions can be used to standardize conductivity meters. TDS values are based on a 0.7 conversion from conductivity.

CODE	DESCRIPTION	SIZE
6416-L	74 $\mu\text{S}/\text{cm}$, 52 ppm	500 mL
6417-L	718 $\mu\text{S}/\text{cm}$, 503 ppm	500 mL
6354-L	1,413 $\mu\text{S}/\text{cm}$, 989 ppm	500 mL
6418-L	6,668 $\mu\text{S}/\text{cm}$, 4668 ppm	500 mL

Conductivity Neutralizing Solutions

CODE	DESCRIPTION	
6483	Conductivity Neutralizing Solution	Contains citric acid and phenolphthalein. Add liquid until sample changes color. Available in 60 mL, pint, and gallon sizes.
6479	Gallic Acid Powder	Organic acid powder; indicator must be purchased and added separately. Add raw powder to sample containing indicator until color changes. Available in 100 g and 1 lb. sizes.
3705	Acid Indicator	Contains acetic acid and phenolphthalein. Add liquid until sample changes color. Available in 30 mL, pint, and gallon sizes.



INSTA-TEST® TEST STRIPS

LaMotte offers a convenient, economical way to perform spot checks for several water quality factors. LaMotte test strips are a great way to monitor water without having to use reagents or field kits. Strips are available for the factors below...and we're working on more!



SINGLE FACTOR TEST STRIPS

TEST FACTOR	CODE	RANGE (ppm)	WATER TESTING APPLICATION*	# OF TESTS PER FACTOR/PER VIAL	VALUES (ppm)
ALKALINITY	2997	0-180	Drinking, Food/Beverage, Pool	50	0, 40, 80, 120, 180
CHLORINE DIOXIDE	2999	0-10	Drinking, Food/Beverage	50	0, 0.25, 0.5, 1, 3, 10 ppm
CHLORINE DIOXIDE	3002	0-500	Medical, Food/Beverage	50	0, 10, 25, 50, 100, 250, 500
CHLORINE, TOTAL	2979	0-5	Drinking, Food/Beverage	50	0, 0.5, 1, 3, 5
HARDNESS, LOW RANGE	2981	0-180	Drinking, Food/Beverage	50	0, 30, 60, 120, 180
pH, WIDE RANGE	2974	4-10 (pH)	Drinking, Food/Beverage, Pool	50	4, 5, 6, 7, 8, 9, 10
PERACETIC ACID	3000	0-160	Food/Beverage	50	0, 10, 20, 40, 60, 85, 160 ppm
PEROXIDE	2984LR	0-50	Drinking, Food/Beverage	25	0, 1, 3, 10, 30, 50
SODIUM CHLORIDE	2993	1000-4000	Pool	10	1000, 1500, 2000, 2500, 3000, 4000



INSTA-TEST® TEST STRIPS



ACCURATE & RELIABLE 30-month shelf-life for the easiest test strips to read.

CONNECTED CAP Can't fall into the water or be lost.

HINGE GUARANTEE Rated for 1000+ openings.

LEAKPROOF Airtight seal meets USDA and FDA requirements.

DESICCANT LINER Stays in the vial - not discarded and can't fall onto wet hands.

6 GRAMS (NOT 3) Desiccant liner is double the industry standard for moisture protection.

DOUBLE DUTY High-density outer shell, combined with desiccant liner, ensure less moisture and light.

HDPP PROTECTION High density polypropylene plastic protects better than the common HDPE bottles.

MULTI-FACTOR TEST STRIPS

TEST FACTOR	CODE	RANGE	WATER TESTING APPLICATION*	# OF TESTS PER FACTOR/PER VIAL	VALUES (ppm)
IRON & COPPER	2994	0-5 (Iron)	Drinking, Pool	25	0, 0.3, 0.5, 1, 3, 5
		0-3 (Copper)		25	0, 0.3, 0.6, 1, 3
IRON, pH, & HARDNESS	2980	0-5 (Iron)	Drinking	25	0, 0.3, 0.5, 1, 3, 5
		4-10 (pH)		25	4, 5, 6, 7, 8, 9, 10
		0-400 (Hard)		25	0, 50, 100, 200, 400
WIDE RANGE (pH & TOTAL CHLORINE)	2987	4-10 (pH)	Drinking, Food/Beverage, Pool	50	4, 5, 6, 7, 8, 9, 10
		0-50 (TCl)		50	0, 1, 5, 10, 20, 50
NITRATE & NITRITE	2996	0-50 (Nitrate)	Drinking	50	0, 5, 10, 25, 50 (NO ₃ -N)
		0-10 (Nitrite)		50	0, 0.5, 1, 5, 10 (NO ₂ -N)

*Strips shown have been evaluated for use in these applications. Use in other applications is subject to potential interferences. Contact LaMotte Technical Services for more information.



MICROBIOLOGICAL TESTING

MICROBIOLOGICAL TESTING

Micro Testing without a Macro Investment!

Bacteria Testing Kits

Welcome to the world of microbes—a brand new product line and technology for your comprehensive water quality program. Count the E. coli and coliforms in your favorite swimming hole. Use for ponds, streams, rivers, lakes, ocean water, tap water.

ColiQuant EZ

Ideal for sample sizes of 1-5 ml of river water or other samples with many coliforms or E. coli expected. The sample is collected with a sterile syringe (included) and added directly into a bottle of Coliscan® Easygel®, swirled, and poured into a pretreated Petri dish (included). Under warm conditions (32-37°C) results can be ready in 24 hours. 10 tests per kit.

- Patented combination of color-producing nutrients and enzymes that mark coliforms purple-blue, E. coli pink, and other non-coliform bacteria colorless
- Easy method for conducting microbiology testing
- Eliminates need for autoclave, water bath, and balance
- Saves preparation time
- All materials supplied except water sample
- Adds valuable quantitative capability
- EPA approved for outdoor surface water monitoring (ColiQuant EZ) and potable water (ColiQuant MF)



Test	Code
ColiQuant EZ	3-0034

ColiQuant MF

Ideal for large quantities of potable water or treated wastewater that contains a low level of coliforms or E. coli. Up to 100 ml of water is filtered through a membrane filter and placed on a Coliscan-MF nutrient rich pad in a Petri dish. 20 tests per kit. Refill package contains enough materials to do 20 tests (refill does not include membrane filtration apparatus).

Test	Code
ColiQuant MF	3-0035
ColiQuant MF Refill	3-0036

See www.lamotte.com
to view the EPA Approved
Method for ColiQuant MF



MICROBIOLOGICAL TESTING

BIOLOGICAL ACTIVITY REACTION TEST

A simple yet effective method for monitoring the population size and/or activity of specific groups of bacteria.

BART Biodetector

With BART, you can monitor for Iron Related Bacteria (IRB), Sulfate Reducing Bacteria (SRB) and Heterotrophic Aerobic Bacteria (HAB) - the three most important agents involved in biofouling. Other BART systems are described below. These bacteria can cause corrosion, clogging, fouling of the water, and increased hygiene risks, so it is important to have an easy and accurate method of determining their presence and level of activity.

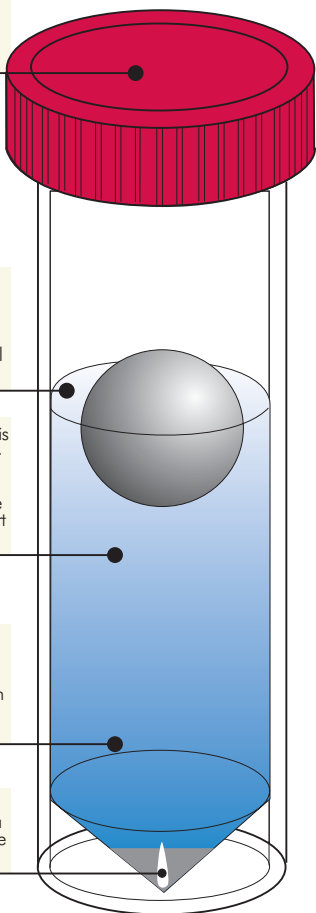
The screw-cap should be tightened on the BART tube so that casual leakage, such as from tipping the tube over, can be prevented.

Aerobic growth of bacteria will occur at the surface of the sample between the BART-BALL and the wall of the BART tube.

15 mL of water sample is used to bring the BART-BALL up to the correct level. Nutrients will gradually diffuse up the water column to support this bacteria growth.

Once the oxygen has been used by the aerobes, this zone becomes free of oxygen and anaerobic growth will dominate.

Nutrient medium for growth is provided as a sterile dried pellet on the floor of the tube.



Easy to use

The BART Biodetector requires no microscope, no laboratory, and no incubator! The test is done at room temperature in your office or treatment room, on a desk, shelf, or in a cupboard, and is viewed daily. Different microorganisms like to grow at different heights in a column of water to which nutrients have been added. BART biodetectors contain nutrients in the base of a column and a ball. The ball restricts the amount of oxygen entering the water column, so that aerobic organisms grow around the ball and anaerobic organisms grow deep down in the water column. By changing the nutrients in the base of the column, different organisms are encouraged to grow. BART determines presence and activity levels.



Easy to analyze

The time taken for a color change (reaction) to occur gives a measure of the population size and activity. A color change occurs in the BART tube as a result of the oxygen gradient diffusing from the bottom upward. The change of color indicates a presence of bacteria within that sample. Interpretation is provided with the kit.

The Test

Full instructions for the use of BART biodetectors are included with your purchase. Each individual test consists of:

- Test vial with media and BART ball
- Outer tube for spill containment, odor control, disinfection, and disposal

To Order

Each kit number below includes nine (9) BARTs, except the 5-0031 which contains seven (7) BARTs and reaction caps. Each BART test is color-coded for quick and easy recognition.

BART Color	Test	Order
Red	Iron Related Bacteria - IRB-BART	5-0024
Black	Sulfate Reducing Bacteria - SRB-BART	5-0025
Lime green	Slime Forming Bacteria - SLYM-BART*	5-0026
Combo	Three each of IRB-, SRB-, and SLYM-BART	5-0032
Blue	Heterotrophic Aerobic Bacteria - HAB-BART	5-0027
Dark green	Micro-Algae - ALGE-BART	5-0028
Yellow	Fluorescent Pseudomonas - FLOR BART	5-0029
Gray	Denitrifying Bacteria - DN-BART	5-0030
White	Nitrifying Bacteria - N-BART	5-0031

*The SLYM-BART requires the use of a fluorescent lamp (Order Code 5-0033)

MICROBIOLOGICAL TESTING

BACTERIA & COLIFORM TESTING KITS



BACTERIA

LaMotte distributes the Biosan line of kits for various microbiological analyses. Results are obtained usually after 24-36 hours of room temperature incubation. Please contact us for more information.

Code	Test System	# of Tests	Shipping Code (Wgt./lbs)
3-0017	Aerobic Bacteria	25	NH (1)
3-0018	Sulfate Reducing Bacteria	25	NH (1)
3-0019	Bacteria and Fungi	10	NH (1)
3-0020	Bacteria	10	NH (1)



COLIFORM

5 tubes, each containing a nutrient tablet, are reacted, stored at room temperature for 40-48 hours and examined for color change and gas formation. The number of positive tubes may be correlated to a MPN method.

Code	Test System	Range/Sensitivity	# of Tests (# of Reagents)	Shipping Code (Wgt./lbs)
4-3616	Tableted nutrient based on 5 tube MPN	Presence/Absence	1 (1)	NH (1)

INDIVIDUAL TEST KITS

ACIDITY - ALUMINUM



In cleaning applications, P alkalinity is sometimes referred to as active alkalinity. The difference between the P reading and the T reading is "inactive" alkalinity.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
ACIDITY A standard base titrates acidity to the phenolphthalein endpoint. The 7182 uses different sample sizes and a 1:10 dilution to test hydrochloric, sulfuric and phosphoric acids with either a 1 drop = 0.1% or 1 drop = 1.0 % equivalence.				
7182	HCl, H ₂ SO ₄ , H ₃ PO ₄ Dropper Bottle	1 drop = 0.1 or 1.0% (as the particular acid)	50 at 10% (2)	R1 (1)
ALKALINITY Kits use titrations with standard acid to the phenolphthalein(P) and/or total(T) alkalinity endpoint. The mixed indicator, BCG-MR, is used for total alkalinity determinations. Where hydroxyl(OH) alkalinity is determined directly, as with kit #7515, the sample is pre-treated with barium to precipitate carbonate alkalinity. All results are expressed as CaCO ₃ . To convert results to Na ₂ O, multiply the answer by 0.62.				
4491-DR WAT-DR	Total Alkalinity Direct Reading Titrator	0-200 ppm/4ppm as CaCO ₃	50 at 200 ppm (2)	NH (1)
4533-DR WAT-MP-DR	P & T Alkalinity Direct Reading Titrator	0-200 ppm/4 ppm as CaCO ₃	50 at 200 ppm (3)	NH (1)
4533 WAT-MP-DC	P & T Alkalinity Dropper Pipet	1 drop = 10 ppm as CaCO ₃	50 at 200 ppm (3)	NH (1)
7240-01	P & T Alkalinity Dropper Bottle	1 drop = 10, 25, or 50 ppm as CaCO ₃	100 at 500 ppm (3)	R1 (2)
3467*† DR-A	P & T Alkalinity Direct Reading Titrator	0-200 ppm/4 ppm as CaCO ₃	50 at 200 ppm (3)	R1 (1)
7515 WAT-MPH-DC	P, T, & OH Alkalinity Dropper Pipet	1 drop = 10 ppm as CaCO ₃	50 at 200 ppm (4)	R1 (1)
ALUMINUM A pink to red color will form when aluminum reacts with Eriochrome Cyanine R, at pH 6.				
3569 AL-2	Octet Comparator	0, 0.1, 0.15, 0.2, 0.25, 0.3, 0.4, 0.5 ppm Al ³⁺	50 (2)	NH (1)

INDIVIDUAL TEST KITS

AMMONIA NITROGEN - BROMINE

Sample size is inversely proportional to equivalence.
 1 drop = 2 ppm in 25 ml,
 5 ppm in 10 mL and 10 ppm in 5 mL.



Arsenic Kit Code 4053

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
AMMONIA NITROGEN Two colorimetric methods are available. Nessler's reagent reacts with ammonia to form a yellow to brown color; salicylate reacts to form a blue color, which in combination with the yellow reagent color produces colors from yellow to blue. The salicylate method is preferred for salt water analysis and does not contain mercury salts as does the Nessler method.				
3304	Salicylate Octa-Slide	0.0, 0.05, 0.1, 0.25, 0.5, 1.0, 2.0 ppm NH ₃ -N	50 (3)	R2 (1)
5864	Salicylate ColoRuler	0.1, 0.25, 0.50, 1.0, 2.0, 4.0 ppm NH ₃ -N	50 (2)	R1 (1)
3315 SL-PAN	Nessler Octa-Slide	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 ppm NH ₃ -N	50 (2)	R1 (1)
3680-01 DC1200-NH	Nessler Colorimeter	0-5 ppm/0.05 ppm NH ₃ -N	100 (2)	R1 (1)
ARSENIC The procedure requires about 15 minutes and employs a test strip. Inorganic As ⁺³ and As ⁺⁵ are converted to arsine gas. This reacts with the test strip in a closed container and produces yellow to brown colors on the strip. The strip color is compared to a color chart to determine concentration in ppb.				
4053	Test Strip	4, 6, 8, 10, 12, 14, 16, 18, 20, 30, 40, 50, 60, 70, 80, 100, 140, 160 ppb	50	R1 (8)
BACTERIA See <i>Microbiological Testing</i> section pages 36-38.				
BIOCHEMICAL OXYGEN DEMAND (BOD) This is a determination of the amount of organic material in wastewater by measuring and comparing the dissolved oxygen content before and after incubating the sample for 5 days at 20°C. All reagents, including seed capsules and glassware needed to perform this test, are included in the kit. Incubator and DO meter are not included. See pages 84-85 for BOD accessories.				
7420 BOD	Buret Titration	1 mL = 0.2 mg O ₂ 0-1000 mg/L	100 (10)	HF (12)
BLEACH (See <i>Chlorine Bleach</i>)				
BROMINE Bromine may be tested using color development with DPD, or by a ferrous ammonium sulfate titration in the presence of DPD indicator. The 6824 kit uses glycine to enable the user to separate bromine and chlorine. The 3624 titration kit uses one sample size to test chlorine and one to test bromine. It includes a 1:10 dilution for determination of concentrations of 100 ppm or higher.				
6955 LP-5	DPD Tablet Octet Comparator	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Br	50 (1)	NH (1)

INDIVIDUAL TEST KITS

BROMINE - CHLORIDE



The total chelant determination is limited to 50 ppm or 10 drops of titrant. The test is pH dependent. Because the titrant is very acidic, it can decrease the pH of the endpoint.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
BROMINE (Continued)				
6824 LP-29	DPD Tablet Bromine in Chlorine Octet Comparator	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Br	50 (3)	NH (1)
3672-01 DC1200-BR	DPD Tablet Colorimeter	0-7.0 ppm/0.05 ppm Br	100 (1)	NH (5)
3624 CL-BR	FAS Chlorine or Bromine Direct Reading Titrator	0-10 ppm/0.2 ppm Cl or Br 0-100 ppm/2 ppm Cl or Br	50 at 10 ppm (3)	NH (1)
CADMIUM A dithizone extraction of cadmium produces a pink to red color.				
7839-01 P-53	Octet Comparator	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0 ppm Cd	20 (4)	HF (1)
CALCIUM (See Hardness)				
CARBON DIOXIDE A standard alkali is used to titrate samples to the phenolphthalein endpoint.				
7297-DR PCO-DR	Direct Reading Titrator	0-50 ppm/1.0 ppm CO ₂	50 at 50 ppm (2)	R1 (1)
7525 PCO-DC	Dropper Pipet	1 drop = 2.5 ppm CO ₂	50 at 50 ppm (2)	R1 (1)
CAUSTIC A sample is reacted with barium to precipitate any carbonates, then is titrated with a standard acid to the phenolphthalein endpoint. The 7181 includes a 1:10 dilution, resulting in a 1 drop = 0.1% or 1 drop = 1% equivalence.				
7516-DR-01 DCA-DR	Direct Reading Titrator	0-10%/0.2% NaOH	50 at 10% (4)	R1 (1)
7181	Dropper Bottle	1 drop = 0.1 or 1% NaOH	50 at 10% (3)	R1 (1)
CHELANT Free chelant is determined by using the back titration of a hardness test, with magnesium as the titrant. Since bismuth will displace other metals from chelants, it is used for total chelant determinations. Both tests use different sample sizes to determine NTA or EDTA.				
7144	Free Chelant Dropper Bottle	1 drop = 2 ppm EDTA 1 drop = 2 ppm NTA	100 (3)	R1 (1)
7143	Total Chelant Dropper Bottle	1 drop = 5 ppm EDTA 1 drop = 5 ppm NTA	100 (3)	HF (1)
CHLORIDE The argentometric method is used with all kits. This employs a chromate indicator and silver nitrate titrant. Hydrogen peroxide is included with kits 7172 and 7247 to eliminate sulfite interference.				
3468*† DR-C	Direct Reading Titrator	0-50 ppm/1 ppm Cl ⁻	50 (2)	NH (1)
4503-DR-01 PSC-DR	Direct Reading Titrator	0-200 ppm/4 ppm Cl ⁻ 0-20,000 ppm/400 ppm Cl ⁻	50 at 200 ppm (4)	R1 (1)

INDIVIDUAL TEST KITS

CHLORIDE - CHLORINE



DPD can be partially or completely bleached by chlorine or bromine concentrations greater than 6-10 ppm, depending on the sample size.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
CHLORIDE (Continued)				
7459 POL-H	Salinity Direct Reading Titrator	0-20 ppt/0.4 ppt Salinity	50 at 20 ppt (2)	NH (1)
7172-01	Dropper Bottle	1 drop = 10, 25, or 50 ppm Cl ⁻	120 at 100 ppm (5)	R1 (2)
7247	Dropper Bottle	1 drop = 2, 5, or 10 ppm Cl ⁻	120 at 10 ppm (5)	R1 (1)
CHLORINE Free, combined and total chlorine may be determined using DPD with either colorimetric or titrimetric methods. These determinations are generally limited to concentrations of 0–10 ppm, although the FAS titration can test higher concentrations by dilution or with the addition of more DPD indicator. Higher concentrations require the iodometric titration, whereby the sample is acidified and iodide is added, which is oxidized by chlorine to iodine and is titrated with a standard thiosulfate solution. Iodometric determinations will only test total chlorine.				
Free & Total				
3308* SL-26	DPD Tablet Octa-Slide	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	50 (2)	NH (1)
3308-LI	DPD Liquid Octa-Slide	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	144 (3)	R1 (1)
3312* SL-MW	DPD Tablet Octa-Slide	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0 ppm Cl	50 (2)	NH (1)
3313* SL-SWS	DPD Tablet Octa-Slide	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0 ppm Cl	50 (2)	NH (1)
3314* SL-16	DPD Tablet 2 Octa-Slides	Low: 0.1–1.0 ppm Cl High: 1.0–6.0 ppm Cl	100 (2)	NH (1)
3328 SL-60	DPD Tablet Octa-Slide	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 ppm Cl	50 (2)	NH (1)
3670-01 DC1200-CL	DPD Tablet Colorimeter	0–4.0 ppm/0.05 ppm Cl	100 (2)	NH (4)
3670-01-LI DC1200-CL-LI	DPD Liquid Colorimeter	0–4.0 ppm/0.05 ppm Cl	144 (3)	R1 (5)
DPD Free Chlorine, Monochloramine, Dichloramine, & Total Chlorine				
3316 SL-1	DPD Tablet Octa-Slide	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	50 (4)	NH (1)
DPD Free, Mono & Dichloramines, Total Chlorine, pH				
6980 LP-8	DPD Tablet/ Phenol Red Tablet 3 Octet Comparators	Low: 0.1–1.0 ppm Cl High: 1.0–6.0 ppm Cl pH: 6.8–8.2	200 (5)	NH (7)

INDIVIDUAL TEST KITS

CHLORINE - CHLORINE TEST PAPERS



Clean sample cells used in DPD test reactions as soon as possible. DPD can stain!

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
CHLORINE ...Continued				
DPD-FAS Titration for Free and Total Chlorine				
3176-01*† DT-DR	Direct Reading Titrator	0-10 ppm/0.2 ppm Cl	50 at 10 ppm (4)	R1 (2)
3624 DT	Chlorine or Bromine Direct Reading Titrator	0-10 ppm/0.2 ppm Cl or Br 0-100 ppm/2 ppm Cl or Br	50 at 10 ppm (3)	NH (1)
7514 CC-25	FAS Dropper Bottle Titration	1 drop = 0.2 or 0.5 ppm Cl	50 (3)	NH (1)
Iodometric Titration (For higher total chlorine levels)				
4497-DR PCT-DR	Direct Reading Titrator	0-200 ppm/4 ppm Cl	50 at 200 ppm (3)	R2 (1)
4497 PCT-DC	Dropper Pipet	1 drop = 10 ppm Cl	50 at 200 ppm (3)	R2 (1)
4501	Dropper Pipet	1 drop = 1 ppm Cl	50 (3)	R2 (1)
Chlorine Bleach, Iodometric Titration				
7105-02	Direct Reading Titrator	0-10%/0.2% Cl	50 at 10% (3)	R1 (2)
7894 LB	Dropper Pipet	1 drop = 0.005%, 0.05%, or 0.5% Cl	50 at 0.1, 1.0, or 10% (3)	R1 (1)
CHLORINE TEST PAPERS See other Chlorine test strips on page 34.				
4250-BJ	Chlorine Test Papers	10, 50, 100, 200 ppm	200 (1)	NH (1)

INDIVIDUAL TEST KITS

CHLORINE DIOXIDE - COPPER



Determine when your reagent was made and bottled.

The first 3 numbers of a date code signify the week and the year the reagent was made.

The last 3-4 numbers of the date code signify the month and day of the month it was bottled. Thus 5041209 was made in the 50th week of 2004 and bottled on Dec 9th.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
CHLORINE DIOXIDE The colorimetric kits use DPD to determine chlorine dioxide. Glycine is added in the method to remove free chlorine interferences. Chlorite up to 1,000 ppm and chlorine up to 2 ppm will not interfere with the test strip determinations.				
3622	Octa-Slide	0.0, 0.2, 0.6, 0.8, 1.0, 2.0, 3.0, 5.0 ppm ClO ₂ (0-10 by dilution)	50 (2)	NH (1)
3671-01 DC1200-CLO	Colorimeter	0-7 ppm/0.05 ppm ClO ₂	100 (2)	NH (3)
2999	Test Strip	0, 0.25, 0.50, 1.0, 3.0, 10 ppm	50	NH (1)
3002	Test Strip	0, 10, 25, 50, 100, 250, 500 ppm	50	NH (1)
CHROMATE Diphenylcarbazide reacts with chromate (hexavalent chromium) to form a red to violet color in an acid solution.				
4430 LSC	Diphenylcarbazide Octet Comparator	5, 10, 15, 20, 25, 30, 35, 40 ppm Na ₂ CrO ₄ (lower or higher ranges by dilution)	50 (1)	R1 (1)
CHROMIUM Total, hexavalent and trivalent chromium are determined by this method. First, the hexavalent chromium is determined by reaction with diphenylcarbazide, as above. A second sample is heated in the presence of an oxidizer, to determine total chromium. The difference between total and hexavalent is trivalent. The heat source is not included.				
7678-01 LSCV	Octet Comparator	0.1, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.5 ppm Cr	20 (5)	HF (2)
COLIFORM See also <i>Microbiological Testing</i> section pages 36-38.				
COLOR The color of water is measured by comparing the water to platinum cobalt color standards representing APHA Standard Color Units. See also TC-3000, pages 8-9.				
3528 CW-HR	Octet Comparator with Axial Reader	0, 20, 50, 80, 110, 140, 170, 200 APHA color units	Unlimited (0)	NH (2)
COPPER A yellow color is formed when copper reacts with diethyldithiocarbamate (DDC). A blue color is formed when copper reacts with cuprizone.				
6616 PCL	DDC Octet Comparator with Axial Reader	0, 0.05, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50 ppm Cu	50 (1)	NH (1)

INDIVIDUAL TEST KITS

COPPER - GLUTERALDEHYDE



2 CHOICES FOR REFILLS:
 1. For a complete set, add "R-" to the kit number.
 2. For individual reagents, order by the code on the reagent.
 See pages 76-83 for a list of kit reagents.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
COPPER (Continued)				
3619 EC-70	Cuprizone Color Chart	0.05, 0.10, 0.15, 0.20, 0.30, 0.50, 0.70, 1.0 ppm Cu	50 (2)	R1 (1)
3673-01 DC1200-CO	DDC Colorimeter	0-8 ppm/0.03 ppm Cu	100 (1)	NH (7)
CYANIDE The cyanide is first reacted with a chlorine donor to form cyanogen chloride, which then reacts with pyridine-barbituric acid to form a red-blue color. The test is also applicable as a screening test for concentrations up to 250 ppm.				
7387-01 CY	Octet Comparator	0.0, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40 ppm Free CN ⁻	50 (5)	R1 (3)
DEHA Diethylhydroxylamine reacts with ferric iron to form ferrous iron, which is then measured by a standard iron test.				
4790	Octa-Slide	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5 ppm DEHA	100 (3)	R1 (1)
DETERGENTS Anionic surfactants are extracted with toluene and break up an ion pair, releasing bromphenol blue into a water layer. A standard color reagent is then used to determine the concentration.				
4507-01 DS-1-DC	Dropper Pipet	1 drop = 1.0 ppm Detergent	60 at 5.0 ppm (3)	R1 (2)
4515	Dropper Pipet	1 drop = 0.1 ppm Detergent	30 (4)	HF (2)
FLUORIDE A red zirconium lake reacts with fluoride to form a colorless solution, which decreases the red color of the solution in proportion to concentration.				
4227-R CC-F3	Octet Comparator with Axial Reader	0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4, 1.6 ppm F ⁻	50 (2)	NH (1)
3674-01 DC1200-FL	Colorimeter	0-2.0 ppm/0.03 ppm F ⁻	100 (2)	HF (7+5)
FORMALDEHYDE The colorimetric analysis uses a modified Schiff reaction in which an acidified pararosaniline and dichlorosulfitomercurate II complex form a violet color.				
6701 FMD	Octet Comparator	0.0, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm Formaldehyde	100 (3)	HF (2+5)
GLUTERALDEHYDE High concentrations are determined by a titration with sulfuric acid after reaction with sulfite.				
7064	Direct Reading Titrator	1 mL = 250 ppm Gluteraldehyde	25 (5)	R2 (3)

INDIVIDUAL TEST KITS

HARDNESS - HYDRAZINE

Hardness originally referred to the ability of water to lather with soap. The more calcium and magnesium ions present, the "harder" it was to produce a lather.



ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
HARDNESS EDTA titration is used for all hardness determinations, with a red to blue endpoint. Both total and calcium hardness buffers include inhibitors to eliminate metal interferences. All results are as CaCO ₃ ; some kits also express results as gpg. The 3609, which is recommended for salt water analysis, includes a conversion factor for Ca ⁺⁺ . The -LI suffix indicates an all liquid kit; -LT indicates a liquid buffer and tablet indicator.				
3609 CA-DR	Fresh & Salt Water Calcium Hardness Direct Reading Titrator	0-200 ppm/4 ppm CaCO ₃ 0-2,500 ppm by dilution	50 (3)	R1 (1)
4482-DR-LI PHT-DR-LI	Total Hardness Direct Reading Titrator	0-200 ppm/4ppm CaCO ₃ Liquid indicator	50 at 200 ppm (3)	R1 (1)
4482-LI-01 PHT-DC-LI	Total Hardness Dropper Bottle	1 drop = 10 ppm or 1 gpg CaCO ₃ Liquid indicator	50 at 200 ppm or 20 gpg (3)	R1 (1)
4482-DR-LT PHT-DR-LT	Total Hardness Direct Reading Titrator	0-200 ppm/4 ppm CaCO ₃ Tablet indicator	50 at 200 ppm (3)	R1 (1)
4824-LT-01 PHT-CMD-LT	Calcium, Magnesium, Total Hardness Dropper Bottle	1 drop = 10 ppm or 1 gpg CaCO ₃ Tablet indicator	50 at 200 ppm or 20 gpg (5)	R1 (1)
4824-DR-LT PHT-CM-DR-LT	Calcium, Magnesium, & Total Hardness Direct Reading Titrator	0-200 ppm/4 ppm CaCO ₃ Tablet indicator	50 at 200 ppm (5)	R1 (1)
3037-DR HCM-DR	Low Range Total Hardness Direct Reading Titrator	0-10 ppm/0.2 ppm CaCO ₃	50 at 10 ppm (3)	R1 (1)
7171-01	Total Hardness Dropper Bottle	1 drop = 10, 25, or 50 ppm CaCO ₃	100 (3)	R1 (1)
7246-01	Total Hardness Dropper Bottle	1 drop = 2, 5, or 10 ppm CaCO ₃	100 (3)	R1 (1)
HYDRAZINE A yellow color is formed in the reaction of hydrazine and paradimethylaminobenzaldehyde.				
4850 PHZ-R	Bi-Color Reader with Octet Comparator	0.00, 0.01, 0.05, 0.10, 0.20, 0.30, 0.40, 0.50 ppm N ₂ H ₄	50 (2)	R2 (1)

INDIVIDUAL TEST KITS

HYDROGEN PEROXIDE - LEAD



Many iodometric titrations use starch to enhance the endpoint. This should only be added near the end of the titration. High iodine concentrations, present early in the determination, can decompose starch.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
HYDROGEN PEROXIDE Although peroxide may be tested colorimetrically with DPD, the most common method is iodometric titration using a standard thiosulfate solution. Both methods are offered.				
3188 HP-40	DPD Tablet Octet Comparator	Low: 0.1, 0.3, 0.5, 0.75, 1.0, 1.25, 1.5, 2.0 ppm H ₂ O ₂ High: 2, 6, 10, 15, 20, 25, 30, 40 ppm H ₂ O ₂	50 (2)	NH (1)
7138-DB	Iodometric Dropper Bottle	1 drop = 5 ppm H ₂ O ₂	50 (4)	HF (2)
7150	Iodometric Dropper Bottle	1 drop = 0.5% H ₂ O ₂	50 (4)	HF (2)
2984LR	Test Strips	0, 1, 3, 10, 30, 50	50 (1)	NH (1)
IODINE As with many other oxidizers, iodine may be titrated with a standard thiosulfate solution, hence the name iodometric titration.				
7253-DR PIT-DR	Direct Reading Titrator	0-50 ppm/1 ppm I ₂	50 at 50 ppm (3)	R1 (1)
7253 PIT-DC	Dropper Pipet	1 drop = 2.5 ppm I ₂	100 at 25 ppm (3)	R1 (1)
2948-BJ	Test Papers	12, 25, 50, 100 ppm I ₂	200	NH (1)
IRON Bipyridyl is a ferrous iron indicator that tests total iron after any ferric iron is reduced to ferrous in the sample. Ferrous and ferric may be tested separately by eliminating the reduction step. A similar ferrous indicator, 1,10 phenanthroline, is used in the DC1200 kit.				
7787 P-62	Total Iron Octet Comparator with Axial Reader	0.05, 0.10, 0.20, 0.30, 0.40, 0.60, 0.80, 1.0 ppm Fe	30 (2)	R1 (1)
3318 SL-P61	Total Iron Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	90 (2)	R1 (1)
3347 SL-P-63	Ferrous/Ferric Iron Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	50 (3)	R1 (1)
3681-01 DC1200-FE	Total Iron 1, 10 Phenanthroline Colorimeter	0-4.0 ppm/0.25 ppm Fe	100 (2)	R1 (1)
LEAD The presence of lead in solder is detected by the reaction of a solder sample with acid and sodium rhodizonate.				
3582 PBS	Spot Plate Plumbing Inspector Kit	Yes/No	100 (3)	R1 (2)

INDIVIDUAL TEST KITS

MANGANESE - NICKEL

Molybdenum x 1.6
= Molybdate

Sodium Molybdate
Dihydrate x 0.4
= Molybdenum

Molybdate x 0.63
= Molybdenum



ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
MANGANESE The 1-(2-pyridylazo)-2-naphthol(PAN) method forms an orange complex with manganese. Metal interferences with the PAN method can be eliminated using the #7104 Cyanide Inhibitor Package, sold separately.				
3588-01 LMN	PAN Octet Comparator	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0 ppm Mn	50 (4)	HF (2)
3682-01 DC1200-MN	PAN Colorimeter	0-0.7 ppm/0.01 ppm Mn	100 (3)	R2 (7+5)
MICROBIOLOGICAL TESTING See section pages 36-38.				
MOLYBDATE/MOLYBDENUM There are three colorimetric methods and one titration available. The 6628 uses Xanthogonate to form a pink color with molybdate. Other color tests use thioglycolate to form a yellow color. The titration employs citric acid with the reaction changing from red to yellow.				
6628 PMO	Xanthate, Sodium Molybdate Octet Comparator	1, 2, 3, 4, 5, 6, 8, 10 ppm Sodium Molybdate	100 (2)	R1 (1)
3346 SL-MHR	Thioglycolate, Molybdate Octa-Slide	30, 60, 90, 120, 150, 180, 240, 300 ppm Molybdate	50 (2)	NH (1)
3160 MBD	Thioglycolate, Molybdenum Octet Comparator with Axial Reader	2, 5, 8, 10, 12, 15, 18, 20 ppm Molybdenum	50 (3)	R3 (2)
3632	Molybdenum Dropper Pipet	1 drop = 2 or 20 ppm Molybdenum	50 (3)	HF (2+5)
3676-01 DC1200-MO	Thioglycolate Colorimeter	0-30 ppm/0.1 ppm Molybdenum	50 (3)	R3 (7)
NICKEL Under acidic conditions, nickel reacts with dimethylglyoxime to form an orange-red complex.				
7802 P-54	Octet Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 5.0, 7.5, 10.0 ppm Ni	20 (7)	HF (9)

INDIVIDUAL TEST KITS

NITRATE NITROGEN - NITRITE, SODIUM



The current EPA limit for nitrate is 10 ppm as nitrogen. Multiply nitrogen readings by 4.4 to convert reading to nitrate.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
NITRATE NITROGEN The nitrate is reduced to nitrite by cadmium or zinc and this undergoes diazotization/coupling to form a pink color. All kits below use cadmium except #3354, which uses zinc and which also contains a reagent that eliminates nitrite interference. Kit #3519 tests both nitrate and nitrite. The kit #3119 uses one comparator that contains both nitrate and phosphate standards. The phosphate method in kit #3119 is an ascorbic acid reduction. See page 14 for Total Nitrogen Digestion Tube Test.				
3319 SL-NCR	Cadmium Reduction Octa-Slide	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO ₃ ⁻ -N	40 (2)	R1 (2)
3119 NPL	Cadmium Reduction Nitrate/Phosphate Octet Comparator with Axial Reader	0.2, 0.4, 0.6, 1.0 ppm NO ₃ ⁻ -N; 0.2, 0.4, 0.6, 1.0 ppm PO ₄ ³⁻	Nitrate: 40 (2) Phosphate: 50 (2)	R3 (2)
3615 NCL	Cadmium Reduction Octet Comparator with Axial Reader	0, 0.2, 0.4, 0.6, 0.8, 1.0 ppm NO ₃ ⁻ -N	50 (2)	R1 (2)
3519 NCR-2	Cadmium Reduction Octet Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO ₃ ⁻ -N	40 (3)	R1 (1)
3354	Zinc Reduction Octa-Slide	0, 1, 2, 4, 6, 8, 10, 15 ppm NO ₃ ⁻ -N	50 (2)	NH (2)
3677-01 DC1200-NA	Cadmium Reduction Colorimeter	0-3.0 ppm/0.05 ppm NO ₃ ⁻ -N	50 (2)	R1 (7)
NITRITE NITROGEN As with nitrate, above, the diazotization/coupling reaction is used to form a pink color with nitrite.				
3352 SL-LNR	Octa-Slide	0.05, 0.10, 0.20, 0.30, 0.40, 0.50, 0.60, 0.80 ppm NO ₂ ⁻ -N	50 (3)	NH (2)
NITRITE, SODIUM Sodium nitrite is titrated using one of two methods. After acidifying the sample, permanganate will oxidize nitrite. When all of the nitrite is oxidized, the permanganate turns the sample pink. Ceric Ammonium Nitrate (CAN) also oxidizes the nitrite in the presence of ferroin indicator. The endpoint is orange to blue. The CAN method is preferred if glycol is present.				
7101-DR PRI-DR	Permanganate Direct Reading Titrator	0-1000 ppm/20 ppm NaNO ₂	50 at 1000 ppm (2)	R1 (1)
7101 PRI-DC	Permanganate Dropper Pipet	1 drop = 50 or 100 ppm NaNO ₂	50 at 1000 or 2000 ppm (2)	R1 (1)
3036-DR-01 NAC-DR	CAN Direct Reading Titrator	0-1000 ppm/20 ppm NaNO ₂	50 at 1000 ppm (2)	R1 (1)
7183-01	CAN Dropper Bottle	1 drop = 50 ppm NaNO ₂	50 at 1000 ppm (2)	R1 (1)

INDIVIDUAL TEST KITS

OXYGEN, DISSOLVED - PHENOLS

It is important in all drop titrations to hold the titrant vertically. This ensures proper drop size.



ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
OXYGEN, DISSOLVED The azide modification of the Winkler method is a modified iodometric titration whereby oxygen, in the presence of a strong alkali, oxidizes manganese, which in turn reacts with iodide to form iodine. This is titrated with a standard thiosulfate solution in the presence of a starch indicator to enhance the endpoint. Azide eliminates nitrite interference.				
7414† EDO	Direct Reading Titrator	0-10 ppm/0.2 ppm O ₂	50 at 10 ppm (5)	R3 (2)
5860	All liquid reagents Direct Reading Titrator	0-10 ppm/0.2 ppm O ₂	50 at 10 ppm (5)	R1 (2)
OZONE DPD reacts with ozone, but any other oxidizers will interfere. The Indigo Trisulfonate method includes a step to eliminate chlorine interference, but bromine will interfere. It is preferred for the analysis of salt water samples.				
3526 LP-62	DPD Tablet Octet Comparator with Axial Reader	0.01, 0.03, 0.07, 0.11, 0.2, 0.4, 0.7, 1.0 ppm O ₃	50 (2)	NH (1)
3678-01 DC1200-OZ	Indigo Trisulfonate Colorimeter	0-0.4 ppm/0.04 ppm O ₃	100 (3)	NH (7)
PERACETIC ACID/HYDROGEN PEROXIDE This test is a combination of two separate titrations. The first is a cerium titration of peroxide. The second is an iodometric titration of peracetic acid.				
7191-01	Dropper Bottle	1 drop = 50 ppm Peroxide 1 drop = 15 ppm Peracetic Acid	50 (5)	R1 (2)
PERACETIC ACID TEST STRIP				
3000	Test Strips	0, 10, 20, 40, 60, 85, 160 ppm	50	NH (1)
pH TEST PAPERS				
2907	Test Papers	6.8-8.4 pH/0.2 pH	1 Roll	NH (1)
2912	Test Papers	3.0-10.0 pH/1 pH	200 Strips	NH (1)
2953	Test Papers	4.5-7.5 pH/0.5 pH	1 Roll	NH (1)
2954	Test Papers	0-13 pH/1 pH	1 Roll	NH (1)
2955	Test Papers	9-14 pH/0.5 pH	1 Roll	NH (1)
2956	Test Papers	1-11 pH/1 pH	1 Roll	NH (1)
2959	Test Papers	8-12 pH/0.5 pH	2 Rolls	NH (1)
3-2950	pH Indicator Sticks	0-14/1 pH	100 Strips	NH (1)
PHENOLS 4-aminoantipyrine is oxidized in the presence of ortho and meta substituted phenols to form a reddish colored complex.				
7824 P-52-R	Octet Comparator with Axial Reader	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0 ppm Phenol	50 (3)	N (1)

INDIVIDUAL TEST KITS

pH

pH indicators work in a specific range. Samples with a pH above the range of an indicator may match the highest standard on the comparator; samples below the range may match the lowest standard.



pH must be controlled and monitored because it plays an essential role in almost all chemical and biological processes.

LaMOTTE pH TEST KITS

Each test kit consists of an Octet Comparator, graduated test tubes, and a bottle of indicator solution for 50 tests. LaMotte Company has been supplying laboratory quality pH indicator tests to professional analysts for more than eighty years; these are the most reliable, economical pH test kits available. Simply fill the tube to the mark with the sample water, add several drops of indicator, and compare the resulting color against the eight permanent color standards in the comparator.

HOW TO SELECT THE RIGHT pH KIT: SINGLE OR WIDE RANGE?

Single range kits cover a range of 1.4 pH units in 0.2 unit increments (0.1 unit sensitivity). Wide range kits may cover as many as 7 pH units in increments of 0.5 or 1.0 pH units (0.25 or 0.5 unit sensitivity).

WHICH RANGE?

Choose a kit in which the midpoint of the range covered is as close to the average or optimum pH value of the sample water. If this value is unknown, choose a wide range kit.

Indicators specific to a particular pH range allow colorimetric determination of pH. If the water to be tested is cloudy, one may wish to employ the bicolor reader (see page 6).



See Instrument Section, pages 22-30 for pH meters.

ORDER CODE/ MODEL	pH INDICATOR	OCTET COMPARATOR COLOR STANDARD VALUES IN pH UNITS								HAZARD (SHIPPING WEIGHT/LBS)
2108/P-CPR	Chlorophenol Red	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	NH (1)
2109/P-BTB	Bromthymol Blue	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	NH (1)
2110/P-PR	Phenol Red	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	NH (1)
2111/P-CR	Cresol Red	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	NH (1)
2112/P-TB	Thymol Blue	8.0	8.2	8.4	8.6	8.8	9.0	9.2	9.4	NH (1)
2113/P-ORB	Oleo Red B	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	R1 (1)
2117/P-3100	Wide Range	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	R1 (1)
2118/P-3065	Wide Range	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	R1 (1)
2119/P-5085	Wide Range	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	R1 (1)
2120/P-5100	Wide Range	5.0	6.0	6.5	7.0	7.5	8.0	9.0	10.0	R1 (1)
2121/P-7105	Wide Range	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	R1 (1)
2124/P-8512	Alkaline Wide Range	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	R1 (1)
5858	Wide Range	2 Octet comparators - combines Code 2118 and Code 2121 from above								R1 (1)

INDIVIDUAL TEST KITS

PHOSPHATE - PHOSPHONATE

If a treatment uses a blend of phosphonates, the equivalence must be determined by running standards of the treatment.



ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
PHOSPHATE There are 3 colorimetric test methods. In two, a phosphomolybdate complex is reduced by stannous chloride or ascorbic acid to produce a blue color. In a third, phosphate forms a yellow complex with vanadomolybdate.				
3679-01 DC1200-PLR	Ascorbic Acid Colorimeter	0-3.0 ppm/0.07 ppm PO ₄ ³⁻	100 (2)	R2 (7)
3121-01 PAL	Ascorbic Acid Octet Comparator with Axial Reader	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm PO ₄ ³⁻	50 (2)	R1 (1)
3114-01 PAA	Ascorbic Acid Octet Comparator	0.5, 1, 2, 3, 4, 6, 8, 10 ppm and 5, 10, 20, 30, 40, 60, 80, 100 ppm PO ₄ ³⁻	50 (2)	R1 (1)
7416-01 NVM	Stannous Chloride Octet Comparator with Axial Reader	0.05, 0.1, 0.2, 0.3, 0.4, 0.6, 0.8, 1.0 ppm PO ₄ ³⁻	50 (2)	R1 (1)
3320-01 SL-VM-12	Stannous Chloride Octa-Slide	Low: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 ppm PO ₄ ³⁻ High: 10, 20, 30, 40, 50, 60, 80, 100 ppm PO ₄ ³⁻	50 (2)	R1 (1)
4408 VM-12	Stannous Chloride Octet Comparator	Low: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 ppm PO ₄ ³⁻ High: 10, 20, 30, 40, 50, 60, 80, 100 ppm PO ₄ ³⁻	50 (2)	HF (1)
7068 P-POR	Stannous Chloride Octet Comparator with BiColor Reader	Low: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 ppm PO ₄ ³⁻ High: 10, 20, 30, 40, 50, 60, 80, 100 ppm PO ₄ ³⁻	50 (2)	HF (1)
4401-01 VM-1	Vanadate Molybdate Octet Comparator	10, 20, 30, 40, 50, 60, 70, 80 ppm PO ₄ ³⁻	50 (1)	R1 (1)
PHOSPHATE (TOTAL) Polyphosphates (acid-hydrolyzable or condensed) and phosphonates (organic phosphates) are reverted using the reagents and apparatus in the 7884 Auxiliary Phosphate kit . The polyphosphates require boiling or microwaving with acid and subsequent neutralization; the phosphonates require the same, but with the addition of an oxidizer in the boiling/microwaving step. Once reverted to orthophosphate, any of the tests in the orthophosphate section above may be used for analysis. See page 14 for Total Phosphorus Digestion Tube Tests.				HF (2)
PHOSPHONATE The chromazurol S method may be used for Dequest, Bayhibit, Belcor 575 and Belsperse 161 phosphonates. The indicator changes from yellow to pink at the pH ideal for the reaction, then thorium nitrate is added until the solution turns purple. The Xylenol Orange method titrates all Dequest products and Belcor 575. The pH is adjusted to 2.5-3.0, then thorium nitrate is added until the color changes from yellow to red.				
7625-DR OPCA-DR	CAS Direct Reading Titrator	0-20 ppm/0.4 ppm HEDP/PBTC	50 at 20 ppm (5)	R1 (1)
7625 OPCA-DC	CAS Dropper Pipet	1 drop = 1.25 ppm HEDP 1 drop = 1.4 ppm PBTC	50 at 20 ppm (5)	R1 (1)

INDIVIDUAL TEST KITS

PHOSPHONATE - SALINITY



Many wood treating companies use QAC kits to monitor their products because the wood preservatives react similarly to QAC.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
PHOSPHONATE (Continued)				
7530-DR FI-DR	XO Direct Reading Titrator	0–20 ppm/0.4 ppm NaAMP	50 at 20 ppm (5)	R1 (2)
7530-WT	XO Dropper Bottle	1 drop = 1 ppm NaAMP	50 at 20 ppm (5)	R1 (2)
POLYPHOSPHATES A colorimetric method is available for waters where metal interference is unlikely. An excess of iron is added to the solution containing polyphosphate. The iron is complexed and the remaining iron is determined. The polyphosphate concentration is derived from the iron concentration.				
7340-R PPK-R	Octet Comparator with Axial Reader	0, 3, 6, 9, 12, 15 ppm Polyphosphate	50 (3)	R2 (1)
POLYQUAT The test is based on the reaction of the cationic polyquat with an anionic polyelectrolyte using Toluidine Blue O as the indicator. The color change is blue to purple.				
7056	Dropper Bottle	1 drop = 1 ppm Polyquat	100+ (5)	R1 (1)
POTASSIUM Sodium tetraphenylboron reacts with potassium to form a white precipitate. The turbidity of the solution is proportional to potassium concentration which is measured in a calibrated tube.				
3138 KIW	Turbidity Reading Tube	6, 8, 10, 20, 30, 40, 50 ppm K ⁺	100 (2)	R1 (1)
QAC Two methods are available. A masked bromphenol blue indicator is added to the sample and turns green. Sodium tetraphenylboron is added to complex the QAC and the color changes to red. This method is best suited to higher QAC concentrations. A polyelectrolytic titration, like the one used for polyquat, is used for low to high concentrations.				
3043-DR QT-DR	BPB Direct Reading Titrator	0–500 ppm/10 ppm Alkyl dimethyl benzyl ammonium chloride	50 at 500 ppm (2)	NH (1)
XX00868	BPB Direct Reading Titrator	0-1,000 ppm/20 ppm 0-5,000 ppm/100 ppm with dilution	50 at 1,000 ppm (2)	NH (1)
7057	Polyelectrolytic Dropper Bottle	1 drop = 2, 5, or 10 ppm Alkyl dimethyl benzyl ammonium chloride	100+ (5)	R1 (2)
2951	Test Papers	50, 100, 200, 400 ppm	100	NH (1)
SALINITY Salinity is based on the concentration of chloride. An argentometric titration with silver nitrate is used to determine the chloride concentration.				
7459-01 POL-H	Direct Reading Titrator	0–40 ppt/0.4 ppt Salinity	50 at 20 ppt (2)	R1 (1)

INDIVIDUAL TEST KITS

SILICA - SULFIDE

Sulfide above 20 ppm will bleach the methylene blue method.



ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGE 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
SILICA The heteropoly blue method tests for "molybdate-reactive" silica. The 4463 uses a 1:10 dilution to expand the range of the kit to 100 ppm.				
4463 PSI	Octet Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm or 5, 10, 20, 30, 40, 60, 80, 100 ppm SiO ₂	50 (4)	R1 (1)
3321 SL-PSI	Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm SiO ₂	50 (4)	R1 (1)
SODIUM NITRITE (See Nitrite, Sodium)				
SULFATE Barium forms a precipitate with sulfate. The turbidity formed is measured using comparator standards or a meter.				
7778 PSAT	Tablet Octet Comparator	20, 40, 60, 80, 100, 120, 160, 200 ppm SO ₄ ²⁻	50 (1)	R1 (1)
3683-01 DC1200-SU	Colorimeter	0-100 ppm/1.0 ppm SO ₄ ²⁻	100 (1)	R1 (6)
SULFIDE Both kits use the Pomeroy methylene blue method for analysis. The colorimetric method uses color standards to read total sulfide. Total, dissolved and hydrogen sulfide can be separated in the titration test. The total sulfide is determined using a color dye which is added to an unreacted sample until it matches a reacted sample. The same procedure is used for dissolved sulfide, after insoluble matter is removed by aluminum floc. Hydrogen sulfide is determined by measuring pH and multiplying the dissolved sulfide concentration by a pH correction factor.				
3322† SL-P70	Total Sulfide Octa-Slide	0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 15.0, 20.0 ppm S ²⁻	50 (3)	R1 (1)
4456	Total Sulfide Octet Comparator	0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 15.0, 20.0 ppm S ²⁻	50 (3)	R1 (1)
4630†* CC-PS	Total, Dissolved & Hydrogen Sulfide Dropper Pipet	1 drop = 1.0 or 0.1 ppm S ²⁻ or H ₂ S	70 at 10 ppm (8)	HF (10)

INDIVIDUAL TEST KITS

SULFITE - ZINC



Cooling sulfite samples will cause low results due to sulfite reaction with air. Testing samples that are too hot may decompose the starch indicator, resulting in a brown endpoint.

ORDER CODE MODEL	TEST SYSTEM (DETAILED ON PAGES 6-7)	RANGE/SENSITIVITY	# OF TESTS (# REAGENTS)	SHIPPING CODE (WEIGHT/LBS)
SULFITE An iodide-iodate titrant oxidizes sulfite to sulfate under acid conditions, until all of the sulfite is reacted. The titrant then reacts with starch to form a blue color signifying the endpoint.				
7175-DR SIT-DR	Direct Reading Titrator	0-100 ppm/2 ppm SO_3^{2-}	50 at 100 ppm (3)	R1 (1)
7175 SIT-DC	Dropper Pipet	1 drop = 5 ppm SO_3^{2-}	50 at 100 ppm (3)	R1 (1)
7132	Dropper Bottle	1 drop = 2, 5, or 10 ppm SO_3^{2-}	100+ (3)	R1 (1)
TANNIN/LIGNIN Tungstophosphoric and molybdophosphoric acids are reduced by tannins and lignins to form a blue color.				
7831 TL	Octet Comparator	1, 2, 3, 4, 5, 6, 8, 10 ppm Tannin or lignin like substances	50 (2)	R1 (1)
TOLCIDE PS BIOCIDE This kit was developed in cooperation with Rhodia, formerly Albright & Wilson, for the determination of tetrakis(hydroxymethyl) phosphonium sulfate (THPS). The iodometric titration may be used for fresh or salt water in oilfields, towers, pulp and paper, etc.				
4-8776	Direct Reading Titrator	0-100/2 ppm THPS	60 (5)	NH (1)
ZINC In a solution buffered to pH 9, zincon reacts with zinc to form a blue color.				
7391-01 ZN	Octet Comparator	0, 1, 2, 3, 4, 6, 8, 10 ppm Zn	50 (2)	NH (1)
7417-01 ZN-LR	Octet Comparator	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4 ppm Zn	50 (2)	NH (1)

COMBINATION OUTFITS

AQUACULTURE & AQUARIUM WATERS

Fish Farms, Hatcheries, Research Institutions, Hobbyists, Retailers,
 Ornamental Fish Culturists...



Fresh Water Outfit

Model AQ-2 • ORDER CODE 3633-03 (Ship Code R3; 16 lbs.)
 Reagent Refill • Order Code R-3633-03 (Ship Code R3)



A complete outfit for pond fish culture, ideal for fresh water analysis. Nine critical test factors can be determined on-site, efficiently and accurately. Designed with field analysis as a priority; all reagents, components, and accessories are arranged in pre-drilled foam. Short form instructions are provided in a handy adhesive lid label for easy access. Long form instruction booklet provides detailed instructions and test kit diagram. Unit is supplied complete with labware, accessories, sampling bottle, and reagents.

FACTOR	METHOD	RANGE (# TESTS)
Ammonia Nitrogen	Nessler	0.2–3.0 (50)
Nitrite Nitrogen	Diazotization/Coupling	0.05–0.8 (50)
pH	Wide Range	5.0–10.0 (50)

FACTOR	METHOD	RANGE (# TESTS)
Alkalinity, Total	Neutralization	0–200 ppm (50)
Carbon Dioxide	Neutralization	0–50 ppm (50)
Chloride	Argentometric	0–200 ppm (50)
Dissolved Oxygen	Azide Modification of Winkler Method	0–10 ppm (50)
Hardness (Total)	Complexometric	0–200 ppm (50)

TEMPERATURE	
Armored Thermometer	–5° to 45°C

Salt Water Outfit

MODEL AQ-4 • ORDER CODE 3635-03 (Ship Code R2; 16 lbs.)
 Reagent Refill • Order Code R-3635-03 (Ship Code R2)

Provides equipment to monitor nine parameters most critical for the salt water aquaculturalist. Reagents, labware, and accessories are mounted in foam for convenient test selection and portability. Short form lid label instructions are always available for quick reference, and a long form booklet provides detailed instructions with kit diagram. Unit is supplied complete with labware, accessories, sampling bottles, and reagents.



FACTOR	METHOD	RANGE (# TESTS)
Ammonia Nitrogen	Salicylate	0.05–2.0 ppm (50)
Nitrate Nitrogen	Cadmium Reduction	0.25–10.0 pm (40)
Nitrite Nitrogen	Diazotization/Coupling	0.05–0.8 ppm (50)
pH	Wide Range	5.0–10.0 (50)

FACTOR	METHOD	RANGE (# TESTS)
Alkalinity*	Neutralization	0–200 ppm (50)
Carbon Dioxide	Neutralization	0–50 ppm (50)
Dissolved Oxygen	Azide Modification of Winkler Method	0–10 ppm (50)
Salinity	Argentometric	0–20 ppt (50)

*Often referred to as carbonate hardness in aquarium industry.

FACTOR	METHOD	RANGE (# TESTS)
Armored Thermometer	0.5C	–5° to 45°C

COMBINATION OUTFITS



ENVIRONMENTAL STUDIES

Elementary, Secondary, Vocational, Outdoor,
& College Science Programs...

Water Quality Educator Monitoring Outfit

ORDER CODE 5870 (Ship Code R3; 14 lbs.)

Always the first kit recommended for beginning a water quality monitoring study. The Water Quality Educator and Monitoring Outfit provides kits for seven basic water quality test factors and exceptional support material, all housed in a rugged field carrying case.

The Monitor's Handbook, a 71-page reference guide, includes all the information needed to set up a water quality monitoring program. The handbook covers test procedures and means to interpret results.

The Water Quality Educator CD-ROM, now for PC and Macintosh computers, incorporates Quick Time™ animations, still photos, written and audio information to provide step-by-step instructions for the tests included. Students receive both visual and verbal instructions and can repeat material as often as necessary. This effective "pre-lab" activity helps prepare students for water quality testing in the field or in the classroom.

The CD also provides benchmark data for each test factor for comparison of results obtained using LaMotte test kits in the field. Students enter their results and receive information on what type of water quality is indicated by their data as well as typical causes and effects of higher and lower levels.



FACTOR	RANGE (# TESTS)	FACTOR	RANGE (# TESTS)
pH	pH 3.0-10.5 (100)	Alkalinity, Total	0-200 ppm (50)
Nitrate-Nitrogen	0-15 ppm (50)	Turbidity	0-200 JTU (50)
Phosphate	0-2.0 ppm (50)	Temperature	-5° to 45°C
Dissolved Oxygen	0-10.0 ppm (50)		



Leaf Pack Experiments Stream Ecology Kit

ORDER CODE 5882 (Ship Code NH; 10 lbs.)

Students performing the Leaf Pack Experiments learn to design, implement, and analyze a scientific investigation by discovering how aquatic macroinvertebrates indicate the overall health of a stream ecosystem. The Leaf Pack Experiments Kit is totally reusable and flexible. Adaptable to varying time constraints, number of students, and grade levels, it is geographically friendly and complete. All the apparatus and guides necessary for collecting, sorting and identifying are included. The kit includes a comprehensive Instructor's Manual - featuring background material on stream ecology, a glossary, diagramed instructions, experiment ideas, and full color macroinvertebrate flash cards. Developed by the Stroud Water Research Center in cooperation with LaMotte Company.

COMBINATION OUTFITS

ENVIRONMENTAL STUDIES

Elementary, Secondary, Vocational, Outdoor,
& College Science Programs...

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 TO SEE THE FULL LINE OF PRODUCTS IN THIS INDUSTRY



Plankton Net

15" (38.1 cm) tall, 5" (12.7 cm) dia. mouth
ORDER CODE 1063
 (2 lbs.)

Cone-shaped net of 10 mesh, 153 micron nylon cloth. Minute plankton are collected and can be observed in the removable, clear conical graduated tube. Two tubes provided. Net mouth is braced by a sturdy stainless steel ring and harness.

Kick-Net

Kick-Net, complete with poles
ORDER CODE 0021-P (8 lbs.)
 Kick-Net only **ORDER CODE 0021** (4 lbs.)

This 1x1 meter square, 500 micron, tan mesh net is designed to meet the requirements of groups performing USEPA Rapid Bioassessment Protocols for benthic invertebrates.



Secchi Disk

Disk with black & white quadrants & calibrated line
ORDER CODE 0171-CL (3 lbs.)

Determine turbidity or degree of visibility in natural waters. Weighted 20 cm diameter disk has a braided stretch-resistant line marked every half meter and at every meter up to 20 meters.



Limnology Outfit

ORDER CODE 5902-01
 (Ship Code HF; 13 lbs.)

Reagent Refill
ORDER CODE R-5902-01
 (Ship Code HF; 4 lbs.)

A popular outfit for the testing and study of freshwater systems such as ponds, lakes, wetlands, rivers, streams, etc. This field-friendly outfit contains individual test modules, water sampling bottles, three supplemental handbooks, and data sheets.

OCTET COMPARATOR TESTS

FACTOR	RANGE (# TESTS)
Nitrate-Nitrogen	0.2-1.0 ppm (40)
Phosphate	0.2-1.0 ppm (50)
pH	3.0-10.0 pH (50)
Silica	0.5-10 ppm (50)

DIRECT READING TITRATOR TESTS

FACTOR	RANGE (# TESTS)
Carbon Dioxide	0-50 ppm (50)
Dissolved Oxygen	0-10 ppm (50)
Hardness	0-200 ppm (50)



Marine Science Outfit

ORDER CODE 5903-02
 (Ship Code HF; 13 lbs.)

Reagent Refill **ORDER CODE R-5903-02**
 (Ship Code HF; 4 lbs.)

For testing and study of saline systems—oceans, bays, salt marshes, etc. Includes the *Lab Manual for Marine Science, Investigating Water Problems* and data sheets.

COLORIMETRIC TESTS

FACTOR	RANGE (# TESTS)
pH	3-10 (50)
pH	7.7-8.4 (50)

TITRATION TESTS

FACTOR	RANGE (# TESTS)
Dissolved Oxygen	0-10.0 ppm (50)
Hardness	0-200 ppm (50)
Carbon Dioxide	0-50 ppm (50)
Alkalinity	0-200 ppm (50)
Salinity	0-20 ppm (50)

COMBINATION OUTFITS



ENVIRONMENTAL STUDIES

Elementary, Secondary, Vocational, Outdoor, & College Science Programs...

The Tour Series

Each Tour is a complete, hands-on, science curriculum with safe, simple TesTabs® tablet tests. Each Tour includes lecture materials, illustrated hand-outs, teacher tips, test procedures, TesTab reagents, data sheets, and games to reinforce key concepts. The Tour Series is designed for elementary and middle school environmental science education.

The Goal of the Tour series is for students to discover, examine, measure, and compare physical and chemical properties. Students learn basic analytical methods while performing a scientific investigation.



Watershed Tour

Watershed Tour • ORDER CODE 5419 (Ship Code NH; 4 lbs.)
Reagent Refill • Order Code R-5419 (Ship Code NH; 1 lb.)

Introduce students to stream and river ecosystems through a classroom-based tour of a virtual watershed. The curriculum is geared toward students in grades 4-8 and designed for teachers who are unable to visit a stream with their students. Students will learn about stream ecology, water quality issues, and their own connection to a watershed. Students will "test" four stations along a river continuum to study how the river changes and how human activities can influence water quality. Includes lecture materials, illustrated handouts, teacher's tips, test procedures, TesTab reagents, data sheets, and games. TesTab reagents and test tubes for 30 students in groups. *Developed by the Stroud Water Research Center in cooperation with LaMotte Company.*



Topsoil Tour

Topsoil Tour • ORDER CODE 5425-01 (Ship Code NH; 4 lbs.)
Reagent Refill • Order Code R-5425-01 (Ship Code NH; 1 lb.)

Investigate the physical and chemical properties of soil. Each student on the Topsoil Tour completes seven units while conducting his/her own soil tests for soil texture, pH, nitrogen, phosphorus, and potassium. Tablets and sample test bags for 50 students. Grades 4-8.



Pondwater Tour

Pondwater Tour • ORDER CODE 5418 (Ship Code R1; 4 lbs.)
Reagent Refill • Order Code R-5418 (Ship Code R1; 1 lb.)

A great introduction to the study and measurement of changes in the water quality of a lake, stream, pond, aquarium, or even a fish bowl. Tests are included for pH, dissolved oxygen, nitrate, and ammonia. Students test variables and investigate natural processes that create changes in water quality. Tablets and sample test bags for 50 students. Grades 4-8.



Tapwater Tour

Tapwater Tour • ORDER CODE 3608 (Ship Code NH; 4 lbs.)
Regent Refill • Order Code R-3608 (Ship Code NH; 1 lb.)

An exciting investigation of water quality examining the chemical properties of water directly from the tap. Students learn the relationships between good and poor water quality while examining the pH, chlorine, hardness, copper, and iron of tapwater from their homes. Tablets and sample test bags for 50 students. Grades 4-8. Ideal for educational outreach for public health/utilities.

CALL FOR OUR ENVIRONMENTAL SCIENCE EDUCATION CATALOG

COMBINATION OUTFITS

ENVIRONMENTAL STUDIES

Educational Outreach for Public Health/Utilities



Inspector Hector

ORDER CODE 5944 (Ship Code NH; 4 lbs.)

Reagent Refill • Order Code R-5944 (Ship Code NH; 1 lbs.)

Join Inspector Hector, the soft-boiled detective and health inspector, and his Siamese cat Ajax, in unraveling clues to solve mysteries from everyday life. Why does everyone in Tank Top Tommy's pool have red eyes? Did Pop's Pickle Emporium pollute the storm drain?

Students enter the amazing world of health inspectors and learn how these behind-the-scenes heroes make our world a safer place to live. Teams use safe and fun hands-on TesTabs® and test strip methods to analyze samples from the scenes and interpret the results to solve the cases!



- Ideal for Public Health Inspector community outreach programs - great activities and ideas
- CD with printable handouts and data sheets, links and more
- Complete, hands-on curriculum
- Entertaining and informative lecture material - fun makes learning easier!
- Classroom activities, team data sheets and handouts
- Scene photos, puzzles and games, teacher tips
- Classroom poster
- Links to over 100 resources with FREE stuff
- Grades 3-9, for 40 students

GREEN Low-Cost Water Monitoring Kit

ORDER CODE 5886 (Ship Code NH; 1 lb.)

A popular, economical tool for learning the basics of water quality. Students will have fun analyzing sample water for pH, Dissolved Oxygen, Biochemical Oxygen Demand, Temperature, Turbidity, Nitrate, Phosphate, and Coliform Bacteria. Includes a manual with step-by-step diagramed instructions and easy-to-use laminated color chart. All the necessary apparatus and non-hazardous TesTabs to test ten water samples (three samples for Coliform). Ideal for educational outreach.



COMBINATION OUTFITS



FOOD/LAUNDRY

Dairy Producers, Food Processors, Commercial Launderers...

Food Sanitizer Kits

For Caustic Soda

Model TK-10 • ORDER CODE 8225 (Ship Code R2; 2 lbs.)
 Reagent Refill • Order Code R-8225 (Ship Code R2; 2 lbs.)

This simple, single-reagent dropper pipet kit measures caustic soda for cleaning dairy bottles, cans, storage tanks, etc. Reagents for 50 tests. Kit uses neutralization test method. Dilution step permits measurement of two ranges:

- 0.25%/drop caustic soda by weight
- 0.01%/drop sodium oxide



Also Available...

FACTOR	ORDER CODE	METHOD	RANGE (# TEST)	SHIP CODES
Sulfuric Acid	8205	Neutralization	0.05 oz. per gal/drop (50)	R2
Chlorine	4497	Iodometric	10 ppm/drop (50)	R2
Chlorinated Cleaner	8226	Neutralization	0.01% NaOH/drop (50)	R2



Look for additional chlorine, iodine, & QAC kits in the Individual Test Kit section

Standard pH Test Papers

ORDER CODE	pH RANGE	ORDER CODE	pH RANGE
2907	6.8-8.4	2955	9-14
2912	3.0-10.0	2956	1-11
2953	4.5-7.5	2959	8-12
2954	0-13		

Test Papers

Chemically treated paper strips change to indicate sanitizer level. Strips and color chart are packaged in a waterproof plastic vial. 2951 is specifically formulated to read all types of QAC.

FACTOR	ORDER CODE	RANGE
Chlorine	4250-BJ	10, 50, 100, 200 ppm (200 strips)
Iodine	2948-BJ	12, 25, 50, 100 ppm (200 strips)
QAC	2951	50, 100, 200, 400 ppm (100 strips)



COMBINATION OUTFITS

FOOD/LAUNDRY

Dairy Producers, Food Processors, Commercial Launderers...



Laundry Outfit

For control of water supplies, cleaning operations, and rinses

Model LDR • ORDER CODE 3095-01 (Shipping Code HF)

Reagent Refill • Order Code R-3095-01 (Shipping Code HF)

Seven important factors for monitoring incoming water supplies, break, suds and bleach operations; also rinse and sour operations. The pH (alkaline) test uses a LaMotte Octet Comparator. The alkalinity tests, chlorine bleach and hardness test utilize dropper pipet test methods. Reagents are supplied for 50 tests of each factor.



FACTOR	RANGE	APPLICATION
pH (Alkaline)	pH 10.0–11.4	Break-suds-bleach solutions
pH (Sour)	pH 1.5–8.5	Sour rinse solutions
Alkalinity (Suds)	100 ppm/drop	Free/total alkalinity in break-suds-bleach solutions
Alkalinity (Rinse)	10 ppm/drop	Total alkalinity in rinses

FACTOR	RANGE	APPLICATION
Chlorine Bleach	0.5%/drop	Available chlorine in bleach solutions
Hardness	10 ppm or 1 gpg/drop	Water Supply
Turbidity	Yes/No (Soil)	Presence of soil in solution



Also Available...

CODE	DESCRIPTION	SHIP CODES
7250	P Alkalinity 1 drop = 10 ppm or 100 ppm Total Hardness 1 drop = 1 gpg Chlorine Strips 10, 50, 100, 200 ppm	R2
7196	Chlorine 1 drop = 10 ppm Oxygenated Bleach 1 drop = 10 ppm	R2
3541	Spot test for presence/absence of Chlorine and Iron. Wide Range pH	R1
7894	High Range–1 dr = 0.5% Cl ₂ Mid Range–1 dr = 0.05% Cl ₂ Low Range–1 dr = 0.005% Cl ₂	R1

COMBINATION OUTFITS

 www.lamotte.com
TO SEE THE FULL LINE OF PRODUCTS IN THIS INDUSTRY

GENERAL WATER ANALYSIS

Laboratories, Government Agencies...

SMART Water Analysis Laboratory

MODEL SCL-05 • ORDER CODE 1951-01 (Shipping Code HF; 37 lbs.)
• ORDER CODE 1951-01EX2 (220V/50Hz AC) (Shipping Code HF; 37 lbs.)

Reagent Refill • Order Code R-1951 (Shipping Code HF; 10 lbs.)

This portable lab measures 24 water quality parameters for pollution detection, environmental studies, and industrial water and wastes. The SMART2 digital colorimeter analyzes test sample color reactions and provides direct readouts for 15 factors. Titration tests performed with LaMotte's Direct Reading Titrators provide results directly in ppm for 6 additional factors. Digital meters measure pH and conductivity.



COMBINATION OUTFITS



COLORIMETER TESTS

FACTOR	METHOD	RANGE (# TEST)
Ammonia	Nesslerization	0-4.0 ppm (50)
Chlorine	DPD	0-4.0 ppm (100)
Bromine	DPD	0-9 ppm (100)
Iodine	DPD	0-16 ppm (100)
Chromium (Hexavalent)	Diphenylcarbazide	0-1.0 ppm (100)
Copper	Diethyldithiocarbamate	0-6.0 ppm (100)
Fluoride	SPADNS	0-2.0 ppm (50)
Iron	Bipyridyl	0-6.0 ppm (50)
Nitrate	Cadmium Reduction	0-3.0 ppm (20)
Nitrite	Diazotization/Coupling	0-0.8 ppm (20)
Phosphate	Ascorbic Acid Reduction	0-3.0 ppm (50)
Silica	Heteropoly Blue	0-4.0 ppm (50)
Sulfate	Barium Chloride	0-100 ppm (50)
Sulfide	Methylene Blue	0-1.5 ppm (50)
Turbidity	Absorption (No Reagents)	0-400 NTU (∞)

GENERAL WATER ANALYSIS

Laboratories, Government Agencies...

TITRATION TESTS

FACTOR	METHOD	RANGE (# TEST)
Alkalinity	Neutralization	0-200 ppm (50 at 200 ppm)
Carbon Dioxide	Neutralization	0-50 ppm (50 at 50 ppm)
Chloride/Salinity	Argentometric	0-200 ppm (50 at 200 ppm)
Dissolved Oxygen	Azide Modification of Winkler Method	0-10 ppm (50 at 10 ppm)
Hardness (Calcium, Magnesium, & Total)	Complexometric	0-200 ppm (50 at 200 ppm)

pH/CONDUCTIVITY INSTRUMENTS

FACTOR	CODE	MODEL	RANGE (# TEST)
pH	5-0034	pH5	pH 0-14
Conductivity	5-0038	CON5	0.0-19.99 mS



Also Available...

DESCRIPTION	CODE	MODEL	SHIP CODE (WGT.)
Model SMART2 Colorimeter, without pH & Conductivity Meters	1991	SCL-04	HF (34 lbs.)
Reagent Refill	R-1991		HF (10 lbs.)



COMBINATION OUTFITS

INDUSTRIAL WATERS

Water Treatment Companies, Engineers, Consultants...



Combination Buret Outfits

In addition to our other standard products, LaMotte also packages combination buret style outfits. These outfits are packaged in cases made of rugged ABS plastic in sizes to fit three to five burets and accessories. The automatic burets and accessories are mounted in plastic clips over a white plastic workshelf in one half of the cabinet. The other half of the case is equipped with foam-lined shelves to hold additional tests or accessories. Colorimetric and titrimetric tests may be added to the buret titrations.

To order, simply choose the desired test reagents from the list on page 66 and select any additional tests from the A - Z section (pages 34-55) or the instrumentation section (pages 8-33). Squeeze valve (pinchcock) style burets are standard equipment with these kits, but glass or Teflon® stopcock burets may be ordered for an additional charge.



Model AB-152 • ORDER CODE 7643 (Ship Code HF)
Reagent Refill • Order Code R-7643 (Ship Code HF)

FACTOR	METHOD	EQUIVALENCE (# TESTS)
pH	Alkaline Wide Range	pH 8.5–12 (50+)
Phosphate	Stannous Chloride	0–10 / 0–100 ppm (50+)

FACTOR	METHOD	EQUIVALENCE (# TESTS)
Alkalinity	Neutralization	1 mL = 1.0 mg (50+)
Chloride	Argentometric	1 mL = 0.5 mg (50+)
Hardness	Complexometric	1 mL = 0.25 mg (50+)
Sulfite	Iodometric	1 mL = 1.0 mg (50+)

Model AB-153 • ORDER CODE 7644-01 (Ship Code HF)
Reagent Refill • Order Code R-7644-01 (Ship Code HF)

FACTOR	METHOD	EQUIVALENCE (# TESTS)
Molybdenum	Xanthate	1–10 ppm Sodium Molybdate (50+)
pH	Phenol Red	pH 6.8 – 8.2 (50+)
pH	Alkaline Wide Range	pH 8.5 – 12 (50+)
Phosphate	Stannous Chloride	0–10 / 0–100 ppm (50+)

FACTOR	METHOD	EQUIVALENCE (# TESTS)
Alkalinity	Neutralization	1 mL = 1.0 mg (50+)
Chloride	Argentometric	1 mL = 0.5 mg (50+)
Phosphonate	Complexometric	1 mL = 0.2 mg (50+)
Sulfite	Iodometric	1 mL = 1.0 mg (50+)

COMBINATION OUTFITS

 www.lamotte.com
 TO SEE THE FULL LINE OF PRODUCTS IN THIS INDUSTRY

INDUSTRIAL WATER

Water Treatment Companies, Engineers, Consultants...

Available in a wide variety of sizes. Call Customer Service for assistance.



Industrial Titration Reagents

FACTOR	ORDER CODE	REAGENT
Alkalinity	2246	Phenolphthalein
	2786	Total Alkalinity Indicator
	6068	Sulfuric Acid, 0.02N
	6111	Sulfuric Acid, 0.1N
Chloride	6352	Chromate Indicator, 5%
	8848	Silver Nitrate, 0.0282N
	6346	Silver Nitrate, 0.0141N
	6168	Silver Nitrate, 0.0171N
Hardness	4259	Ca Buffer (w/ metal inhibitors)
	T-5250	Ca Indicator Tablets
	4483	Total Buffer (w/ inhibitor)
	4484	Total Indicator Tablets
	6261	EDTA, 0.01M
Sulfite	6385	Starch Acid Indicator Powder
	7329	Iodide Iodate, N/40
	6106	Iodide Iodate, N/80
	4556	Iodide Iodate, N/63
	8667	Iodide Iodate, N/126



COMBINATION OUTFITS

INDUSTRIAL WATER

Water Treatment Companies, Engineers, Consultants...



For additional customer convenience, LaMotte has packaged a variety of combination kits. There are two choices of kit style, depending on the titration method desired - Direct Reading Titration (DRT) or Dropper Bottle (WT).

If the combination needed is not listed below, LaMotte offers a unique custom combination kit program. Simply choose the desired tests from the A - Z listing (pages 39-55) or the instrument section (pages 8-33). If you need a test equivalence or method different from what we offer, please contact us with the specific requirement.

When ordering the combinations below, please designate whether you wish the Direct Reading Titrator (-DRT) or Dropper Bottle (-WT) version.



Combination #1

DRT Version • ORDER CODE 7177-DRT
(Ship Code HF; 7 lbs.)

Reagent Refill • Order Code R-7177-DRT (Ship Code HF)

WT Version • ORDER CODE 7177-WT
(Ship Code R1; 7 lbs.)

Reagent Refill • Order Code R-7177-WT (Ship Code R1)

FACTOR	DRT	WT
P/T Alkalinity	0-200 ppm	1 drop = 10, 25, 50 ppm
Chloride	0-200 ppm	1 drop = 2, 5, 10 ppm
Total Hardness	0-200 ppm	1 drop = 2, 5, 10 ppm
Nitrite	0-1000 ppm	1 drop = 50 ppm
Phosphonate	0-10 ppm	1 drop = 1 ppm

Combination #2

DRT Version • ORDER CODE 7178-DRT
(Ship Code HF; 7 lbs.)

Reagent Refill • Order Code R-7178-DRT (Ship Code HF)

WT Version • ORDER CODE 7178-WT
(Ship Code HF; 7 lbs.)

Reagent Refill • Order Code R-7178-WT (Ship Code HF)

FACTOR	DRT	WT
P/T Alkalinity	0-200 ppm	1 drop = 10, 25, 50 ppm
Chloride	0-200 ppm	1 drop = 10, 25, 50 ppm
Total Hardness	0-200 ppm	1 drop = 2, 5, 10 ppm
Sulfite	0-100 ppm	1 drop = 2, 5, 10 ppm
Phosphate	2, 4, 6, 8 (20, 40, 60, 80) ppm	Octet Comparator
pH	4, 6, 8, 10	Octet Comparator

COMBINATION OUTFITS

 www.lamotte.com
 TO SEE THE FULL LINE OF PRODUCTS IN THIS INDUSTRY

INDUSTRIAL WATER

Water Treatment Companies, Engineers, Consultants...



Combination #3

DRT Version • ORDER CODE 7179-DRT
 (Ship Code R2; 7 lbs.)

Reagent Refill • Order Code R-7179-DRT (Ship Code R2)

WT Version • ORDER CODE 7179-WT
 (Ship Code R1; 7 lbs.)

Reagent Refill • Order Code R-7179-WT (Ship Code R1)

FACTOR	DRT	WT
P/T Alkalinity	0–200 ppm	1 drop = 10, 25, 50 ppm
Chloride	0–200 ppm	1 drop = 2, 5, 10 ppm
Total Hardness	0–200 ppm	1 drop = 2, 5, 10 ppm
Sulfite	0–100 ppm	1 drop = 2, 5, 10 ppm
Wide Range pH	5–10 ppm Octet	
Iron	0.5–10 ppm Octet	

Combination #4

DRT Version • ORDER CODE 7180-DRT
 (Ship Code R2; 7 lbs.)

Reagent Refill • Order Code R-7180-DRT (Ship Code R2)

WT Version • ORDER CODE 7180-WT
 (Ship Code R2; 7 lbs.)

Reagent Refill • Order Code R-7180-WT (Ship Code R2)

FACTOR	DRT	WT
P/T Alkalinity	0–200 ppm	1 drop = 10, 25, 50 ppm
Chloride	0–200 ppm	1 drop = 10, 25, 50 ppm
Total Hardness	0–200 ppm	1 drop = 2, 5, 10 ppm

COMBINATION OUTFITS

POOL & SPA WATERS

Pool Professionals, Public Pool or Spa Operators,
 Private Pool or Spa Owners...



Insta-Test® Strips

The Insta-Test® 3-, PRO400, and 5-way pool and spa test strips are the only strips of their kind that do not require any specific waiting period. Just swirl three times in the pool or spa for accurate and reliable results. The 3-way test strip tests for Free Chlorine or Bromine, Alkalinity and pH all on one strip. The 5-way test strip measures Free Chlorine or Bromine, Total Chlorine, Alkalinity, pH and Total Hardness. Both are sold in vials containing 50 strips. The PRO-400 provides 100 strips and measures the Free Chlorine or Bromine, Total Chlorine, pH and Alkalinity. The PopTop vial features a patented desiccant liner covering its base and sides, which provides substantially better moisture protection and eliminates the need for a loose desiccant bag. Another feature is the hinged cap, which eliminates the problem of loose caps getting wet. Each bottle has a 30 month shelf life. Individual units are available through local retailers, which can be found on our website

www.lamotte.com/insta.

The Sodium Chloride Insta-Test® strip is an easy one step procedure for measuring Sodium Chloride in salt-water pools. Just dip and read to get results in only 30 seconds. The strip measures salt water pool samples over the range of 1,000 to 4,000 ppm. Each vial contains 10 strips in a convenient, black PopTop vial. A desiccant liner inside the vial protects the strips from moisture intrusion and UV light.

The Wide Range pH and Total Chlorine Insta-Test® strip identifies how far out of range a pool or spa sample may be, before a variety of treatment chemicals and test reagents are consumed. The Wide Range strip provides quick and reliable results in just 15 seconds. The strips are designed to measure Total Chlorine from 0 to 50 ppm and pH from 4 to 10. The test strips are uniquely packaged in the Pop Top vials with a desiccant liner to protect the strips from moisture.

See pages 34-35 for additional test strips.



Code	Model	Free Chlorine	Bromine	Total Chlorine	Alkalinity	pH	Total Hardness	Salt	Case Pack Size	Ship Code
2976	Insta-Test 3	0 to 10	0 to 20	—	0 to 180	6.8 to 8.4	—	—	12, 24 or 100	NH
2977	Insta-Test 5	0 to 10	0 to 20	0 to 10	0 to 180	6.8 to 8.4	50 to 800	—	12, 60 or 100	NH
2978	Insta-Test PRO 400	0 to 10	0 to 20	0 to 10	0 to 180	6.8 to 8.4	—	—	12 or 100	NH
2993	Insta-Test Low Range Salt	—	—	—	—	—	—	1000 to 4000	12	NH
2987-G	Insta-Test Wide Range	—	—	0 to 50	—	4 to 10	—	—	12	NH

Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 * (NPDWR) EPA Accepted • † (NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

COMBINATION OUTFITS



POOL & SPA WATERS

Pool Professionals, Public Pool or Spa Operators,
 Private Pool or Spa Owners...

DipCell Series

The LaMotte DipCell color comparator is available in a competitive lineup of kits for the pool operator and service pro. The DipCell comparator is simple to use. Just dip the comparator into the water to get a sample, add reagents, cap, mix, and read chlorine and pH immediately. Six color standards are provided for wide-range chlorine from 0.5-10.0 ppm. The six standards included for pH range from 6.8 - 8.2.

KEY FEATURES

- A wide range chlorine DipCell measures Chlorine from 0.5 - 10 ppm
- Removable wall dividers inside the carrying case permit an easy upgrade to larger 60 mL reagent sizes
- "Handle-Top" carrying case is compact and rugged (7½" x 4½")
- Liquid DPD and Phenol Red offered in large volumes to do 144 or 288 tests
- Color-coded instructions and reagents simplify analysis
- Separate titration tube for Alkalinity and Hardness avoids cleaning pH cell before each test
- Handbook included



Code/Model	Free Chlorine	Total Chlorine	pH	Calcium Alkalinity	Calcium Hardness	Acid Demand	Base Demand	CyA	Ship Code
7011/DT-3	0.5-10.0	0.5-10.0	6.8-8.2	(This kit includes 50 DPD tablets for each Chlorine test)				—	NH
# of Tests	50	50	144	—	—	—	—	—	
7013/DL-51*	0.5-10.0	0.5-10.0	6.8-8.2	1 drop = 10 ppm	1 drop = 20 ppm	Drop count	Drop count	0-100	R1
# of Tests	144	144	144	70±	70±	70±	70±	50	
7014/DL-60	0.5-10.0	0.5-10.0	6.8-8.2	1 drop = 10 ppm	1 drop = 20 ppm	Drop count	Drop count	—	R2
# of Tests	288	288	288	140±	140±	140±	140±	—	



Pool MGR. Series

All Tablet • Octa-Slide

Our rugged all tablet kit for the public pool operator. The precise Octa-Slide Comparator system is used to comply with regulatory standards. The Pool MGR. Series includes diagramed instructions, saturation index calculator, water quality handbook, and the eight-standard Octa-Slide Comparator system for chlorine and pH, all in a tough, blow molded carrying case. The Pool MGR. tablet series is supplied with sufficient tablet reagents for 50 tests for Free Chlorine, Total Chlorine, and pH. Tablet reagents for 20 tests are provided for Alkalinity, Hardness, and Cyanuric Acid.

Code/Model	Free Chlorine	Total Chlorine	pH	Total Alkalinity	Calcium Hardness	Acid Demand	CyA	Ship Code
3366-BR	Bromine	0-10.0	6.8-8.2	60-400	60-400	Calc.	—	NH
3366/PM-41	0.2-3.0	0.2-3.0	6.8-8.2	60-400	60-400	Calc.	—	NH
3366-NJ/PM-41-NJ	0.5-10.0	0.5-10.0	6.8-8.2	60-400	60-400	Calc.	—	NH
3368/PM-51	0.2-3.0	0.2-3.0	6.8-8.2	60-400	60-400	Calc.	0-100	NH
3368-NJ/PM-51-NJ	0.5-10.0	0.5-10.0	6.8-8.2	60-400	60-400	Calc.	0-100	NH
3368-ABC/PM-51-NJ	0.5-10.0	0.5-10.0	6.8-8.2	60-400	60-400	Acid/Base drop titration	0-100	NH
# of Tests	50	50	50	20	20	Calc. From Alk test result	20	NH

Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 *(NPDWR) EPA Accepted • †(NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

COMBINATION OUTFITS

POOL & SPA WATERS

Pool Professionals, Public Pool or Spa Operators,
 Private Pool or Spa Owners...



PRO250

Our professional water analysis kits are supplied in durable, cases for years of dependable service. Each unit features liquid reagent systems for chlorine and pH (capable of 280+ tests each). The liquid DPD reagent system is provided to monitor chlorine, while pH is tested with a single liquid indicator. Total Alkalinity, Calcium Hardness, Acid and Base Demand are analyzed with drop count titrations. Cyanuric Acid is measured by turbidity. The PRO250 PLUS outfit includes all of the above plus Copper and Iron tests.

Every PRO250 SERIES kit includes color-coded caps to prevent mixups and diagrammed instructions to make testing a breeze. The Pool MGR. Water Quality handbook and saturation index calculator are also included. See the chart below for specifications.

Code/Model	Free Chlorine	Total Chlorine	pH	Total Alkalinity	Calcium Hardness	Acid & Base Demand	CyA	Copper	Iron	Ship Code
7001-NJ/ PRO250-NJ	0.2-3.0 & 0.5 -10.0	0.2-3.0 & 0.5 -10.0	6.8-8.2	1 drop = 10 ppm	1 drop = 20 ppm	Drop count	0-100	—	—	R2
7002-NJ/ PRO250 PLUS-NJ	0.2-3.0 & 0.5 -10.0	0.2-3.0 & 0.5 -10.0	6.8-8.2	1 drop = 10 ppm	1 drop = 20 ppm	Drop count	0-100	0.1-1.0	0.1-1.0	R2
# of Tests	288	288	288	140+	140+	70 each	100	50	50	

WaterLab 2

MODEL DPC-52 • ORDER CODE 3509-01
 (Ship Code R2; 13 lbs.)

Our popular digital DPC-52 WaterLab features the DPC-2 colorimeter along with reagents to do 100 tests. The colorimeter analyzes Chlorine, Bromine, pH, Cyanuric Acid, Copper, and Iron. Compact Direct Reading Titrators are used to test Hardness and Alkalinity. A complete poolside lab in a sturdy carrying case. Optional AC adapter - CODE 1708.

Test Factor	Range	Method
Free Chlorine	0-4.0 ppm	Colorimeter
Total Chlorine	0-4.0 ppm	Colorimeter
Bromine	0-9.0 ppm	Colorimeter
pH	6.6-8.2 pH	Colorimeter
Cyanuric Acid	10-150 ppm	Colorimeter
Copper	0-4.0 ppm	Colorimeter
Iron	0-7.0 ppm	Colorimeter
Calcium Hardness	0-500 ppm	Direct Reading Titrator
Total Alkalinity	0-500 ppm	Direct Reading Titrator
Acid Demand	—	from Alkalinity test
Base Demand	—	Drop Count



Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 *(NPDWR) EPA Accepted • †(NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

COMBINATION OUTFITS



POOL & SPA WATERS

Pool Professionals, Public Pool or Spa Operators,
 Private Pool or Spa Owners...

DPD TESTABS® - All new packaging for easier use!

The DPD tablet is the most widely used test for determining Free and Combined Chlorine in pool water. Establishing a Free Chlorine residual is the most important step toward protection of bather health. A DPD #1 Rapid tablet will quickly reveal the precise level of Free Chlorine. (Note: Levels in excess of 10 ppm may bleach out any DPD test method.)

The DPD #3 Rapid tablet measures the level of Combined Chlorine. Combined Chlorine is a sanitizer that has reacted with impurities within the water and is, therefore, less capable of sanitizing pool water. It can cause eye irritation and a strong chlorine odor. To test for Combined Chlorine, simply add a DPD #3 Rapid tablet to the Free Chlorine water sample. A measurable increase in sample color indicates undesirable Combined Chlorine, which should be treated with a chlorine- or oxygen-based shock treatment.

Easier push-thru packaging!



Tablet	Quantity/Order Code			Ship Code
	50	100	1000	
Chlorine DPD #1 Rapid	6999A-H	6999A-J	6999A-M	NH
Chlorine DPD #1 Instrument	6903-H	6903-J	6903-M	NH
Chlorine DPD #3 Rapid	6905A-H	6905A-J	6905A-M	NH
Chlorine DPD #3 Instrument	6197-H	6197-J	6197-M	NH
Chlorine DPD #4 Rapid	6899A-H	6899A-J	6899A-M	NH
Chlorine DPD #4 Instrument	6906-H	6906-J	6906-M	NH
pH (Phenol Red)	6915A-H	6915A-J	6915A-M	NH
Alk Test	3920A-H	3920A-J	3920A-M	NH
Cyanuric Acid	6994A-H	6994A-J	6994A-M	NH
Calcium Hardness	6846A-H	6846A-J	6846A-M	NH
MPS-OUT (Monopersulfate Eliminator)	6911-H	6911-J	N/A	NH

DPD LIQUID REAGENTS

The liquid alternative to DPD tablets can be used with existing LaMotte chlorine comparators or colorimeters. DPD 1A and DPD 1B are added to a 5 or 10 mL sample to test Free Available Chlorine. DPD 3 is added to the reacted sample to measure Total Chlorine. Liquid reagents are also available to measure pH, Hardness, Alkalinity, and Copper.

30 mL (1 oz.)	Code	Ship Code
DPD 1A	P-6740-G	NH
DPD 1B	P-6741-G	R2
DPD 3	P-6743-G	NH

60 mL (2 oz.)	Code	Ship Code
DPD 1A	P-6740-H	NH
DPD 1B	P-6741-H	R2
DPD 3	P-6743-H	NH



COMBINATION OUTFITS

WATER & WASTEWATER

Municipal & Industrial Water & Wastewater Systems...

www.lamotte.com
 TO SEE THE FULL LINE OF PRODUCTS IN THIS INDUSTRY



Wastewater Lab

Model SW-04 • ORDER CODE 7946-04 (Ship Code R3; 25 lbs.)

Reagent Refill • Order Code R-7946-04 (Ship Code R3)

This self-contained laboratory includes a one liter plastic Imhoff Cone with support stand and polycarbonate settleometer for measuring settleability. Critical pH measurements are performed with the pH 5, digital pH meter. A maintenance free, gel-filled combination electrode, and three pH buffers (4.00, 7.00, 10.00) are provided. The Wastewater Lab also includes the Dissolved Oxygen (Code 7414) and Chlorine (Code 3176) test kits.

FACTOR	METHOD	RANGE (# TESTS)
Free & Total Chlorine	DPD-FAS	0-10 ppm (50)
Dissolved Oxygen	Winkler	0-10 ppm (50)
Settleable Solids	Gravimetric	0-1000 mL/L(Unlimited)
Settleability	Gravimetric	0-100% (Unlimited)
Temperature	—	-5° to 50°C (Unlimited)

METERS	RANGE
pH 5 meter	0-14 pH

Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 *(NPDWR) EPA Accepted • †(NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

COMBINATION OUTFITS



WATER & WASTEWATER

Municipal & Industrial Water & Wastewater Systems...

Storm Drain Monitoring Kit

Model SSDK • ORDER CODE 7446 (Ship Code HF; 8 lbs.)

Reagent Refill • Order Code R-7446-01 (Ship Code HF)

The Model SSDK Detection Kit was specifically designed and manufactured to meet US EPA requirements for field test procedures approved in the November 16, 1990 Federal Register to monitor illicit storm drain connections. Each unit includes tests for pH, Total Chlorine, Total Copper, Phenols, Detergent surfactants, and Turbidity.

The Model SSDK is packaged in a rugged portable carrying case for on-site use. Reagents are provided for 100 tests of each parameter (30 tests for Detergent).

FACTOR	METHOD	RANGE (# TESTS)
Phenols	4-Aminoantipyrine Slide	0-5.0 ppm
Copper	Thiocarbamate Slide	0-4.0 ppm
Detergents	Titration	0.1 ppm sensitivity
Chlorine	DPD Slide	0.2-3.0 ppm
Turbidity	Formazin Equivalent	L-M-H

METERS	RANGE
Waterproof pH 1 PockeTester	0-14 pH, 0.2 pH



Corrosion Control Kit

Model CCK • ORDER CODE 7436-01 (Ship Code R1; 7 lbs.)

Reagent Refill • Order Code R-7436-01 (Ship Code R1)

By determining corrosive conditions in water supplies, this test kit supports a water supplier's lead in drinking water abatement program. Each unit includes tests for P and T alkalinity, calcium hardness, temperature, pH, phosphates, and total dissolved solids. Calculate saturation index by the Langelier method to indicate the corrosive conditions in water supplies. The Model CCK Corrosion Control kit is packaged in a portable carrying case for on-site use.

FACTOR	METHOD	RANGE (# TESTS)
Calcium Hardness	Complexometric	0-200 ppm (50)
P & T Alkalinity	Neutralization	0-200 ppm (50)
Orthophosphate	Ascorbic Acid	0.5-10 ppm (50)
Temperature	—	-5° to +45°C (Unlimited)
Corrosion Index	—	By calculation via chart (50)

METERS	RANGE
Waterproof pH 1 PockeTester	0-14 pH
Waterproof TDS 1 PockeTester	10-1990 ppm

COMBINATION OUTFITS

WATER CONDITIONING

Residential & Commercial Water Treatment Specialists...



Model AT SERIES

LaMotte Model AT outfits are the most popular and effective sales tools for onsite demonstration of treated water benefits. Tests are fast and simple with visually dramatic and technically accurate results. Packaging is convenient for the salesperson, impressive to the prospect. Available in two models with all reagents and components for pH, Iron, and Hardness test and Precipitation/Soap demonstrations. AT-38 comes with the single-chamber Model S softener featuring high capacity resin. The all new AT-40 model is supplied with the Duo-Soft dual chambered softener (supplied empty). Both models come in a sturdy carrying case with a literature compartment and pre-cut foam block to hold optional test factors listed below.

CUSTOMIZE YOUR OWN!

Model AT-40

Code 4-3015 - Reagents for 100 tests (50 for pH and Iron)

pH	pH 5.0-10.0
Iron	0.5-10.0 ppm
Hardness, Drop Count	1 drop = 10 ppm/1 gpg
Precipitation	Before/After
Soap Consumption	Before/After

Comes with Duo-Soft Softener (supplied empty), carrying case (18"x13"x7"), and literature compartment.

Model AT-38

Code 4-3003-01 - Reagents for 100 tests (50 for pH and Iron)

pH	pH 5.0-10.0
Iron	0.5-10.0 ppm
Hardness, Drop Count	1 drop = 10 ppm/1 gpg
Precipitation	Before/After
Soap Consumption	Before/After

Comes with Model S Softener, carrying case (18"x13"x7"), and literature compartment.

Duo-Soft Softener



Model S Softener

Optional Test Modules

Test	Method	Range	Code
Chlorine	Comparator	0.2-3.0 ppm	4-3006
Nitrate	Comparator	0-15 ppm	4-3004
TDS	Electrode	0-1.990 ppm	5-0080

Duo-Soft™

Order Code 1022

The new LaMotte twin-chambered softener clearly demonstrates the advantages of advanced two-part treatment systems. Customize one today to demonstrate the true effectiveness of your treatment system.

- Treat tapwater in one pass with a two-chambered softener
 - Fill both chambers with the media of your choice
 - Filter screen divider prevents bleeding of media between beds
 - Two 4" resin columns (10.25" total height)
- Duo-Soft is furnished in the Model AT-40 outfit. Unit supplied empty without media.

Model S

Order Code 1002

An 8" resin column that softens up to 70 gallons of medium-hard water. Comes with Model AT-38 outfit.

Water Quality Outfit

The simplest, most economical way to measure several water quality factors with a single, portable outfit. Ideal for service applications. Easily customized for your particular analytical needs.

Model AR-42 • ORDER CODE 3590-02 (Ship Code R1, 7 lbs.)

Reagent Refill • Order Code R-3590-02 (Ship Code R1, 7 lbs.)

Offers tests for pH, hardness, iron, and sulfide. Includes reagents for 50 tests each for pH, hardness, and sulfide; 100 tests for iron.

FACTOR	METHOD	RANGE (# TESTS)
pH	Wide Range	pH 5.0-10.0 (50)
Iron	Bipyridyl	0.5-10.0 ppm (100)
Hardness	Complexometric	1 drop = 10 ppm/ 1 gpg (50)
Sulfide	Pomeroy	0.2-20.0 ppm (50)



Ship Codes: (NH) Non-Hazardous Material - No Fees • (R1) Small Qty. Hazardous Material - No Fees • (R2 & R3) Hazardous Material - Air Fees Only • (HF) Hazardous Material - Air & Ground Fees
 *(NPDWR) EPA Accepted • †(NPDES) EPA Accepted • Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

REAGENT REFILLS

How to use this section:

The reagent code number is followed by a letter which indicates the container size supplied for that reagent. The following table shows how those letters correspond to container sizes - milliliters for liquids and grams for powder. When ordering a reagent, please include the appropriate letter suffix with the reagent code number to indicate the container size.

EXAMPLE: To order a 60 mL bottle of Conductivity Neutralizing Solution (Reagent Code Number 6483), use the letter "-H" (to indicate that you want a 60mL bottle), and order by code number "6483-H".

CODE #	SUFFIX INDICATING SIZE	SIZE
6483-H	Conductivity Neutralizing Solution LaMOTTE Conductivity Neutralizing Solution Warning! Flammable! Read side panels before use.	60mL

FIRST AID EYE OR SKIN: Immediately flush with water for 15 minutes.
INTERNAL: Call a doctor

Read MSDS. Contains 39% isopropanol, CAS# 67-63-05; 5% citric acid, CAS# 77-92-9; 0.1% phenolphthalein, CAS# 77-09-8; deionized water to 100%, CAS# 7732-18-5. Do not use near heat or flame. Avoid contact with eyes. Keep out of reach of children.

LaMotte Company
Clarkson, Maryland

Letter	Quantity	Volume / Weight	Weight
-A	1	1 mL	1 gram
-B	2	2 mL	2 grams
-C	5	5 mL	5 grams
-D	10	10 mL	10 grams
-E	15	15 mL	15 grams
-F	20	20 mL	20 grams
-G	30	25-30 mL	25-30 grams
-H	60	50-60 mL	50-60 grams
-J	120	100-120 mL	100-120 grams
-K	250	250-285 mL	200-250 grams
-L	500	470-525 mL	450-500 grams
-M	1000	950-1000 mL	—
-N	—	3800 mL	—

Kit Code	Reagent #	Description
■ 1956-01	5115PS-J	Deionized Water
■ 1981-01	2881-J	pH 7.00 Buffer
■ 2081-01	2218-G 2212-G	Wide Range Cresol Red
■ 2107	2208-G	Bromcresol Purple
■ 2108	2209-G	Chlorophenol Red
■ 2109	2210-G	Bromthymol Blue
■ 2110	2211-G	Phenol Red
■ 2111	2212-G	Cresol Red
■ 2112	2213-G 2214-G	Thymol Blue Oleo Red B
■ 2114	2215-G	LaMotte Purple
■ 2117	2218-G	Wide Range
■ 2118	2218-G	Wide Range
■ 2119	2218-G	Wide Range
■ 2120	2218-G	Wide Range
■ 2121	2218-G	Wide Range
■ 2123	2302-G	Acid Wide Range
■ 2124	2303-G	Alkaline Wide Range
■ 3036	6410-E 6411PS-H	Ferrioin Nitrite DRT
■ 3036-DR-01	6410-E 6411DR-G	Ferrioin Nitrite
■ 3037-DR	4483-E 4257-H 6522-E	Hardness 5 Hardness Titration CM Indicator
■ 3043-DR	6413-E 6412-H	QAC Indicator Titration Reagent
■ 3110	V-6278-H V-6279-C	Mixed Acid Nitrate Reducing
■ 3114-01	V-6282-G V-6283-C	Phosphate Acid Phosphate Reducing
■ 3119	V-6278-J V-6279-C V-6282-H V-6283-C	Mixed Acid Nitrate Reducing Phosphate Acid Phosphate Reducing
■ 3121-01	V-6282-G V-6283-C	Phosphate Acid Phosphate Reducing
■ 3133	4509-D 4170-H 6377-D 6155-E 6378-E	pH Adjustment Starch Indicator Iodine Sodium Thiosulfate Morpholine Indicator
■ 3138	6364-C 7745-E	Tetraphenylboron Sodium Hydroxide
■ 3152	6155-E 6165-D 6025-E 6158PS-H	Sodium Thiosulfate Xylenol Orange Hydrochloric Acid Thorium Nitrate
■ 3160	6484-H 6485-H 6486-S	Molybdenum Buffer Molybdenum Oxidizing Molybdenum Indicator

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 3176-01	6807-C	DPD 1
	6905-H	DPD 3R
	6815-G	Ferrous Ammon. Sulfate
	6495-E	Control Reagent
■ 3188	6452-G	Hydrogen Peroxide 1
	6454-H	Hydrogen Peroxide LR
■ 3195	6999-H	DPD 1R
■ 3300	2218-G	Wide Range
	2217-G	LaMotte Violet
	4450-G	Iron 1
	4451-S	Iron 2
	4566-E	QTC Cond
	6414-J	QAC Test
	4498-E	Chlorine 1
	4499-E	Chlorine 2
	4500PS-H	Chlorine 3
	4483-E	Hardness 5
	4485-E	Hardness 6
	4487PS-H	Hardness 7
■ 3308	6999-H	DPD 1R
	6905-H	DPD 3R
■ 3312	6999-H	DPD 1R
	6905-H	DPD 3R
■ 3313	6999-H	DPD 1R
	6905-H	DPD 3R
■ 3314	6999-J	DPD 1R
	6905-J	DPD 3R
■ 3315	4797WT-G	Ammonia Nitro. 1
	4798WT-G	Ammonia Nitro. 2
■ 3316	6905-6999	DPD 1, DPD 3
	6904-6906	DPD 2, DPD 4
■ 3318	4450-G	Iron 1
	4451-S	Iron 2
■ 3319	V-6278-H	Mixed Acid
	V-6279-C	Nitrate Reducing
■ 3320-01	4410-G	VM Phosphate
	6405-G	Reducing Reagent
■ 3321	4571-G	Silica 1
	4467-E	Silica 2
	4468-E	Silica 3
	6405-C	Reducing Reagent
■ 3322	4458-G	Sulfide A
	4459-E	Sulfide B
	4460-H	Sulfide C
■ 3328	6999-H	DPD 1R
	6905-H	DPD 3R
■ 3346	3962-H	Molybdate 1 HR
	3963-H	Molybdate 2 HR
■ 3354	2799-H	Nitrate 1
	NN-3703-H	Nitrate 2
■ 3363	6915-H	Phenol Red
	6905-6999	DPD 1, DPD 3
■ 3363-NJ	6915-H	Phenol Red
	6905-6999	DPD 1, DPD 3

Kit Code	Reagent #	Description
■ 3366	6905-6999	DPD 1, DPD 3
	6915-3box	pH, Alk, Hard
■ 3366-BR	6999-J	DPD 1R
	6915-3box	pH, Alk, Hard
■ 3368	6905-6999	DPD 1, DPD 3
	3920-4box	pH, Alk, Hard, CYA
■ 3467	3870-E	Alkalinity Indicator 1
	3869-E	Alkalinity Indicator 2
	4493DR-H	Alkalinity B
■ 3468	4069-E	Chloride A
	4070-H	Chloride B
■ 3509-01	WL-T-2311-J	Alk 1
	WL-4450-H	Iron 1
	WL-4451-D	Iron 2
	WL-4493-H	Alk Titrant
	WL-4487-H	Hardness Titrant
	WL-6460-H	Base
	WL-4259-E	Hardness 1
	WL-T-5250-J	Hardness 2
	WL-3808-H	Copper
	P-6740-G	DPD 1A
	P-6741-G	DPD 1B
	P-6743-G	DPD 3
	WL-7027-H	pH Indicator
WL-4856-K	Cyanuric Acid Rgt.	
■ 3519	V-6278-J	Mixed Acid
	V-6279-C	Nitrate Reducing
	V-6281-C	Color Developing
■ 3526	6903-H	DPD 1
	6197-H	DPD 3
■ 3541	6381-G	Hydrochloric Acid
	4100-G	O-Tolidine
	5116WT-G	Ferric Iron Test
■ 3569	9078WT-G	Sour Indicator
	3943-H	Aluminum 1
■ 3582	3944-H	Aluminum 2
	3951-E	Lead A
■ 3588-01	3945-E	Lead C
	3946-J	Lead Indicator
■ 3592	4255-H	Hardness Buffer
	3956-G	Manganese
	6203-J	Chloroform
■ 3609	2785-E	Metal Inhibitor
	6903-H	DPD 1
■ 3615	6811-E	Glycine
	4259-E	Sodium Hydroxide
	T-5250-H	Calcium Hardness
■ 3619	4487DR-H	Hardness 7
	6903-H	DPD 1
■ 3624	6811-E	Glycine
	V-6278-K	Mixed Acid
■ 3624	V-6279-D	Nitrate Reducing
	P-6367-E	Copper A
■ 3624	P-6368-E	Copper B
	6807-C	DPD 1
■ 3624	6905-H	DPD 3R
	3992DR-H	Chlorine/Bromine

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 3632	3997-J	MO Buffer
	3998-H	Denatured Alcohol
	3999-H	MO Titrant
	4001-S	Carbazone
■ 3633-03	4797WT-G	Ammonia Nitro. 1
	4798WT-G	Ammonia Nitro. 2
	2218-G	Wide Range, pH 3
	V-6278-H	Mixed Acid
	V-6281-D	Color Developing
	2311-Eg-E	BCG-MR Indicator
	4493DR-H	Alkalinity B
	2246-E	Phenolphthalein
	4504-E	Chloride 1
	4505DR-H	Chloride 2
	6090-E	Sulfuric Acid
	4483-E	Hardness 5
	4485-E	Hardness 6
	4487DR-H	Hardness 7
	4169-H	Sodium Thiosulfate
	4167-G	Mang. Sulfate
	7166-G	Alk. Pot. Iodide-Azide
	6141WT-G	Sulfuric Acid
	4170PS-G	Starch Indicator
	4253DR-H	Carbon Dioxide B
■ 3634-03	4797WT-G	Ammonia Nitrogen 1
	V-6278-H	Mixed Acid
	V-6281-D	Color Developing
	2311-Eg-E	BCG-MR Indicator
	4493DR-H	Alkalinity B
	2246-E	Phenolphthalein
	4504-E	Chloride 1
	4505DR-H	Chloride 2
	6090-E	Sulfuric Acid
	4483-E	Hardness 5
	4485-E	Hardness 6
	4487DR-H	Hardness 7
	4253DR-H	Carbon Dioxide B
	4798WT-G	Ammonia Nitro. 2
	■ 3635-03	2218-G
3978LWT-H		Salicylate Ammon. 1
3979WT-G		Salicylate Ammon. 2
3982WT-G		Salicylate Ammon. 3
V-6278-J		Mixed Acid
V-6281-C		Color Developing
V-6279-C		Nitrate Reducing
2311-Eg-E		BCG-MR Indicator
4493DR-H		Alkalinity Titration B
2246-E		Phenolphthalein
4253DR-H		Carbon Dioxide B
7460-E		Salinity Indicator A
7461-H		Salinity Titration B
4169-H		Sodium Thiosulfate
4167-G		Mang. Sulfate
7166-G		Alkaline Pot. Iodide-Azide
6141WT-G		Sulfuric Acid
4170PS-G		Starch Indicator

Kit Code	Reagent #	Description
■ 3639-SC	4004WT-G	Sodium Hydroxide
	6364-C	Tetraphenylboron
■ 3640-SC	T-3808-H	Copper Tablets
■ 3641-SC	7865-C	Aluminum Inhibitor
	7866-J	Aluminum Buffer
	7867-J	Aluminum Indicator
	7868-E	Aluminum Complex.
■ 3642-SC	V-4797-G	Ammonia Nitro. 1
	V-4798-G	Ammonia Nitro. 2
■ 3643-SC	6903-J	DPD 1
	6197-J	DPD 3
	6811-E	Glycine
■ 3644-SC	6903-J	DPD 1
	6811-E	Glycine
■ 3645-SC	V-6276-D	Chromium Rgt.
■ 3646-SC	6446-E	Copper 1
■ 3647-01-SC	3875-G	Acid Zirconyl Spadns
	4128-G	Sodium Arsenite
■ 3648-SC	V-4450-G	Iron 1
	V-4451-C	Iron 2
■ 3649-SC	V-6278-H	Mixed Acid
	V-6279-C	Nitrate Reducing
■ 3650-SC	V-6278-H	Mixed Acid
	V-6281-C	Color Developing
■ 3651-SC	3989-G	Indigo Blue Solution
	3990-E	Chlorine Inhibitor
	3991-K	Ozone Buffer
■ 3653-SC	V-6282-H	Phosphate Acid
	V-6283-C	Phosphate Reducing
■ 3654-01-SC	V-4458-G	Sulfide A
	V-4459-E	Sulfide B
	4460-H	Sulfide C
■ 3655-SC	4410-H	Phosphate Rgt.
■ 3656-SC	4842-D	Reagent B
	4841-H	Hydrazine A
■ 3658-01-SC	3956-G	Manganese Indicator
	4255-G	Hardness Buffer
	6565-E	Sodium Cyanide
■ 3659-01-SC	3978-H	Salicylate Ammon. 1
	7457-D	Salicylate 2
	7458-C	Salicylate 3
■ 3660-SC	6130-E	Hydrochloric Acid
	4004-E	Sodium Hydroxide
	2850PS-H	Cyanide Buffer
	2794DS-C	Cyanide CL
	2793DS-C	Cyanide Indicator
■ 3661-SC	4856-K	Cyanuric Acid Rgt.
■ 3662-SC	6452-G	Hydrogen Peroxide 1
	6454	Hydrogen Peroxide Tabs
■ 3663-SC	6251PS-H	Hydrochloric Acid
	6253-K	Sodium Citrate
	6254-H	Dimethylglyoxime
	6537-H	Ammonium Hydroxide
	6566-G	Ammonium Persulf.
	6346WT-G	Silver Nitrate

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 3664-SC	V-4466-G	Silica 1
	V-4467-G	Silica 2
	V-4468-G	Silica 3
	V-6284-D	Silica 4
■ 3665-SC	V-6277-D	Sulfate Rgt.
■ 3666-SC	7833-G	Tannin 1
	7834-H	Tannin 2
■ 3667-SC	6314-G	Zinc Indicator
	6315-G	Zinc Buffer
	6565-E	Sodium Cyanide
	6316-D	Sodium Ascorbate
	5128-G	Formaldehyde
	6319-J	Methyl Alcohol
■ 3668-SC	2776-E	Acid Phenanthroline
	2777-C	Iron Reducing
■ 3669-SC	6310-D	Manganese Buffer
	6311-E	Manganese Periodate
■ 3670-01	6903-J	DPD 1
	6197-J	DPD 3
■ 3670-LI-01	P-6740-G	DPD 1A
	P-6741-G	DPD 1B
	P-6743-G	DPD 3
■ 3671-01	6903-J	DPD 1
	6811-E	Glycine
■ 3672-01	6903-J	DPD 1
■ 3673-01	6446-G	Copper 1
■ 3674-01	3875-J	Acid Zirconyl SPADNS
	4128-H	Sodium Arsenite
■ 3676-01	6485-G	Molybden. Oxidizing
	3997-H	MO Buffer
	6486-S	Molybdenum Indicator
■ 3677-01	V-6278-J	Mixed Acid
	V-6279-D	Nitrate Reducing
■ 3678-01	3989-G	Indigo Blue Solution
	3990-E	Chlorine Inhibitor
	3991-K	Ozone Buffer
■ 3679-01	V-6282-H	Phosphate Acid
	V-6283-D	Phosphate Reducing
■ 3680-01	V-4797-G	Ammonia Nitrogen 1
	V-4798-G	Ammonia Nitrogen 2
■ 3681-01	2776-E	Acid Phenanthroline
	2777-C	Iron Reducing
■ 3682-01	4255-J	Hardness Buffer
	3956-G	Manganese Indicator
	6565-E	Sodium Cyanide
■ 3683-01	V-6277-D	Sulfate Rgt.
■ 3687-SC	V-4466-G	Silica 1
	V-4467-G	Silica 2
	4468-E	Silica 3
■ 3688-SC	4167-G	Manganous Sulfate
	7166-G	Alkaline Pot. Iodide-Azide
	6141WT-G	Sulfuric Acid

Kit Code	Reagent #	Description	
■ 3698-SC	7681-H	Sulfuric Acid	
	V-6276-D	Chromium Rgt.	
	7683-E	Sodium Azide	
	7682-G	Potassium Permanganate	
	5115PT-H	Deionized Water	
■ 3699-02-SC	3997-G	MO Buffer	
	6485-G	Molybdenum Oxidizing	
	6486-S	Molybdenum Indicator	
■ 3700-SC	V-2209-H	TRL Chlorphenol Red	
	V-2304-H	TRL Phenol Red	
	V-2213-H	TRL Thymol Blue	
■ 4-3003-01	4450-G	Iron 1	
	4451-S	Iron 2	
	2218-G	Wide Range Indicator	
	4767-H	Soap 4	
	4542-H	Precip A	
	4543-H	Precip B	
	4483WT-H	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
	■ 4227-R	6974-H	Fluoride A-Z
		6975-H	Fluoride Excess AL
■ 4401-01	4410-G	VM Phosphate	
■ 4408	6405-G	Reducing Rgt.	
	4410-H	VM Phosphate	
■ 4430	4431-G	Chromate Indicator	
■ 4447	4450-G	Iron 1	
	4451-S	Iron 2	
■ 4456	4458-G	Sulfide A	
	4459-E	Sulfide B	
	4460-H	Sulfide C	
■ 4463	4571-G	Silica 1	
	4467-E	Silica 2	
	4468-E	Silica 3	
	6405-C	Reducing Rgt.	
■ 4482-DR-LI	4483-E	Hardness 5	
	4485-E	Hardness 6	
	4487DR-H	Hardness 7	
■ 4482-DR-LT	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487DR-H	Hardness 7	
■ 4482-LI-01	4483-E	Hardness 5	
	4485-E	Hardness 6	
	4487WT-H	Hardness 7	
■ 4482-LT-01	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
■ 4491-DR	T-2311-H	BCG-MR Indicator	
	4493DR-H	Alkalinity Titration B	
■ 4497	4498WT-H	Chlorine 1	
	4499WT-H	Chlorine 2	
	4500PA-H	Chlorine 3	
■ 4497-DR	4498WT-H	Chlorine 1	
	4499WT-H	Chlorine 2	
	4500DR-H	Chlorine 3	

REAGENT REFILLS

Kit Code	Reagent #	Description	
■ 4501	4498-E	Chlorine 1	
	4499-E	Chlorine 2	
	3819-H	Sodium Thiosulfate	
■ 4503	4054-L	Arsenic Reagent 1	
	4055-G	Arsenic Reagent 2	
	4056-G	Arsenic Reagent 3	
	4057-H	Arsenic Test Strips	
■ 4503-DR-01	4504-E	Chloride 1	
	2246-E	Phenolphthalein	
	6090-E	Sulfuric Acid	
	4505DR-G	Chloride 2	
■ 4507-01	4508-G	DS Indicator	
	4509-H	pH Adjustment	
	4513-E	DS Reference	
■ 4533	T-2246-J	Phenolphthalein	
	T-2311-J	BCG-MR Indicator	
	4493PS-H	Alkalinity Titration B	
■ 4533-DR	T-2246-J	Phenolphthalein	
	T-2311-J	BCG-MR Indicator	
	4493DR-H	Alkalinity Titration B	
■ 4630	4633-H	Sulfide Test 1	
	4634-H	Sulfide Test 2	
	4635-H	Sulfide Test 3	
	4636-H	Sulfide Test 4	
	4636-J	Sulfide Test 4	
	4637-S	Sulfide Test 5	
	4638-S	Sulfide Test 6	
	4639-H	Sulfide Test 7	
	4640-H	Sulfide Test 8	
	■ 4783-02	4483-E	Hardness 5
		4484-J	Hardness 6
4487WT-H		Hardness 7	
4450-G		Iron 1	
4451-S		Iron 2	
2218-G		Wide Range	
■ 4790	4791-E	DEHA 1	
	4792-E	DEHA 2	
	4793-E	DEHA 3	
■ 4801	4802PS-H	TDS A	
	4803PS-H	TDS B	
	2299-E	Methyl Orange	
■ 4801-DR	4802DR-H	TDS A	
	4803DR-H	TDS B	
	2299-E	Methyl Orange	
■ 4824-DR-LT	4259-E	Sod. Hydroxide	
	T-5250-H	Calcium Hardness	
	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487DR-H	Hardness 7	
■ 4824-LT-01	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
	4259-E	Sod. Hydroxide	
	T-5250-H	Calcium Hardness	
■ 4850	4841-H	Hydrazine A	
	4842-D	Hydrazine B	
■ 6616	6446-E	Copper 1	

Kit Code	Reagent #	Description
■ 6628	6630-D	Molybdenum Rgt.
	6381-G	Hydrochloric Acid
■ 6662	6319-H	Methyl Alcohol
	1157	Filter Paper
■ 6680	6155-E	Sodium Thiosulfate
	6165-D	Xylenol Orange
	6025-E	Hydrochloric Acid
	6158PS-H	Thorium Nitrate
■ 6701	6697-J	Formaldehyde 1
	6698-C	Formaldehyde 2
	6699-J	Formaldehyde 3
■ 6806	6807-J	DPD 1
	6382-F	EDTA Disodium Salt
	6383WT-H	Steadifac
	6809-H	Potassium Iodide
	6810-G	Potassium Iodide
	6811-J	Glycine
	6520-H	Sulfuric Acid
	6813-K	Sodium Bicarbonate
	4128-H	Sodium Arsenite
	6815-J	Ferrous Amm. Sulf.
	5115PS-K	Deionized Water
5115PT-K	Deionized Water	
■ 6817	6999-H	DPD 1R
	6905-H	DPD 3R
■ 6819	6999-H	DPD 1R
	6905-H	DPD 3R
■ 6824	6811-E	Glycine
	6905-H	DPD 3R
	6977-J	Bromine Tablets
■ 6896	6999-J	DPD 1R
	6915-H	Phenol Red
■ 6955	6977-H	Bromine Tablets
■ 6980	6999	DPD 1R
	6904	DPD 2R
	6905	DPD 3R
	6899	DPD 4R
	6915	Phenol Red
■ 7001-NJ	P-6740-H	DPD 1A
	P-6741-H	DPD 1B
	P-6743-H	DPD 3
	P-7026-H	Phenol Red
	6994-J	Cyanuric Acid
	P-7028-G	Alk 1 Indicator
	P-6111-H	Alk Titrant
	P-4259-H	Hard 1
	P-7030-G	Hard 2
	P-7031-H	CaHard Titrant
	P-6068-E	Acid Demand
P-6460-E	Base Demand	

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 7002-NJ	P-6740-H	DPD 1A
	P-6741-H	DPD 1B
	P-6743-H	DPD 3
	P-7026-H	Phenol Red
	6994-J	Cyanuric Acid
	P-7028-G	Alk 1 Indicator
	P-6111-H	Alk Titrant
	P-4259-H	Hard 1
	P-7030-G	Hard 2
	P-7031-H	CaHard Titrant
	P-6068-E	Acid Demand
	P-6460-E	Base Demand
	P-4450-E	Iron 1
	T-4451-H	Iron 2
	P-6446-E	Copper 1
■ 7011	6905-6999	DPD 1, DPD 3
	P-7026-G	Phenol Red
■ 7013	P-6740-G	DPD 1A
	P-6741-G	DPD 1B
	P-6743-G	DPD 3
	P-7026-G	Phenol Red
	6994-HRB	Cyanuric Acid
	P-6068-E	Acid Demand
	P-6460-E	Base Demand
	P-7028-G	Alk 1 Indicator
	P-6111-G	Alk Titrant
	P-4259-G	Hard 1
	P-7030-G	Hard 2
P-7031-G	CaHard Titrant	
■ 7014	P-6740-H	DPD 1A
	P-6741-H	DPD 1B
	P-6743-H	DPD 3
	P-7026-H	Phenol Red
	P-6068-G	Acid Demand
	P-6460-G	Base Demand
	P-7028-G	Alk 1 Indicator
	P-6111-H	Alk Titrant
	P-4259-H	Hard 1
	P-7030-G	Hard 2
	P-7031-H	CaHard Titrant
■ 7056	7125-H	Polyquat Titrating
	2258-E	Phenolphthalein
	6090-E	Sulfuric Acid
	3995-G	Toluidine Blue O
	7117-H	EDTA
■ 7057	3996-H	Quat Titrating
	3995-G	Toluidine Blue O
	7117-H	EDTA
	2258-E	Phenolphthalein
	6090-E	Sulfuric Acid
■ 7064	6289-H	Sulfuric Acid
	6289WT-H	Sulfuric Acid
	5168-J	Sodium Hydroxide
	2246-E	Phenolphthalein
	7114-H	Glut. Test Powder
	5175PT-K	Distilled Water
■ 7068	4606-H	Phosphate A
	4607-J	Phosphate B/C

Kit Code	Reagent #	Description
■ 7101	7102-G	Nitrite 1
	7103PS-H	Nitrite 2
■ 7101-DR	7102-G	Nitrite 1
	7103DR-H	Nitrite 2
■ 7105-02	7939PS-G	Hypochlorite A
	2790-H	Hypochlorite D
	6809-D	Potassium Iodide
■ 7115	7118-J	Barium Chloride
	7119-J	EDTA
	7121-H	Complex Solution
	7120-H	Sulfate Solution
	7122-H	Buffer
	7123-G	Indicator
	4804-J	Cation Exchange
■ 7132	2258-E	Phenolphthalein
	6385-D	Starch Acid
	2779WT-H	Iodide Iodate
■ 7138-DB	6809-D	Potassium Iodide
	4170WT-G	Starch Indicator
	7139-H	Peroxide Titrant
	7140-H	Acidified Catalyst
■ 7143	2780-D	T.C. Indicator
	6025-H	Hydrochloric Acid
	2781WT-H	T.C. Titrant
■ 7144	4483-G	Hardness 5
	4485-E	Hardness 6
	2782WT-H	Free Chelant Titrant
■ 7150	6809-D	Potassium Iodide
	4170WT-G	Starch Indicator
	7456WT-H	Peroxide Titrant
	7140-H	Acidified Catalyst
■ 7171-01	4483WT-G	Hardness 5
	4485-G	Hardness 6
	2783WT-H	Hardness 10
■ 7172-01	6091WT-G	Hydrogen Peroxide
	4069WT-G	Chloride A
	6090WT-G	Sulfuric Acid
	2258-E	Phenolphthalein
	3824WT-G	Silver Nitrate
■ 7175	7327-E	Sulfite A
	7328-E	Sulfite B
	7329PS-H	Sulfite C
■ 7175-DR	7327-E	Sulfite A
	7328-E	Sulfite B
	7329DR-H	Sulfite C
■ 7181	5649WT-G	Hydrochloric Acid
	2258-E	Phenolphthalein
	6117-G	Barium Chloride
■ 7182	5648-G	Sodium Hydroxide
	2258-E	Phenolphthalein
■ 7183-01	6410-E	Ferriin
	2789WT-G	Can Solution
■ 7191-01	6141WT-G	Sulfuric Acid
	6410-E	Ferriin
	5650LWT-G	Hydrogen Peroxide
	6521-G	Potassium Iodide
	S-6155-H	Peracetic Acid Titrant

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 7196	6434WT-G	Hypochlorite
	4500WT-H	Chlorine 3
	6452-G	Hydrogen Peroxide 1
■ 7240-01	2258-E	Phenolphthalein
	2786-E	Total Alkalinity
	7748WT-G	Sulfuric Acid
■ 7246-01	2788WT-G	Hardness 2
	4483WT-G	Hardness 5
	4485-G	Hardness 6
■ 7247	6091WT-G	Hydrogen Peroxide
	4069WT-G	Chloride A
	6090WT-G	Sulfuric Acid
	2258-E	Phenolphthalein
	6421WT-H	Silver Nitrate
■ 7250	2246-G	Phenolphthalein
	4250-BJ	Chlorine Test Papers
	4483-G	Hardness 5
	4485-G	Hardness 6
	2783WT-H	Hardness 10
	6323WT-H	Hydrochloric Acid
	6130WT-H	Hydrochloric Acid
■ 7253	7254-E	Iodine 1
	7255-E	Iodine 2
	6406PS-H	Iodine 3
■ 7253-DR	7254-E	Iodine 1
	7255-E	Iodine 2
	6406DR-H	Iodine 3
■ 7282	7283-K	Reagent 1
	7284-J	Reagent 2
	7285-E	Reagent 3
	7287-C	Reagent 4
	7286-E	Reagent 5
	7288-J	Reagent 6
	0463	Filter Paper
■ 7297-DR	2246-E	Phenolphthalein
	4253DR-H	Carbon Dioxide B
■ 7307	6456-H	Sulfate Turb
■ 7340-R	7342-H	PPK A
	7343-H	PPK B
	7344-H	PPK C
■ 7387-01	6130-E	Hydrochloric Acid
	4004-E	Sodium Hydroxide
	2850PS-H	Cyanide Buffer
	2794DS-C	Cyanide CL
	2793DS-C	Cyanide Indicator
	2955	pH Test Paper
■ 7391-01	7393-G	Zinc Rgt.
	7361-E	Zinc Conditioning
■ 7414	4167-G	Manganous Sulfate
	7166-G	Alkaline Pot Iodide-Azide
	6286-H	Sulfamic Acid
	4169-H	Sodium Thiosulfate
	4170WT-G	Starch Indicator
■ 7416-01	4410-G	VM Phosphate
	6405-G	Reducing Rgt.
■ 7417-01	7393-G	Zinc Rgt.
	7361-E	Zinc Conditioning

Kit Code	Reagent #	Description
■ 7418-01	4797WT-G	Ammonia Nitrog. 1
	4798PS-H	Ammonia Nitrog. 2
■ 7419	4167-H	Manganous Sulfate
	7166-H	Alkaline Pot Iod-Azide
	6286-J	Sulfamic Acid
	4169-J	Sodium Thiosulfate
	4170-H	Starch Indicator
	2843-H	Phosphate Buffer
	3761-H	Magnesium Sulfate
	3760-H	Ferric Chloride
	3756-H	Calcium Chloride
■ 7420	4167-H	Manganous Sulfate
	7166-H	Alkaline Pot. Iod-Azide
	5172-H	Sulfuric Acid
	4169-L	Sodium Thiosulfate
	4170-J	Starch Indicator
	2843-K	Phosphate Buffer
	3760-K	Ferric Chloride
	3761-K	Magnesium Sulfate
■ 7421	7423-G	Nitrite Nitrogen A
	7424-G	Nitrite Nitrogen B
	7797-D	Nitrite-Nitrogen CR
■ 7436-01	3870-E	Alkalinity 1
	3869-E	Alkalinity 2
	4493DR-H	Alkalinity Titration B
	4259-E	Sod. Hydroxide
	T-5250-H	Calcium Hardness
	4487DR-H	Hardness 7
	V-6282-H	Phosphate Acid
	V-6283-C	Phosphate Reducing
	2881-H	pH 7.00 Buffer
■ 7443	6899-H	Chlorine DPD #4R
	7825-C	Aminoantipyrine
	7826-G	Ammonium Hydroxide
	7827-H	Pot. Ferricyanide
	7444-J	Detergent 1
	6037-K	Detergent 2
	7445-J	Detergent 3
	6446-E	Copper 1
	2881-H	pH 7.00 Buffer
■ 7446	6446-G	Copper 1
	6899-J	DPD 4R
	7825-D	Aminoantipyrine
	7826-H	Ammonium Hydroxide
	7827-J	Pot. Ferricyanide
	7444-H	Detergent 1
	6037-J	Detergent 2
	7445-J	Detergent 3
■ 7459-01	7460-E	Salinity A
	7461DR-G	Salinity B
■ 7514	6807-C	DPD 1
	6905-H	DPD 3R
	3992WT-H	Chlorine/Bromine

REAGENT REFILLS

Kit Code	Reagent #	Description
■ 7515	T-2246-J	Phenolphthalein
	T-2311-J	BCG-MR Indicator
	6117-G	Barium Chloride
	6102PS-H	Alkalinity Titrant
■ 7516-DR-01	5115PT-H	Deionized Water
	6073-G	Barium Chloride
	2246-E	Phenolphthalein
	6251DR-G	Hydrochloric Acid
■ 7518	7217-H	Manganese A
	7218-G	Manganese B
	5115PT-J	Deionized Water
■ 7519	7520-H	Standard Turbidity
■ 7523	6058-H	STD Color
■ 7525	2246-E	Phenolphthalein
	4253PS-H	Carbon Dioxide B
■ 7530-DC	6130-E	Hydrochloric Acid
	6155-E	Sodium Thiosulfate
	6165-D	Xylenol Orange
	6158PS-H	Thorium Nitrate
	3929-E	Fluoride Inhibitor
■ 7530-DR	6130-E	Hydrochloric Acid
	6155-E	Sodium Thiosulfate
	6165-D	Xylenol Orange
	6158PS-H	Thorium Nitrate
	3929-E	Fluoride Inhibitor
■ 7530-WT	6130-E	Hydrochloric Acid
	6155-E	Sodium Thiosulfate
	6165-D	Xylenol Orange
	6158WT-H	Thorium Nitrate
	3929-E	Fluoride Inhibitor
■ 7605	7607-J	Amine Indicator
	6290-E	Sulfuric Acid
	6203-J	Chloroform
■ 7625	6155-E	Sodium Thiosulfate
	6323-E	Hydrochloric Acid
	3964-E	Chrome Azurol S
	3965-H	Thorium Nitrate
	6130-E	Hydrochloric Acid
■ 7625-DR	6155-E	Sodium Thiosulfate
	6323-E	Hydrochloric Acid
	3965-H	Thorium Nitrate
	6130-E	Hydrochloric Acid
■ 7634-DC	6130-E	Hydrochloric Acid
	6155-E	Sodium Thiosulfate
	6158PS-H	Thorium Nitrate
	2202-G	Meta Cresol Purple
	6165-D	Xylenol Orange
■ 7634-DR	2202-G	Meta Cresol Purple
	6130-E	Hydrochloric Acid
	6155-E	Sodium Thiosulfate
	6165-D	Xylenol Orange
	6158PS-H	Thorium Nitrate
■ 7658	7659-G	Sulfuric Acid
	7660-G	Ferrioin
	7661-HS	Ceric Ammon. Nit.

Kit Code	Reagent #	Description	
■ 7674-01	7423-G	Nitrite Nitrogen A	
	7424-G	Nitrite Nitrogen B	
	7797-D	Nitrite-Nitrogen CR	
■ 7678-01	7681-H	Sulfuric Acid	
	7683-E	Sodium Azide	
	7682-G	Potassium Perman.	
	V-6276-D	Chromium Reagent	
	5115PS-H	Deionized Water	
■ 7759	7756-J	Silver 1	
	7757-S	Silver 2	
	7758-J	Silver 3	
■ 7778	6456-H	Sulfate Turb	
■ 7787	4450-G	Iron 1	
	4451-S	Iron 2	
■ 7791-DR-01	2786-E	Total Alkalinity	
	6111DR-H	Sulfuric Acid	
	6248DR-H	Sodium Hydroxide	
	4483-E	Hardness 5	
	4484-J	Hardness 6	
4487DR-H	4487DR-H	Hardness 7	
	■ 7802	6251PS-H	Hydrochloric Acid
■ 7802	6537-H	Ammonium Hydroxide	
	6253-J	Sodium Citrate	
	6254-H	Dimethylglyoxime	
	6566-G	Ammon. Persulfate	
	6346-G	Silver Nitrate	
	5115PT-J	Deionized Water	
	■ 7824	7826-G	Ammon. Hydroxide
		7827-H	Pot. Ferricyanide
7825-C		Aminoantipyrine	
■ 7831	7833-E	Tannin 1	
	7834-H	Tannin 2	
■ 7839-01	4427-J	Lead Dithizone	
	6565-E	Sodium Cyanide	
	7841-E	Potassium Sodium	
	7886PS-G	Sodium Hydroxide	
■ 7857	7837-E	SDMBT 1	
	6376-H	SDMBT 2R	
	3016-E	Formaldehyde	
■ 7884	7885-H	Sulfuric Acid	
	7886-J	Sodium Hydroxide	
	2246-E	Phenolphthalein	
	6566-G	Ammon. Persulfate	
	5115PT-J	Deionized Water	
	7888-D	Boiling Stones	
■ 7894	7939PS-G	Hypochlorite A	
	7940-G	Hypochlorite B	
	7941PS-H	Hypochlorite C	
■ 7894-DR	7939PS-G	Hypochlorite A	
	7940-G	Hypochlorite B	
	7941DR-H	Hypochlorite C	
■ 8205	8215-H	Acid Titration	
	2786-E	Total Alkalinity	
■ 8225	8228-H	TK-10 Rgt.	
■ 8226	8230PA-H	Cleaner 1	
	8233PA-H	Cleaner 2	
	8234PA-H	Cleaner 3	

APPARATUS

BEAKERS - BOD

■ BEAKERS

Glass beakers have thick, slightly flared top, with spout designed for excellent pouring. Designed from ASTM specifications E960, type I requirements. All sizes have marking area and white graduated volume scale.

Nalge® Polypropylene Beakers are polypropylene with superior chemical resistance. Ribbed for easy stacking. Meets ISO/DIS 7056 Standards for Lab Plastic Accuracy. Autoclavable.



GLASS ORDER CODE	PLASTIC ORDER CODE	DESCRIPTION
0410	0944	Beaker, 50 mL
0415	0896	Beaker, 100 mL
0414	2-2011	Beaker, 150 mL
0596	—	Beaker, 200 mL
0411	0609	Beaker, 250 mL
2-2024	2-2013	Beaker, 400 mL
0412	2-2014	Beaker, 600 mL
2-2027	—	Beaker, 1,000 mL

■ BOD

WHEATON WATER BOTTLES, CAP, & RACK

Bottle has flared lip for forming a water seal and penny-head glass stopper with pointed bottom to eliminate the trapping of air bubbles.

Polyethylene cap complete with a closed cell foam insert snaps firmly over the flared mouth of bottle preventing evaporation of water seal during 5-day incubation period.

BOD Bottle Rack holds 12 - 300 mL BOD bottles. PVC-covered wire rack with carrying handles. Racks interlock when stacked. 13x10x7 in. high.



ORDER CODE	DESCRIPTION
1781-N32	BOD Bottle, 300mL, Cs 24
1781-N85	Cap, BOD Bottle, Cs 50
1781-Q05	Rack, BOD Bottle

PRE-FILLED DILUTION BOTTLES

Pre-filled, sterilized. Just open, insert sample, close, shake, and analyze. Buffered to pH 7.2 ± 0.2. Filled to 99 mL ± 2 for 1:100 dilutions or 90 mL ± 2 for 1:10 dilutions. Total capacity 150 mL.



ORDER CODE	DESCRIPTION	DILUENT FILL (ML)	DILUENT RATIO
1756-U40	Dilution Bottle, Stopper Color: Red, Cs 72	99 ± 2	1/100
1756-U41	Dilution Bottle, Stopper Color: Red, Cs 72	90 ± 2	1/10

BOD POLYSEED

Polybac Corporation Polyseed® For producing acclimated seed for fast, economical BOD₅ analyses with consistent results. Each capsule contains 100 mg for specialized, lyophilized bacterial cultures. Contents of capsule are added to 500 mL of APHA standard nutrient water at 20°C and stirred for 60 minutes. Resultant mixture provides enough acclimated seed for up to 250 BOD tests. EPA accepted.



ORDER CODE	DESCRIPTION
9855-D20	Polyseed®, Pk 50

N-CON BOD-CUBATOR

No modifications to refrigerator necessary; your refrigerator can be temporarily converted to meet peak loads. Thermostat control alternates operation of its heater's and the refrigerator's cooling system to maintain temperature over range 5° to 40 °C.



ORDER CODE	DESCRIPTION
6124-N10	BOD-Cubator

APPARATUS

BOD - CLEANERS

■ BOD (Continued)

LAB-LINE ECONOMY INCUBATORS

Adjustable bimetallic thermostat. Pilot light indicates when heater is energized. Backed by 15-month manufacturer's warranty.



ORDER CODE	DESCRIPTION
6127-A22	Economy Incubator

■ BRUSHES

GENERAL BLACK BRISTLE

Made of brass wire with tufted bristle end. For cleaning cylinders, large tubes, etc.



ORDER CODE	DESCRIPTION
2-2035	Brush, 305mm L, 76 mm bristle L, 51mm bristle dia., 27-45 Cylinder i.d.
2-2036	Brush, 380mm L, 102 mm bristle L, 64mm bristle dia., 32-60 Cylinder i.d.

FLASK/BOD BOTTLE BRUSH

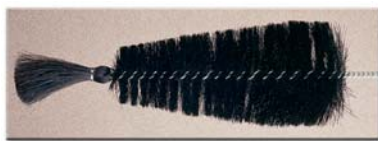
Allows access to entire inside surface of flasks or BOD bottles. Black hog bristle brush 4¼ in. long mounted on a flat steel shank attached to a pivoting shaft.



ORDER CODE	DESCRIPTION
1929-R35	Brush, 16 in, Pk 3

IMHOFF CONE

Conical shape with tufted bristle and sturdy twisted wire handle. Black bristles combine with stiff fibers, shaped to fit into cone tip. Bristle part 9 in. long, 4 in. top diameter, 1½ in. bottom diameter, tip 3 in. long, length including handle 30 in.



ORDER CODE	DESCRIPTION
1930-D10	Brush, Imhoff cone

■ BURETS

Twelve inch high, self-leveling, glass burets are graduated from 0-10 mL in 0.1 mL increments. Available with rubber squeeze valve, glass stopcock, or Teflon® stopcock. Buret-24 assembly includes empty 250 mL bottle of natural, low density polyethylene which attaches to 24 mm screwcap on buret stem. Buret-28 assembly has 250 mL bottle of amber polyethylene and 28 mm cap. Bottle serves as titrant reservoir; a gentle squeeze forces titrant into buret, where it automatically levels on 0 mL mark at top of scale.



BURET TYPE	ORDER CODE WITH POLY BOTTLE	ORDER CODE WITH AMBER BOTTLE	ORDER CODE BURET & CAPS ONLY
Rubber Squeeze	0847-24	0847-28	0427
Glass Stopcock	0827-24	0827-28	0826
Teflon Stopcock	0996-24	0996-28	0997

■ CASSEROLES

COORS® PORCELAIN CASSEROLES

Glazed inside and outside with exception of rim. Has spout and flat porcelain handle. No lid.



ORDER CODE	CAPACITY (ML)	DIAMETER (IN)	HEIGHT (IN)
2427-C50	140	3¾	1¼
2427-C60	210	3¾	2

■ CLEANERS

ALCONOX® BIODEGRADABLE CLEANING COMPOUND

Mild, odorless, non-toxic powdered wetting agent and detergent for cleaning glassware, porcelain, metal, plastic, or rubber. Suitable for use in ultrasonic cleaners. Usual dilution 1 tablespoon to 1 gallon water.



ORDER CODE	DESCRIPTION
2902-G05	Alconox, 4 lb Box

APPARATUS

CLEANERS - COLIFORM

CLEANERS (Continued)

KIMBERLY-CLARK KIMWIPE® ABSORBENT LIGHT-DUTY WIPER

Single-ply premium lab wiper for extra low-lint performance. Won't scratch delicate surfaces. LINTGUARD® polyshield reduces lint and electrostatic discharge when dispensing. Gently absorbent for light liquid pickup.



ORDER CODE	DESCRIPTION
2-2069	4½ x 8½ single-ply in dispensing box, Bx 280
2-2070-15	15 x 17 single-ply in dispensing box, Cs 15

COD

120V and 230V, 12-tube capacity. This COD heater block features digital microprocessor control, programmable time and temperature settings, and a dual LED display to monitor both temperature and timer. Perfect for COD, Total Phosphorus, and Total Nitrogen testing PLUS other tests requiring digestion. See page 14 for additional specifications.



ORDER CODE	DESCRIPTION
5-0102	COD Heater Block, 120 V
5-0102-EX2	COD Heater Block, 230 V

COLIFORM

THOMAS® COLIFORM WATER SAMPLE BAG

Twist tie top seals with a 5 mm wide metal strip. Large textured label area for potable water according to Standard Methods (Method 9060 A) or for NPDES compliance monitoring. Sterilized, with thiosulfate dechlorination tablet included. 100 mL fill line marked for easy reference.



ORDER CODE	DESCRIPTION
1303-R90	Sample Bag, 100/bag

THOMAS® COLIFORM WATER SAMPLING VIAL

Improved sample container for microbiological testing. Ideal when filtration or the Colilert® method is used. Improved latching mechanism, won't open or leak in transit. Pre-sterilized, with thiosulfate tablet included. 120 mL fill line.



ORDER CODE	DESCRIPTION
9853-Q35	Vial with tablet, Bg 100

WHATMAN® QUANTITATIVE ASHLESS FILTER PAPERS

Suitable for precipitates that are ordinarily difficult to filter (2.5 µm particle retention). Acid Wash, Ash Content 0.007%. Highly retentive for very fine analytical precipitates. Recommended for use with vacuum.



ORDER CODE	DESCRIPTION
4716-Q10	Filter Paper, 5.5 cm, Pk 100
4716-Q15	Filter Paper, 7 cm, Pk 100
2-2098	Filter Paper, 9 cm, Pk 100
4716-Q25	Filter Paper, 11 cm, Pk 100
2-2100	Filter Paper, 12.5 cm, Pk 100
4716-Q35	Filter Paper, 15 cm, Pk 100
4716-Q40	Filter Paper, 18.5 cm, Pk 100
4716-Q45	Filter Paper, 40 cm, Pk 100

GELMAN GN-6 METRICEL® FILTER MEMBRANE

Certified for the microbiological analysis of potable, waste, process, and natural waters in accordance with the membrane filtration technique referenced in Standard Methods, and the US EPA's Microbiological Methods for Monitoring the Environment, 600/8-78-01. The mixed Cellulose Ester Metricel® is resistant to ether, aromatic hydrocarbons, carbon tetrachloride, chloroform, petroleum, ethylene glycol, glycerine, and dilute acids. This Metricel® is attacked by concentrated acids and bases, ketones, and propylene glycol. Water flow rate 65 mL/min/cm² at 250 mm Hg (10psi); air flow rate 8 Lpm/cm² at 520 mm Hg (10psi).



ORDER CODE	DESCRIPTION
4641-J22	Filter, 0.45 µm, 47 mm, sterilized, Bx 100

APPARATUS

CYLINDERS - FLASKS

■ CYLINDERS

Glass cylinders have pouring spout and permanent fused white graduations. Plastic cylinders meet ASTM Class B, E1272 standards and have excellent heat and chemical resistance.



PLASTIC ORDER CODE	VOLUME (ML)	GRADUATION INTERVALS (ML)	GLASS ORDER CODE
2-2076	10	0.2	0416
2-2077	25	0.5	0417
2-2078	50	1.0	0418
2-2079	100	1.0	0419
2-2080	250	2.0	—
2-2081	500	5.0	0994
2-2082	1,000	10.0	—

■ FILTER PAPER

All papers listed are sold 100 to a package.

ORDER CODE	DESCRIPTION	DIAMETER (CM)	SPEED
Alhstrom			
0463	No. 642-27, Qual.	11	Slow
0465	No. 642, Qual.	9	Medium
0463-S	No. 950-25, Qual.	11	Slow
Whatman			
0947	No. 2, Qual.	2.5	Medium
0471	No. 2, Qual.	9	Medium
2-2098	No. 42, Ashless, Quan.	9	Slow
2-2100	No. 42, Ashless, Quan.	12.5	Slow
1157	Glass Fiber	2.4	—

■ FILTER/SYRINGE ASSEMBLY

For on-site collection of filtrates or filtered material from natural or industrial waters. Consists of 60 mL plastic syringe, dual check-valve, Delrin® filter holder with Luer slip outlet and clear flexible PVC tubing, 3 ft. long x 3/16 in. i.d. Tubing attaches to check-valve outlet. Syringe is calibrated to 0 to 60 mL and 0 to 2 oz.

ORDER CODE	DESCRIPTION
1050	Complete filter/syringe assembly
0943	Syringe, 60 mL
1175	Tubing, 36 in.
1174	Check-valve
0598	Filter Holder
Code 0598 holder accepts the following filters (furnished in packages of 100, unless otherwise specified):	
0947	Paper, 2.5 cm
1157	Glass Fiber, 24 mm Membrane, 25 mm
1103	0.45 micron, pkg. 100
1103-6	0.45 micron, pkg. 6
1180	0.2 micron, pkg. 100

■ FLASKS

NALGE® ERLENMEYER FLASKS

Glass flasks have thick-walled body with tapered contour to minimize chipping. Approximate volumes are indicated. Plastic flasks are polycarbonate with polypropylene screw closures; use for preparation and storage of culture media and culturing techniques.

PLASTIC ORDER CODE	DESCRIPTION	GLASS ORDER CODE
2-2114	Flask, 25 mL	2-2109
2-2115	Flask, 50 mL	0438
2-2116	Flask, 125 mL	0431
2-2117	Flask, 250 mL	0433
2-2118	Flask, 500 mL	0435

APPARATUS

FLASKS - HYDROMETERS

■ FLASKS (Continued)

CORNING VOLUMETRIC FLASKS

Pyrex® Brand Class A. Heavy beaded, heavy tubing neck with snap cap. White block letters for easy readability.

ORDER CODE	DESCRIPTION
2-2127	Flask, Volumetric, 50 mL
2-2128	Flask, Volumetric, 100 mL
2-2129	Flask, Volumetric, 500 mL
2-2130	Flask, Volumetric, 1,000 mL



■ FLASKS, FILTERING

Heavy glass with serrated side tubulation for tubing attachment. 500 mL requires 5/16 in. i.d. tubing; 1,000 mL requires 3/8 in.

ORDER CODE	DESCRIPTION
2-2119	Flask, 500 mL
2-2120	Flask, 1,000 mL

■ FUNNELS, PLASTIC

Reinforced rim. Ridges outside and inside permit air passage and improve filtering efficiency. Withstand continuous use at temperatures up to 130°C.

ORDER CODE	DESCRIPTION
2-2134	Funnel, 9 mL
2-2135	Funnel, 20 mL
0459	Funnel, 37 mL
2-2136	Funnel, 60mL
2-2137	Funnel, 95 mL
2-2138	Funnel, 225 mL

■ HOT PLATES

CORNING® HOT PLATE

Superb linear control for both heating and stirring. Minimum heat up time. Meets testing standards for electrical safety.



ORDER CODE	DESCRIPTION	TOP STYLE (IN)	TEMP RANGE	DIMENSION H X W X D (IN)
5983-C06	Ceramic Top Hot Plate, 120V, 50/60 Hz, 625W	5x7	40°-550°C	4.4x7.8x9.6

■ HYDROMETERS

SPECIFIC GRAVITY 1 TO 2

For liquids heavier than water. Approximate total length 305 mm, approximate length of graduate scale 135 mm, excepting range 1.000 to 2.000, which has scale approximately 150 mm long, and is made without conventional enlarged bulb at bottom. Tolerance ±1 scale division. Require a cylinder 340x38 mm and approximately 250 mL of liquid.

ORDER CODE	DESCRIPTION
2-2150	Hydrometer, 1.000-1.200: 0.002 interval
2-2151	Hydrometer, 1.200-1.420: 0.002 interval
2-2152	Hydrometer, 1.400-1.620: 0.002 interval
2-2153	Hydrometer, 1.600-1.820: 0.005 interval
2-2155	Hydrometer, 1.000-2.000: 0.005 interval
2-2157	Hydrometer, 1.000-2.000: 0.01 interval

CORNING PYREX® BRAND HYDROMETER CYLINDER

Heavy wall construction. Large, hexagonal base, sealed to the cylinder body, increases stability.

ORDER CODE	DESCRIPTION
2-2149	Hydrometer Cylinder, 38 x 340 mm

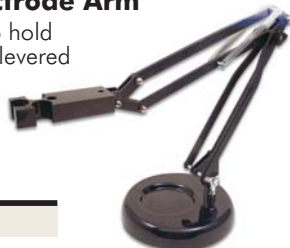


PIPETS - STIRRERS & ACCESSORIES

■ pH ELECTRODE ACCESSORIES

Thomas® Adjustable Electrode Arm

Provides stability and flexibility to hold electrodes in any position. Cantilevered stand. Large steel base. Ship weight: 3lb.



ORDER CODE	DESCRIPTION
4111-M10	Electrode Arm

■ PIPETS

BEL-ART® SAFETY BULB

Tapered silicone seal provides airtight fit in all pipet sizes. 2-2164 comes complete with an elastic cord for dedicating pipettor to a specific reagent bottle.



ORDER CODE	DESCRIPTION
2-2164	Safety Bulb
0395	Safety Bulb

■ PIPETS (continued)

CORNING TRANSFER PIPETS

Pyrex® Class A. Tapered at both ends. Calibrated to deliver rated volume at 20°C.

ORDER CODE	DESCRIPTION
2-2170	Transfer Pipet, 1 mL
2-2174	Transfer Pipet, 5 mL
2-2175	Transfer Pipet, 10 mL
2-2177	Transfer Pipet, 25 mL
2-2179	Transfer Pipet, 100 mL



■ SAMPLE VIALS

THOMAS® 40 ML EPA VIALS

The unique TomCap septum/liner is molded and not punched like other vial liners. This liner locks into the hole in the cap. The molded septa allows for thinner outer lip, assisting in light leakproof seals, eliminating leaks and air bubbles. The 0.005 in. PTFE layer is fused to 0.120 in. silicone layer for EPA compliance.



ORDER CODE	DESCRIPTION
9711-F07	Sample Vial, Precleaned, Amber w/cap, Pk 72
2-2264-72	Sample Vial, Precleaned, Clear w/cap, Pk 72

■ SETTLOMETER

NALGE SETTLOMETER KIT

For use in wastewater treatment plants to perform the settlometer test to determine the settled sludge volume (SSV). See APHA Standard Methods for the Examination of Water and Wastewater, 20th Ed. (1998), Method 2710-C, p 2-80. Kit includes 2-liter, transparent polycarbonate jar, polycarbonate cover, polypropylene stirring paddle, ten 15 mL polycarbonate conical bottom centrifuge tubes and sample data sheet. Chemically resistant to sludge samples in range pH 3 to 10.



ORDER CODE	DESCRIPTION
9857-U25	Settlometer Kit

■ STIRRERS & ACCESSORIES

SQUID MAGNETIC STIRRERS

These colorful stirrers are electronically controlled from 0 to 1500 RPM. The design is under glass so it won't wear off. Strong magnetic field can stir up to 800 mL. Glass top and Hytre® plastic base offer superior chemical and flame resistance. 5 in. diameter top, 100/120 VAC.



ORDER CODE	DESCRIPTION
8613-N62	Bigwave
8613-N53	Sunset
8613-N59	Zip
8613-N50	Harry's Notes
8613-N56	Formula

APPARATUS

STIRRERS & ACCESSORIES - THERMOMETERS

■ STIRRERS & ACCESSORIES (Continued)

STIRRING BARS:

Octagon-shaped with rounded ends and molded pivot ring.



MAGNETIC STIRRING BAR RETRIEVER:

For insertion or removal of magnetic stirring bars. Overall length 11½ in.

ORDER CODE	DESCRIPTION
2-2185	Stirring Bar, 5/16 x 1 in.
2-2186	Stirring Bar, 5/16 x 1 5/8 in.
2-2187	Magnetic Pick Up Rod

■ STOPCOCK GREASE

LUBRISEAL® STOPCOCK GREASE

For lubricating ground glass joints, glass, and metal stopcocks and valves, and for sealing desiccators, anaerobic culture jars, and similar utensils. Prevents the freezing of stopcocks, ground joints, etc. Low vapor pressure, and resists attack by acidic and alkaline solutions. Smooth textured, stable, free from vegetable or animal oil or silicone, and practically insoluble in water.



ORDER CODE	DESCRIPTION
2-2158-H	LubriSeal, 75g tube

■ THERMOMETERS

DUAL SCALE

Mercury filled thermometers with white enameled back and dark engraving are easy to read.



ORDER CODE	CELSIUS SCALE	FAHRENHEIT SCALE
9284-C25	-20° to +110° x 1°	0° to +230° x 2°
9284-C30	-20° to +150° x 1°	0° to +300° x 2°
9284-C35	-10° to +260° x 1°	0° to +500° x 2°

THOMAS® SWITCHABLE THERMOMETER, °C/°F

8 in. thermometer with a wide range and digital display. Fits into cuvettes, test tubes, flasks, and beakers. Stainless steel probe is resistant to acids, bases, solvents, and most laboratory chemicals. Dual range of -58° to 302°F or -50° to 150°C. Digital resolution of 0.1° from -20° to 200°. Accuracy is ±1°C between -20° to 100°C. Readings updated every second. Operates continuously for over a year on a single replaceable silver-oxide battery (included). Supplied with protective case that can be used as a holder.



ORDER CODE	DESCRIPTION
9329-H01	Switchable Thermometer with Digital Display

OTHER CATALOGS

FREE CATALOGS



AQUACULTURE TESTING PRODUCTS

Code 1612

Test kits and instrumentation for critical water quality control of aquarium systems. Designed for the hobbyist, retailer, and ornamental fish culturist. Test kits, instrumentation, and combination outfits designed for fish farms, hatcheries, and research institutions. Equipment designed for monitoring water quality conditions on-site and at benchtop locations.

ENVIRONMENTAL SCIENCE EDUCATION

Code 1590

Practical, "hands-on" test equipment for air, soil and water chemistry students in elementary, secondary, vocational, outdoor and college science programs.

POOL & SPA WATER TEST EQUIPMENT

Code 1634

A complete line of test kits, combination outfits and labs for pool professionals, public pool or spa operators, and private pool or spa owners.

PRODUCT PRICE LIST

Code 1645

This "component price list" gives price and ordering information on all standard LaMotte reagents, labware, apparatus and accessories. Reagents are listed in kit-size and bulk containers.

SOIL TESTING PRODUCTS

Code 1652

Field and laboratory test equipment for measurement of soil nutrients and soil pH. For agricultural soils, greenhouses, gardens, dairy sanitation, aquaculture and hydroculture.

WATER CONDITIONING TESTING PRODUCTS

Code 1650

Softener sales demonstration outfits and other specialized test equipment for the point-of-use water treatment industry.

HANDBOOKS

WATER & SOIL HANDBOOKS

A Study of Water Quality

Dr. Charles E. Renn; 46 pages
Examines the "life cycle" of water from its occurrence in nature to its treatment for domestic and industrial use, with emphasis on such water quality problems as scaling, corrosiveness, taste, and turbidity.

ORDER CODE 1532

A Laboratory Manual for Marine Science Studies

Staff, LaMotte Company; 32 pages
Test procedures and background information on sampling and analysis in salt water environments - oceans, bays, marine estuaries, and salt marshes.

ORDER CODE 1587

Investigating Water Problems

Dr. Charles E. Renn; 72 pages
Discusses 25 chemical factors of water quality analytical procedures for their measurement and interpretation of test results.

ORDER CODE 1589

Limnology: An Introduction to the Fresh Water Environment

William A. Amos; 40 pages
Discusses biological, chemical, and physical processes in ponds, lakes, swamps, streams, and rivers - stream dynamics, plant zonation, the succession of ponds, the energy cycle of ponds, etc.

ORDER CODE 1593

Marine Aquarium Handbook

Staff, LaMotte Co.; 20 pages
Test procedures and background information on chemical testing for successful management of aquarium water.

ORDER CODE 1585

Monitor's Handbook

Staff, LaMotte Co.; 71 pages
A complete guide covering the importance of water quality of all types of natural waters. Gives guidance for watershed surveys, site location, sample collection, and choosing appropriate methods and equipment. Describes physical, chemical, and biological factors of water quality, and the analytical procedures for their measurement. Provides the basic program planning, data analysis, and reporting with conversion factors, glossary, and resource list. For individuals or groups starting a water quality monitoring program.

ORDER CODE 1507

Our Environment Battles Water Pollution

Dr. Charles E. Renn; 32 pages
Traces a theoretical river from its origin as a mountain brook to its discharge into a marine estuary, examining the chemical and biological changes that occur as the stream reacts to impurities from natural and industrial sources.

ORDER CODE 1592

pH, Buffers & Acid/Base Titrations

Staff, LaMotte Company; 20 pages
The theoretical and practical applications of acids and bases in chemical testing.

ORDER CODE 1595

Pool Mgr. Handbook

Staff, LaMotte Company; 60 pages
A 60 page text for entry level lifeguards or aquatic supervisors. Discussions on water balance, sanitation, analysis, and problem solving. Water treatment charts are provided.

ORDER CODE 1505

Turbidity, Its Meaning & Measurement

Dr. Charles E. Renn; 20 pages
The cause of water turbidity and methods of turbidity measurement, including the Secchi disk, the Jackson Candle method, and the electronic nephelometer.

ORDER CODE 1643

A Study of Soil Science

Dr. Henry D. Foth; 44 pages
An introduction to soil formation, soil pH, mineral elements and plant nutrition, the life cycle of growing plants, and soil fertility management.

ORDER CODE 1530

The LaMotte Soil Handbook

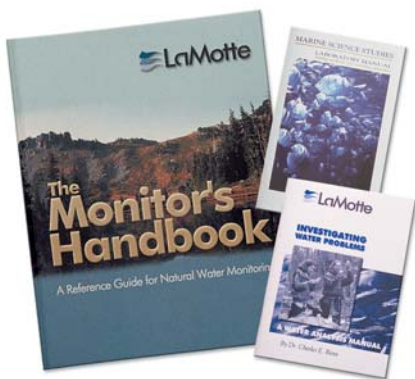
Staff, LaMotte Company; 60 pages
This "growers manual" discusses major and minor nutrients, trace elements, soil pH, organic matter, soil texture, etc. Includes lime and fertilizer recommendations for a variety of crops and plants.

ORDER CODE 1504

Plant Nutrition Studies

Dr. Robert Stegner; 76 pages
Discusses the study and practice of hydroponics - plant culture in soilless solutions - and includes a series of laboratory investigations.

ORDER CODE 1596



Chemistry & Control of Modern Chlorination

Dr. A.T. Palin; 64 pages
The process of chlorination and principal methods of chlorine testing. Written by a leading international authority on chlorine measurement.

ORDER CODE 1597

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