

## WATER QUALITY Testing Products



## The Next Revolution in Water Analysis is Here!

Welcome to our General Products Catalog!

For almost 100 years we have kept alive my grandfather's passion, to innovate using new technologies to achieve greater accuracy, speed, and repeatable results for field and lab water analysis...to make your job simpler and more productive.

Perhaps there is no better example of this continuous innovation than our new WaterLink Spin Touch Colorimeter and pre-loaded reagent Spin Disks. This incredible new system uses Centrifugal Fluidics Photometry to accurately measure up to 10 parameters of water in 60 seconds with a single injection of a water sample. WaterLink Spin celebrated its 5-year anniversary earlier in 2017, and did so with the launch of its latest version...the portable, touch-screen Spin Touch. The Spin Touch and Disks are not only ideal for Pool and Spa testing, but now available for Drinking Water testing. We offer a variety of single-use and multi-use reagent disks testing almost 20 parameters, with more to come for new applications."

Our own software development team is enhancing your experience and capabilities with iOS and Android apps and cloud-based software like our WaterLink Connect and DataMate Web products. Test results are now captured and recommendations for action are provided instantly on mobile phones. These results can be literally viewed from anywhere in the world. From our Insta-Link smart phone test strip scanning products to our Bluetooth-enabled Spin and Smart Colorimeters, we are connecting your testing with the latest smart phone and web advantages.

We take tech support and customer service very seriously—it's what sets us apart. If you ever need either of these services, make sure you reach out, that's why we're here. I encourage you to call our Customer Service staff for guidance on product selection or Technical Support for assistance with any questions regarding purchased LaMotte products. If for any reason you are not satisfied with our products or service, you may return the product within 30 days for a full refund; please call for return authorization.

Please know that when you buy analysis products from us, you purchase solutions to your challenges, not simply hardware.

David LaMotte

President LaMotte Company



## Since 1919

Helping people solve analytical challenges by providing innovative solutions through knowledgeable technical guidance, prompt service, and quality products designed for the analysis of water and soil.

#### TO ORDER - SEE BACK COVER

CAPABILITIES	Page 4
CUSTOM KIT SERVICES & INTERNATIONAL SALES	Page 5
TEST METHODS	
Colorimetric	Page 6
Electronic	7
Titrimetric	7
INSTRUMENTATION	
WaterLink Spin Touch DW	Pages 8-9
SMART3 Colorimeter	
2020t & i Portable Turbidity Meters	
TC-3000t & i Turbidity & Chlorine Laboratory Meters	
SMART Spectro 2 Spectrophotometer	
COD Reagents UV-VIS Spectrophotometer	
Instrument Reagent Listing	
DC1500 Single Test Colorimeter Labs	
TRACERS: Total Chlorine, pH, ORP, Options, EC/TDS/Salt	
pH/Conductivity, DO	
Dissolved Oxygen Meters	
PockeTesters: pH, Double Junction ORP, Salt, Thermomete Microprocessor-Based TDS and EC Dual Range	
Temperature Measurement	
LaMotte pH, TDS, Conductivity Meters	
pHPLUS Direct Digital pH/ISE Meter and Electrodes	
DPD Reagents pH Buffers/Electrode Soaker	
Conductivity Solutions	
INSTA-TEST <sup>®</sup> TEST STRIPS	Pages 36-37
	Pages 36-37
INSTA-TEST <sup>®</sup> TEST STRIPS	Pages 36-37
INSTA-TEST® TEST STRIPS	Pages 36-37 Pages 38-40
INSTA-TEST <sup>®</sup> TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS	Pages 36-37 Pages 38-40
INSTA-TEST <sup>®</sup> TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing	Pages 36-37 Pages 38-40 Pages 41-55
INSTA-TEST <sup>®</sup> TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST <sup>®</sup> TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS Aquaculture & Aquarium Water Environmental Studies Food/Laundry	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 
INSTA-TEST * TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS Aquaculture & Aquarium Water Environmental Studies Food/Laundry General Water Analysis	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST * TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS Aquaculture & Aquarium Water Environmental Studies Food/Laundry General Water Analysis Industrial Water	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry     General Water Analysis     Industrial Water     Pool & Spa Water	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST <sup>®</sup> TEST STRIPS MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS Aquaculture & Aquarium Water Environmental Studies Food/Laundry General Water Analysis Industrial Water Pool & Spa Water Water & Wastewater	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 61-62 63-64 65-66 67-71 72-73
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry     General Water Analysis     Industrial Water     Pool & Spa Water	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 61-62 63-64 65-66 67-71 72-73
INSTA-TEST * TEST STRIPS. MICROBIOLOGICAL TESTING INDIVIDUAL TEST KITS Acidity to Zinc Test Kit Listing COMBINATION OUTFITS Aquaculture & Aquarium Water Environmental Studies Food/Laundry General Water Analysis Industrial Water Pool & Spa Water Water & Wastewater Water Conditioning REAGENT REFILLS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST* TEST STRIPS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST * TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry.     General Water Analysis.     Industrial Water     Pool & Spa Water     Water & Wastewater     Water Conditioning     REAGENT REFILLS     Numerical Listing     APPARATUS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST TEST STRIPS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry.     General Water Analysis.     Industrial Water     Pool & Spa Water     Water & Wastewater     Water Conditioning     REAGENT REFILLS     Numerical Listing     APPARATUS     Beakers to Thermometers     CATALOGS & HANDBOOKS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST TEST STRIPS	Pages 36-37 Pages 38-40 Pages 41-55 
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry.     General Water Analysis.     Industrial Water     Pool & Spa Water     Water & Wastewater     Water Conditioning     REAGENT REFILLS     Numerical Listing     APPARATUS     Beakers to Thermometers     CATALOGS & HANDBOOKS     Application Specific Catalogs & Handbooks     STANDARDS	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry.     General Water Analysis.     Industrial Water     Pool & Spa Water     Water & Wastewater     Water Conditioning     REAGENT REFILLS     Numerical Listing     APPARATUS     Beakers to Thermometers     CATALOGS & HANDBOOKS	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 
INSTA-TEST* TEST STRIPS     MICROBIOLOGICAL TESTING     INDIVIDUAL TEST KITS     Acidity to Zinc Test Kit Listing     COMBINATION OUTFITS     Aquaculture & Aquarium Water     Environmental Studies     Food/Laundry.     General Water Analysis.     Industrial Water     Pool & Spa Water     Water & Wastewater     Water Conditioning     REAGENT REFILLS     Numerical Listing     APPARATUS     Beakers to Thermometers     CATALOGS & HANDBOOKS     Application Specific Catalogs & Handbooks     STANDARDS	Pages 36-37 Pages 38-40 Pages 41-55 Page 56 

LaMotte Company manufactures its products at its 65,000 square foot facility in Chestertown, Maryland, near Washington, DC on the east coast of the United States.

Over 12 years into our Lean Manufacturing journey, LaMotte's chemists, engineers, and technicians continue to optimize a wide variety of processes to achieve maximum quality and efficiency.

We offer a wide range of test methods and tools for the analyst, from multi-factor test strips, foil-packaged unit dose tablets, unit dose powder vials, and liquid reagents to sonic-welded color compara-

tors, multi-parameter test kits, and electronic instruments. LaMotte controls the manufacturing of all aspects to ensure the highest quality.

We believe strongly in having a team of technical





experts available by phone and email for customer support. The Research and Development team works to constantly improve and create new test methods. Our in-house graphic design department provides extensive services that are especially valuable for the many custom designed products that

LaMotte welcomes.

All of these varied capabilities enable LaMotte to excel at helping people solve their analytical challenges.



pH, Pree 9



## **Custom Test Kit Services**

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.

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



#### 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].
- 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.





International Sales Worldwide Distributor Network

#### Available online at www.lamotte.com:

- Entire Product Listing with Full Descriptions
- Printable Test Instructions
- Printable SDSs
- Printable Reagents Certificates of Analysis

For Pricing and To Order, contact a distributor near you.

To locate a LaMotte distributor, visit www.lamotte.com and select "INTERNATIONAL". For more information email us at **intl@lamotte.com**.



### Colorimetric

#### Colorimetric



#### There are two basic types of colorimetric tests:

- 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 2 Comparator

The Octa-Slide 2 replaces the Octet and Octa-Slide comparators. All 8 color standards can be viewed at once against a precision matched color bar top-loaded next to the sample tube. This comparator system can be used with existing reagent system but is not compatible with color bars from the original Octa-Slide.





#### LRC Comparator

This innovative design replaces the Axial Reader with a simpler and significantly improved optical system. Simply place one reacted sample in the front and one un-reacted sample behind it and let the light shine down into both tubes. Precision matched glass ampoules are in the slide bar so even the most sensitive low range colors can be matched one-on-one with extraordinary ease and confidence.

#### Test Strips

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





#### Color Chart Comparator

5.0

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

#### **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.

#### 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.



#### 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 84 for full line of automatic burets.

#### **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.

## e.W.

## WaterLink<sup>®</sup> Spin Touch<sup>™</sup> DW

"Every now and then a technology emerges that changes people's lives. For people who test water, that time is now."

— David LaMotte, President



Centrifugal Fluidics Photometry<sup>~</sup>

The innovative WaterLink® Spin Touch™ DW photometer does all your drinking water testing for you. Each sealed reagent disk contains the precise amount of reagent needed to run a complete series of tests. Just fill one unique Spin reagent disk with less than 3 mL of water and all your vital tests are done automatically—in just 60 seconds!

It's the most advanced system for precise use of wet chemistry methods ever produced. Now analysts can achieve precision without time consuming test and clean-up procedures. This ground-breaking analysis system is so simple anyone can use it! No vials to fill, no prep time, no guessing!



## WaterLink® Spin Touch™ DW

#### **Reliable Results**

- Virtually eliminates User-Error
- Pre-Measured Reagents
- Exact Reaction Times and Auto-Blanking
- Meter Calibration Check System
- New 6-Wavelength Photometer

#### Super Fast & Simple

- Fill Disk and Insert > Select "Start Test" > Read Results
- Results in 60 seconds

#### Auto-Record Keeping

Stores Test Dates, Times, Results

#### Stand-Alone

- No Computer, Smartphone, or Tablet Needed
- Touchscreen Operation

Communicate through Bluetooth® or USB
Software Available 2017

Bluetooth® is a registered trademark of Bluetooth® SIG, Inc.

#### Rugged and Portable

- Innovative Water-Resistant Housing
- Internal, Rechargeable Batteries
- Optional Heavy-Duty, Waterproof
- Carrying Case with Foam Inserts

#### WaterLink<sup>®</sup> Spin Touch<sup>™</sup> DW Code 3585

Includes: Photometer, Instruction Manual, Quick-Start Guide, 3 Syringes, Meter Check Disk, Disk Cover, Sample Bottle, USB Cord with USB Wall Adapter, Carrying Case [Disks sold separately]

Instrument Type:	Centrifugal Fluidics Photometer	
6 Wavelengths:	390 nm, 428 nm, 470 nm, 525 nm, 568 nm, 635 nm	
Display:	Color Capacitive Touchscreen, 3.5", 320 X 240 pixel resolution	
Batteries:	Lithium Ion, Rechargeable (Full Charge in 6 hours), 100-150 tests per charge	
Communication:	Bluetooth, USB-C	
Calibration:	Factory Set, Field Calibration via Internet Connection	
Data Storage:	Last 250 Test Results with Date and Time	
Water Resistance:	Rubber Over-molded Base, Rubber USB Port Plug, Gasketed Display and Hinge	
Size & Weight:	8.5 L x 4.9 W x 4.1 H inches, 1.74 lb 22.6 L x 12.7 W x 11.4 H cm, 0.79 kg	
Operation:	Single On/Off/Reset Button with Indicator Light	
Firmware:	Internet Updateable (New Tests, New Test Calibrations, etc.)	
Printer:	Optional Bluetooth Printer (Code 5-0066); 384 dots per line at 8 dots/mm resolution	

Drinking Water Series DW11		
Code 4336-H	50 pack	
Free Chlorine	0-15 ppm	
Total Chlorine	0-15 ppm	
Combined Chlorine	0-15 ppm	
рН	4.5-9.5 pH	
Total Hardness	0-70 gpg	
Total Iron	0-6 ppm	
Ferric Iron	0-6 ppm Fe <sup>3+</sup>	
Ferrous Iron	0-6 ppm Fe <sup>2+</sup>	
Total Alkalinity	0-250 ppm	





## SMART3 Colorimeter



Over 80 Pre-Programmed Tests

Code 1910

#### The user-friendly SMART3 Colorimeter is the ideal direct reading colorimeter 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 chamber 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 25 tests for analyzing custom reagent systems. LaMotte stands behind every system we provide.

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

- IP67 Waterproof
- 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 LCD display for improved readability
- USB interface
- Lithium ion rechargeable battery, USB computer adapter is included

#### As well as the incorporated features:

- All wavelength filters 428, 525, 568, 635 nm (SMART3 only)
- USB port
- and more...

NOTE: SMART 3 Turbidity is not the same as EPA 180.1 Turbidity

SMART Colorimeter® is a registered trademark of LaMotte Company.

## SMART3 Colorimeter



See pages 19-20 for complete reagent system listing.

Range:	0-125%T
Resolution:	1% FS
Accuracy:	2% FS
CE Mark:	Yes
Light Source:	LED/Filter setup; 428nm, 525nm, 568nm, 638nm
Detector:	Photodiode
Display:	160x100 Backlight LCD, 20x4 line graphics display
Sample Cell:	25 mm round cell, 10 mm square cuvette, 16 mm COD tubes
Datalogging:	Up to 500 data points, USB transfer, time and date stamped
Keypad:	6-button mechanical
Calibration:	Factory set - user adjustable
Power:	USB computer/power charger or Lithium Ion rechargeable battery, 3.7V, 2.5" x 0.75", 1.7 oz.
Dimensions:	19.05 x 8.84 x 6.35 cm; 7.5 x 3.5 x 2.5 inches
Weight:	15 ounces
Bandwidth:	10 mm typical

#### SMART3 · Code 1910

Comes with 6 sample tubes, power charger and manual

#### Accessories/Replacement Items:

Smartcheck Standards	Code 4148
Replacement Sample Chamber Cup	Code 3-0038
COD/UDV adapter	Code 1724
6 sample tubes	Code 0290-6
USB Cable	Code 1720
USB Power Plug	Code 1721
Car Charger	Code 5-0132
Small Case	Code 1910-GCS150
Large Case	Code 1910-GCS440
Bluetooth Printer	Code 5-0066

## 2020t & 2020i Portable Turbidity Meters





Waterproof to IP67 Lithium rechargeable batteries **USB** port 7 languages **Backlit display** FPA and ISO versions

New RATIOMETRIC design in one of the most innovative, WATERPROOF, handheld meters available on the market!

The multi-detector optical configuration assures long-term stability and minimizes stray light and color interference. The new ratiometric design allows for easy and accurate testing. The nephelometric mode measures 0-40 NTU/FNU, ratiometric mode 40-1000 NTRU/FNRU and 1000-2000 AU. Now pinpoint the range of interest with better, more reliable results. Ideally suited for low-level drinking water applications, mid-range industrial applications, and high-range environmental applications.

- Seven user selected languages English, Spanish, French, Japanese, Chinese, Italian, and Portuguese
- Advanced calibration algorithms
- Easy menu driven operation and large LCD display
- 500 point data log; stored results can be viewed directly on instrument

2020t version meets US EPA design criteria as specified by EPA 180.1, Rev. 2.0 [1993] and Standard Methods 2130 B-2001.

2020i version meets design criteria for quantitative methods of turbidity using optical turbidimeters as specified by ISO 7027. Best for colored or extremely turbid samples.

Kits are supplied with 0, 1, and 10 NTU standard, sample bottle, four sample tubes, USB cable and wall adapter.

#### To Order:

2020t Kit · Portable turbidity meter complies with by EPA 180.1, Rev. 2.0 (1993) and Standard Methods 2130 B-2001 Order Code 1974-T 2020i Kit · Portable turbidity meter complies with ISO 7027 Standard Order Code 1974-I

## 2020t & 2020i Portable Turbidity Meters

#### **Turbidity Specifications:**

Mode	Ratiometric	Nephelometric	Attenuation
Unit of Measure 2020t	NTRU, NTU, ASBC, EBC	NTU, ASBC, EBC	AU, NTU, ASBC, EBC
Unit of Measure <b>2020i</b>	FNRU, NTU, ASBC, EBC	FNU, NTU, ASBC, EBC	FAU, NTU, ASBC, EBC
Range	0-1,000 NTRU/FNRU 0-17,500 ASBC 0-250 EBC	0-100 NTU/FNU 0-1,750 ASBC 0-25 EBC	0-2,000 AU/FAU 0-70,000 ASBC, 0-1,000 EBC
Resolution	0-10.99 NTRU/FNRU: 0.01 11.0-109.9 NTRU/FNRU: 0.1 110-1000 NTRU/FNRU: 1	0-10.99 NTU/FNU: 0.01 11.0-100.0 NTU/FNU: 0.1	0-2000 AU/FAU: 1
Accuracy	0-2.5 NTRU/FNRU: ±0.05 2.5-100 NTRU/FNRU: ±2% 100-1000 NTRU/FNRU: ±3%	0-2.5 NTU/FNU: ±0.05 2.5-100 NTU/FNU: ±2%	0-2000 AU/FAU: ±10 AU/FAU or 6%, whichever is greater
<b>Detection Limit</b>	0.05 NTRU/FNRU	0.05 NTU/FNU	10 AU/FAU
Reproducibility	0.02 NTRU/FNRU or 1%	0.02 NTU/FNU or 1%	1%
<b>Range Selection</b>	Automatic		
Light Source	2020t: Tungsten lamp 2300 °K ±50 °K 2020i:  IR LED 860 nm ±10 nm, spectral bandwidth with 50 nm		
Detector	2020t: Photodiode, centered at 90° and 180°, maximum peak 400-600 nm 2020t/i: Photodiode, centered at 90° and 180°		

#### Meter Features:

Signal Averaging	Disabled, 2, 5, 10
Power	USB computer cable, wall adapter or Lithium ion rechargeable battery, 3.7V, 2.5" x .75", 1.7 oz
Data Logging	500 points
Auto Shut-Off	Disabled, 5, 10, 30 seconds
Languages	English, French, Spanish, Japanese, Italian, Portuguese, Chinese
Response Time	<2 Seconds
Size	7.5 x 3.5 x 2.5 inches; 19.05 x 8.84 x 6.35 cm
Weight	13 ounces
Display	6-line LCD with backlit display

#### Accessories:

- 0 NTU Standard (EPA and ISO), 60 mL Code 1440
- 1 NTU Standard (EPA), 60 mL Code 1441
- 1 FNU Standard (ISO), 60 mL Code 1446
- 10 NTU Standard (EPA), 60 mL Code 1442
- 10 NTU Standard (ISO), 60 mL Code 1447
- 100 NTU Standard (EPA), 60 mL Code 1443
- 100 FNU Standard (ISO), 60 mL Code 1448
- Formazin Standard Solution, 4000 NTU, 60 mL Code 6195-H
- USB Cable, Code 1720
- Wall Adapter, Code 1721
- Six-pack of vials, Code 0290-6
- Car Charger, Code 5-0132



Kits are supplied with 0, 1, and 10 NTU/FNU standards, sample bottle, six sample tubes, USB cable and wall adapter—all in a sturdy waterproof case.

## TC-3000t/i Portable Turbidity, Chlorine & Color

New Ratiometric Design for Turbidity allows for easy and accurate testing!

Laword







TC-3000t (EPA version) Code 1976-T Œ

Kits supplied with 0, 1 and 10 NTU standards, 6 sample tubes, DPD tablets, USB cable and AC adapter.

TC30001 mars

The TC-3000t uses a tungsten lamp and meets the specifications of EPA 180.1.

## Industry leading precision and sensitivity in an innovative instrument measuring Ratiometric Turbidity, Chlorine, and Color.

The TC3000t is a portable turbidity, chlorine and color meter with wide range and high accuracy. **ISO unit also available in the TC3000i.** The meter meets EPA 180.1, Rev. 2.0 (1993) and Standard Methods 2130 B-2001 for turbidity and Standards Methods 4500-Cl G for chlorine. The turbidity range is 0-2,000 NTU with a MDL of 0.05 NTU. The free and total chlorine range is 0-4 ppm with a MDL of 0.03 ppm. The meter can store 500 data points which can be downloaded to a computer, allows 6 different languages, and runs on rechargeable batteries or a USB computer/wall adapter.

- Ratiometric design makes it Ideally suited for low-level drinking water applications, midrange industrial applications, and high-range environmental applications
- Special focusing optics
- Supports 6 languages: English, French, Spanish, Chinese, Japanese, Portuguese and Italian
- Data logging up to 500 points with a date and time stamp stored tests can be viewed on the meter or downloaded to a PC
- Easy to read graphic LCD display
- Easy menu-driven operation

#### **Meter Features**

Waterproof	IP67
Signal Average	Disabled, 2, 5, 10
Power	USB computer cable, wall adapter or Lithium ion rechargeable battery, 3.7V, 2.5" x 0.75", 1.7 oz
Data Logging	500 points
Auto Shut-Off	Disabled, 5, 10, 30
Languages	English, French, Spanish, Japanese, Italian, Portuguese, Chinese
Response Time	<2 Seconds
Dimensions	7.5 x 3.5 x 2.5 inches; 19.05 x 8.84 x 6.35 cm

## TC-3000t/i, Portable Turbidity, Chlorine & Color

#### Kits & Accessories

TC-3000t US EPA Compliant, Order Code 1976-t, Turbidity (EPA 180.1, Rev. 2.0 (1993) and Standard Methods 2130 B-2001), Chlorine (Standard Methods 4500-Cl G), Color (based on Standard Methods 2120 C)

**TC-3000i ISO Compliant, Order Code 1976-i,** Turbidity (ISO 7027), Chlorine (Standard Methods 4500-Cl G), Color (based on Standard Methods 2120 C)

#### Accessories:

- 0 NTU Standard (EPA and ISO), 60 mL Code 1440
- 1 NTU Standard (EPA), 60 mL Code 1441
- 1 FNU Standard (ISO), 60 mL Code 1446
- 10 NTU Standard (EPA), 60 mL Code 1442
- 10 NTU Standard (ISO), 60 mL Code 1447
- 100 NTU Standard (EPA), 60 mL Code 1443
- 100 FNU Standard (ISO), 60 mL Code 1448
- Formazin Standard Solution, 4000 NTU, 60 mL Code 6195-H
- USB Cable, Code 1720
- Wall Adapter, Code 1721
- Six-pack of vials, Code 0290-6
- Car Charger, Code 5-0132

#### Turbidity

- Meets design criteria for quantitative methods of turbidity using optical turbidimeters as specified by EPA 180.1, Rev. 2.0 (1993) and Standard Methods 2130 B-2001
- 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

Mode	Ratiometric	Nephelometric	Attenuation
Unit of Measure TC3000t	NTRU, ASBC, EBC	NTU, ASBC, EBC	AU, ASBC, EBC
Unit of Measure <b>TC3000i</b>	FNRU, ASBC, EBC	FNU, ASBC, EBC	FAU, ASBC, EBC
Range	0-1,000 NTRU/FNRU 0-17,500 ASBC 0-250 EBC	0-100 NTU/FNU 0-1,750 ASBC 0-25 EBC	0-2,000 AU/FAU 0-70,000 ASBC, 0-1,000 EBC
Resolution	0–10.99 NTRU/FNRU: 0.01 11.0–109.9 NTRU/FNRU: 0.1 110–1000 NTRU/FNRU: 1	0-10.99 NTU/FNU: 0.01 11.0-100.0 NTU/FNU: 0.1	0–2000 AU/ FAU: 1
Accuracy	0-2.5 NTRU/FNRU: ±0.05 2.5-100 NTRU/FNRU: ±2% 100-1000 NTRU/FNRU: ±3%	0-2.5 NTU/FNU: ±0.05 2.5-100 NTU/FNU: ±2%	0-2000 AU/FAU: ±10 AU/FAU or 6%, whichever is greater
Detection Limit	0.05 NTRU/FNRU	0.05 NTU/FNU	10 AU/FAU
Range Selection	Automatic		
<b>Calibration Options:</b>	Nephelometric, Ratiometric, Attenuation		
Reproducibility	0.02 NTRU/FNRU or 1%	0.02 NTU/FNU or 1%	1%
Light Source	TC3000t complies with EPA 180.1 and Standard Methods 2130 B; TC3000i complies with ISO 7027		

#### Chlorine

- Exceeds design specifications for Standard Methods 4500-Cl G
- 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	0-4 ppm, Free and Total Chlorine*	
Resolution	0.00-5.00 ppm Range: 0.01 ppm; 5.0-10.0 ppm Range: 0.1 ppm	
Accuracy	Tablet: 0-1.0 ppm Range: ±0.03 ppm 1.0-3.0 ppm Range: ±0.06 ppm 3.0-4.0 ppm Range: ±0.3 ppm Liquid: 0-0.5 ppm Range: ±0.03 ppm 0.6-3.0 ppm Range: ±0.06 ppm 3.0-4.0 ppm Range: ±0.4 ppm	
Detection Limit	0.03 ppm	
Response Time	<5 Seconds	
Light Source	525 nm LED, complies with Standard Methods 4500-Cl G	
*Above 4.0 ppm an "over range" alert displays prior to showing test results. A 1:3 dilution is recommended for reliable results above 4.0 ppm.		

#### Color

- Uses Platinum-Cobalt method from Standard Methods 110.2
- Wavelength 390 nm

Range	0-500 си
Detection Limit	20 cu
Accuracy	±15 cu
Light Source	390 nm LED

## SMART<sup>®</sup> Spectro 2 Spectrophotometer

A spectrophotometer that is easy 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!

#### **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.

#### To Order:

#### Order Code 2000-02 (120V/60Hz and 220V/50Hz)

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

#### **Options:**

- Carrying Case, Code 2000-CS
- Battery Pack with holder (rechargeable), Code 2000-BP
- Replacement sample cells (round), Code 0290-6
- Cuvettes, Code 29653-10

LaMotte

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SMART Spectro?

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See pages 19-20 for complete reagent system listing.



## SMART<sup>®</sup> Spectro 2 Spectrophotometer

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 OA; <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 vial
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, datalogs 500 tests
Diagnostics:	Yes
Power:	110/220 volt adapter or battery pack (rechargeable)
Weight:	4.65 kgs (10.3 lbs)
Size (WxDxH:)	35 cm x 28 cm x 17 cm



#### **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. **See page 85 for Heater Block.** 

Code	Description	Range	# of Tests
4024-01	Low Total Phosphorus	0-3.5 mg/L	25
4025-01	High Total Phosphorus	0-100 mg/L	25
4026-01	Total Nitrogen	0-25 mg/L	25



#### Multi-Range COD Reagent Systems

LaMotte-manufactured Chemical Oxygen Demand reagent systems used with our SMART3 Colorimeter or SMART Spectro 2 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 [US EPA approved method] or non-mercury reagent systems. Each package contains 25 ready to use vials. All kits ship as R1. **See page 85 for Heater Block.** 

#### Mercury based systems

	•	•	
Code	Range	Code	Range
0075-SC	0-150 ppm (EPA approved)	0072-SC	0-150 ppm
0076-SC	0-1500 ppm (EPA approved)	0073-SC	0-1500 ppm
0077-SC	0-15,000 ppm	0074-SC	0-15,000 ppm

Mercury-free systems

## **UV/VIS Spectrophotometer**



The UV-Vis Spectrophotometer is an expandable, easy-to-use instrument that provides maximum performance in a compact, benchtop package. The instrument includes a high precision optical bench, full programming capabilities, customizable standard curves, and over 80 preprogrammed tests. Available options include a variety of sample holders as well as software-based wavelength scanning and kinetics.

#### Order Code 7-2000-UV

- Programmable wide range spectrophotometer can accept up to 200 user curves in memory
- Pre-programmed to analyze selected tests on a directreading digital display
- Advanced key pad with 22 buttons simplifies data entry
- Includes one 10 mm quartz glass cuvette, six round 25 mm 10 mL test vials, universal sample holder and square sample holder

IKUN	l
LEAD	
MANGANESE LR	
MANGANESE HR	
NICKEL	
NITRATE	1
MITEDITE	

PHENOL PHOSPHATE SULFATE ZINC

NA C	
Wavelength Range	190-1100nm
Wavelength Accuracy	±2nm
Wavelength Repeatability	±1nm
Bandwidth	4nm
Optical System	Single beam, grating 1200 lines/nm
Photometric Accuracy	±0.004 A at 0.5 A
Communication Ports	USB, RS-232
Power Requirements	100-220V
Instrument Weight & Size	14kg (31 lbs.), 73x60x34cm (26x21x15")
Shipping Weights & Size	17.5kg (39 lbs.), 104x82x60cm (26x21x15")

## **Instrument Reagent Listing**

## New tests are being developed for the SMART 3 Colorimeter. Please contact our Technical Service Department for information regarding additions.

Test Factor	Test Method (# of reagents)	SMART 3 Ranget	Spectro / UV-VIS Range†	# Tests	Code	Ship
Alkalinity UDV	Unit Dose Vial (1)	10-250	15-200	100	4318-J	NH
Aluminum	Eriochrome Cyanine R (4)	0.01-0.30	0.01-0.30	50	3641-01-SC	NH
Ammonia Nitrogen LR, Fresh	Salicylate [3]	0.05-1.00	0.02-1.00	25	3659-01-SC	R2
Ammonia Nitrogen LR, Salt	Salicylate (3)	0.10-1.00	0.10-1.00	25	3659-01-SC	R2
Ammonia Nitrogen HR	Nesslerization (2)	0.05-4.00	0.05-4.00	50	3642-SC	R1
Barium	Barium Chloride (1)	5-200	-	50	3638-SC	NH
Benzotriazole**	UV Photolysis (3)	0.5-30.0	-	50	4047-01	R1
Biguanide	Colorimetric (1)	2-70	5-70	50	4044	NH
Borate UDV	Unit Dose Vial (1)	5-80	-	100	4322-J	NH
Boron	Azomethine-H (2)	0.05-0.80	0.05-0.80	50	4868-01	NH
Bromine, Liquid DPD	DPD Liquids (3)	0.10-9.00	_	144	4859	R2
Bromine	DPD Tablets (2)	0.10-9.00	0.04-9.00	100	3643-SC	NH
Bromine UDV	Unit Dose Vial DPD (1)	0.1-22.0	0.3-22.0	100	4311-J	NH
Cadmium	PAN [4]	0.02-1.00	0.02-1.00	50	4017-01	R1
Carbohydrazide	Iron Reduction (3)	0.04-0.900	0.005-0.900	100	4857	R1
Chloride TesTab	Argentometric (1)	0.4-30.0	0.5-30.0	50	3693-SC	NH
Chlorine, Liquid DPD	DPD Liquids (3)	0.03-4.00	0.30-4.00	144	4859	R1
Chlorine, Tablet DPD	DPD Tablets (3)	0.03-4.00	0.02-4.00	100	3643-SC	NH
Chlorine, Free, UDV	Unit Dose Vial (1)	0.10-10.00	0.10-10.00	100	4311-J	NH
Chlorine, Total, UDV	Unit Dose Vial (1)	0.10-10.00	0.1-10.0	100	4312-J	NH
Chlorine Dioxide	DPD Tablet/Glycine (2)	0.06-8.00	0.04-7.00	50	3644-SC	NH
Chromium Hexavalent	Diphenylcarbohydrazide (1)	0.01-1.00	0.01-1.00	50	3645-SC	HA
Chromium (Total, Hex & Trivalent)	Diphenylcarbohydrazide (5)	0.01-1.00	0.03-1.00	50	3698-SC	HF
Cobalt	PAN [3]	0.04-2.00	0.02-2.00	50	4851-01	LQ
COD LR w/ Mercury*	Digestion (1)	5-150 mg/L	5-150 mg/L	25	0075-SC	R1
COD LR w/o Mercury*	Digestion (1)	5-150 mg/L	5-150 mg/L	25	0072-SC	R1
COD SR w/ Mercury*	Digestion (1)	50-1,500 mg/L	50-1,500 mg/L	25	0076-SC	R1
COD SR w/o Mercury*	Digestion (1)	50-1,500 mg/L	500-1,500 mg/L	25	0073-SC	R1
COD HR w/ Mercury*	Digestion (1)	500-15,000 mg/L	500-15,000 mg/L	25	0077-SC	R1
COD HR w/o Mercury*	Digestion (1)	500-15,000 mg/L	50-15,000 mg/L	25	0074-SC	R1
Color	Platinum Cobalt (0)	20-1,000	15-1,000	00	NA	NH
Copper, BCA	Bicinchoninic Acid (1)	0.04-3.50	0.05-3.50	50	3640-SC	NH
Copper, Cuprizone	Cuprizone (2)	0.03-2.00	0.01-2.00	50	4023	R1
Copper, DDC	Diethyldithiocarbamate (1)	0.10-6.00	0.05-6.00	50	3646-SC	NH
Copper UDV	Unit Dose Vial, Bicinchoninic Acid (1)	0.1-4.0	0.20-4.00	100	4314-J	NH
Cyanide	Pyridine-Barbituric Acid [5]	0.03-0.35	0.05-0.50	50	3660-01-SC	R1
Cyanuric Acid	Melamine (1)	10-200	16-200	100	3661-01-SC	R1
Cyanuric Acid UDV	Unit Dose Vial, Melamine [1]	10-150	5-150	100	4313-J	NH
DEHA	Iron Reduction [3]	0.01-0.70	0.005-0.700	100	4857	NH
Dissolved Oxygen (DO)	Winkler Colorimetric [3]	0.6-11.0	0.3-12.0	100	3688-SC	R1
Erythorbic Acid	Iron Reduction [3]	0.02-3.00	0.02-3.00	100	4857	R1
Fluoride	SPADNS [2]	0.1-2.0	0.1-2.0	50	3647-02-SC	R1
Hardness (Total) UDV	UDV [1]	10-500	10-500	100	4309-J	NH
Hydrazine	P-dimethylaminobenzaldehyde (2)	0.01-1.00	0.010-0.750	50	3656-01-SC	R2
Hydrogen Peroxide LR	DPD [2]	0.02-1.50	0.02-1.50	100	3662-SC	NH
		0.01 1.00	0.02 1.00	100	500L 00	

†As ppm except as otherwise indicated \*Requires COD Adapter Code 5-0087 and Heater Block \*\*UV lamp 31041-1; UV lamp power source 31041-2; UV safety goggles 31041

#### Continue next page...

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, R2, R3) Hazardous Material - Air Fees Only · (HF) Hazardous Material - Air & Ground Fees

Instrumentation

## **Instrument Reagent Listing**

## New tests are being developed for the SMART 3 Colorimeter. Please contact our Technical Service Department for information regarding additions.

Test Factor	Test Method (# of reagents)	SMART 3 Range†	Spectro / UV-VIS Range†	# Tests	Code	Ship
Hydrogen Peroxide HR	DPD (2)	1-60	1-60	50	4045-01	NH
Hydrogen Peroxide Shock	DPD (2)	10-225	4-225	100	4045-01	NH
Hydroquinone	Iron Reduction (3)	0.01-2.00	0.01-1.80	100	4857	R1
lodine	DPD Tablets (2)	0.2-14.0	0.08-14.00	100	3643-SC	NH
Iron	Bipyridyl (2)	0.10-6.00	0.06-6.00	50	3648-SC	R1
Iron, Phenanthroline	1,10 Phenanthroline (2)	0.1-5.0	0.04-4.50	50	3668-SC	R1
Iron UDV	Unit Dose Vial, Bipyridyl (1)	0.1-10.0	0.07-10.00	100	4315-J	NH
Lead	PAR (5)	0.1-5.0	0.1-5.0	50	4031-01	
Manganese LR	PAN [3]	0.01-0.70	0.02-0.70	50	3658-01-SC	HF
Manganese HR	Periodate (2)	0.3-15.0	0.3-15.0	50	3669-SC	R1
Mercury	ТМК [3]	0.01-1.50	0.02-1.50	50	4861-01	LQ
Methylethylketoxime	Iron Reduction (3)	0.01-3.00	0.02-3.00	100	4857	R1
Molybdenum HR	Thioglycolate (3)	0.6-50.0	0.2-15.0	50	3699-03-SC	R1
Nickel	Dimethylglyoxime (6)	0.15-8.00	0.06-8.00	50	3663-01-SC	LQ
Nitrate Nitrogen LR	Cadmium Reduction (2)	0.10-3.00	0.05-3.00	20	3649-SC	R1
Nitrate TesTabs	Zinc Reduction (1)	5-60	3-60	50	3689-SC	NH
Nitrate UDV	Unit Dose Vial, Zinc Reduction	2-80	_	100	4321-J	NH
Nitrite Nitrogen LR	Diazotization (2)	0.02-0.80	0.020-0.800	20	3650-SC	NH
Nitrogen, Total*	Chromotropic Acid/Digestion (6)	3-25 mg/L	2-25 mg/L	25	4026-01	R1
Oxygen Scavengers	Iron Reduction (3)	various	various	100	4857	R1
Ozone	DPD Liquid (4)	0.03-3.00	-	100	4881	R1
Ozone LR	Indigo Trisulfonate (3)	0.01-0.40	0.02-0.40	100	3651-SC	NH
Ozone HR	Indigo Trisulfonate (3)	0.05-2.50	0.05-1.50	20	3651-SC	NH
pH, CPR	Chlorophenol Red (3)	5.0-6.8 pH	5.0-7.0 pH	100	3700-01-SC	NH
pH, PR	Phenol Red (3)	6.6-8.4 pH	6.8-8.4 pH	100	3700-01-SC	NH
рН, ТВ	Thymol Blue (3)	8.0-9.5 pH	8.0-9.5 pH	100	3700-01-SC	NH
Phenol	Aminoantipyrine (3)	0.05-6.00	0.05-6.00	50	3652-01-SC	NH
Phosphate LR	Ascorbic Acid Reduction (2)	0.05-3.00	0.04-3.00	50	3653-SC	R2
Phosphate HR	Vanodomolybdophosphoric Acid (1)	0.5-70.0	1.0-70.0	50	3655-SC	R1
Phosphate, ppb	Ascorbic Acid/Digestion (2)	50-3000 ppb	_	50	3653-SC	R2
Phosphorus, Total - LR*	Ascorbic Acid/Digestion (5)	0.50-3.50 mg/L	0.07-3.50 mg/L	25	4024-01	R1
Phosphorus, Total - HR*	Molybdovanadate/Digestion (5)	5-100 mg/L	5.0-100.0 mg/L	25	4025-01	R1
Potassium	Tetraphenylboron (2)	0.8-10.0	0.5-10.0	100	3639-SC	R1
Silica LR	Heteropoly Blue (4)	0.05-4.00	0.03-2.50	100	3664-SC	R1
Silica HR	Silicomolybdate [3]	1-75	1-50	50	3687-SC	R1
Sulfate HR	Barium Chloride (1)	3-100	5-100	100	3665-SC	R1
Sulfide LR	Methylene Blue (3)	0.06-1.50	0.02-1.00	50	3654-02-SC	R1
Surfactants	Bromphenol Blue (3)	0.5-8.0	0.5-8.0	100	4876-01	LQ
Tannin	Tungsto-Molybdophosphoric Acid (3)	0.1-10.0	0.2-10.0	50	3666-01-SC	R1
Tolyltriazole**	UV Oxidation/Dichromate (3)	0.5-30.0	-	50	4047-01	R1
Turbidity	Absorptimetric (0)	3-400 FAU	2-400 FTU	~	NA	NH
Zinc LR	Zincon [6]	0.05-3.00	0.03-3.00	50	3667-01-SC	LQ

+ As ppm except as otherwise indicated \* Requires COD Adapter Code 5-0087 and Heater Block

\*\* UV lamp 31041-1; UV lamp power source 31041-2; UV safety goggles 31041

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, R2, R3) Hazardous Material - Air Fees Only · (HF) Hazardous Material - Air & Ground Fees

## Model 1500 · Single Test Colorimeter Labs

## 🐨 Waterproof \, 🕙 USB Capable 🛛 🕤 Rechargeable

The 1500 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.





Order Code 3240 (tablet) Order Code 3240-LI (liquid)

#### Options:

USB Cable (Order Code 1720) Wall Plug (Order Code 1721) Replacement Tubes (Order Code 0290-6)

- 0-4 ppm Chlorine: No need to select a low or high range. The DC1500 covers the entire critical chlorine range of 0-4 ppm with an MDL of 0.03 ppm.
- A Great Value: Complete, economical package! The DC1500 Chlorine Colorimeter Kit includes tablets for 100 tests or liquid reagents for 140 tests, six sample vials, and a sturdy carrying case.
- IP67 Waterproof Design: Designed with excessive exposure to moisture in mind, the DC1500 colorimeter delivers trouble-free performance
- Bold, backlit display
- European CE Mark
- USB port
- Field & Lab Use: USB cable and wall adapter included; car charger optional
- Rechargeable battery: No need to buy batteries again
- EPA Compliant: Uses proper wavelength and DPD test method to meet EPA design specifications for NPDWR and NPDES chlorine monitoring programs (EPA 330.5 and Standard Method 4500)

## Model 1500 · Single Test Colorimeter Labs

# Instrumentation

#### Features include:

- Large graphical liquid crystal display
- Simple, menu-driven operation
- Lithium ion rechargeable battery and computer/wall adapter
- IP67 Waterproof
- Backlit display
- Auto-off
- USB port
- European CE mark



#### **AVAILABLE TESTS**

Test Factor	Code	Range (ppm)	Detection Limit	Test Method (# of reagents)	# of Tests	Ship Codes
Ammonia Nitrogen	3241	0-5.0	0.05	Nessler (2)	60	R1
Chlorine (Free & Total)	3240	0-4.0	0.05	DPD Tablets (2)	100	NH
Chlorine (Free & Total)	3240-LI	0-4.0	0.05	DPD Liquid (3)	140	R1
Chlorine Dioxide	3244	0-7.0	0.05	DPD with Glycine Solution (2)	100	NH
Copper	3245	0-6.0	0.03	Diethyldithiocarbamate (1)	100	NH
Fluoride	3243	0-2.0	0.1	Alizarin-Zirconyl (2)	100	LQ
Iron	3248	0-5.0	0.25	1,10 Phenanthroline (2)	100	R1
Molybdenum	3246	0-30	0.5	Thioglycolate (3)	50	R3
Ozone	3249	0-0.4	0.04	Indigo Blue (3)	100	NH
Phosphate	3242	0-3.0	0.07	Ascorbic Acid (2)	100	R2
Sulfate	3247	0-100	1.0	Barium Chloride (1)	100	R1

#### ALSO AVAILABLE Model 1500-UDV 568 nm Absorbance Colorimeter

For 10mm cuvettes Order Code 3250



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

## Model 1500 & 1500 UDV · Absorbance Colorimeters

## Instrumentation

#### **Replacement Reagents for 1500 Chlorine**

#### Liquid Reagents

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

#### Tablet Reagents

Tablet	50	100	1000	Ship Code
Chlorine DPD #1 Instrument*	6903A-H	6903A-J	6903A-M	NH
Chlorine DPD #3 Instrument*	6197A-H	6197A-J	6197A-M	NH
Chlorine DPD #4 Instrument*	6906A-H	6906A-J	6906A-M	NH

\* Instrument DPD featuring new ultra-clear fast dissolving tablets.





#### DPD Powder Pop<sup>®</sup> 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)



#### Chlorine Standards for Model 1500 & SMART3

For use with the 1500 series and SMART3 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, Order Code 4140-02 FAS-DPD Titration Kit for Chlorine Titration, Order Code 3176-02 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)

or a complete

listing of

STANDARDS

## TRACER PockeTesters

A 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 0.00-10 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
- Automatic shut-off and Low Battery indicator; uses four 3V CR-2032 batteries
  - Includes 100 reagent tablets at almost half the price of similar Chlorine ISE reagents
- ELCMONTO ELCMONTO ELCMONTO ELCMONTO ELCMONTO

Follows EPA protocol for ISE methods

#### TRACER KIT with pH, Total Chlorine and ORP probes

#### Order Code 1740-KIT-01

Includes Tracer meter with pH, Total Chlorine and ORP probes, 100 Chlorine tablets, 50 pH 7.0 buffer tablets, tablet crusher and convenient carrying case.



#### **pH TRACER**

#### Order Code 1741

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:	32° to 149°F (0° to 65°C)
<b>Resolution</b> :	0.01 pH
Accuracy:	±0.01 pH

#### TRACER with pH and Total Chlorine probes

#### Order Code 1741-KIT-01

Includes Tracer with pH and Total Chlorine probe, 100 Chlorine tablets, 50 pH tablets, tablet crusher in a convenient carrying case.



#### OPTIONS

#### **Additional Probes**

Order Code 1733 pH Sensor (0-14.00/±0.01 pH) Order Code 1734 ORP Sensor (±999mV/±4mV) Order Code 1732 Cl2 Sensor (0-10.00/±10% of reading)



RACE

ELaMotte

#### Order Code 1742

- High resolution to 1 mV
- Automatic self calibration

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

#### TRACER KIT with pH and ORP probes

#### Order Code 1742-KIT-01

Includes Tracer with pH and ORP probe, 100 Chlorine tablets, 50 pH tablets, tablet crusher in a convenient carrying case.

#### **Chlorine Test Tablets**

#### Order Code 7044A-J

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

## TRACER PockeTesters

TRACER

keleste

GAL

Fluoride

See page 34

for pH Tablets

#### TDS/SALT/CONDUCTIVITY/TEMP TRACER

#### Code 1749

TRACER

13.0'

EC/TDS/SAL

TRACER

PockeTester

20

ph / EC / TDS Module

#### Easy to use

- 2% accuracy for EC, TDS, and Salt modules
- Automatic temperature compensation
- Self calibration
- Memory can store up to 25 readings; autopower off after 10 minutes of no button presses
- Automatic shut-off and low battery indicator; uses four 3V CR-2032 button batteries

#### Options:

EC/TDS/SAL Replacement Electrode\*, Order Code 1765

Sample Cup w/cap, Order Code 1745-1

Conductivity Standard, 84  $\mu S$ , 30 mL Order Code 6312-G

Conductivity Standard, 1413 µS, 30 mL Order Code 6354-6

Conductivity Standard, 12,880 µS, 30 mL Order Code 6317-G

Conductivity:	0 to 199.9 μS, 200 to 1999 μS, 2.00 to 19.99 mS
TDS:	0 to 9,999 ppm
Salinity:	0 to 9,999 ppm
Temperature	32°F to 149°F (0 to 65°C)
Accuracy:	EC, TDS, Salt: ± 2% FS; Temperature: ± 1°C (1.8°F)

#### **Fluoride TRACER**

#### Order Code 1756

- The first Fluoride meter with built-in Automatic Temperature Compensation and fastest response (<1 min)</li>
- Small sample/TISAB volume required for testing
- Complies with EPA Method 340.2 (Potentiometric Ion Selective Electrode)
- Automatic electronic 1 or 2 point calibration with offset adjustment
- Memory stores 25 labeled readings and water resistant to IP54
- Complete with electrode, 20 TISAB reagent tablets, sensor cap, four 3V button batteries, and 48" (1.2m) neckstrap

#### Options:

TISAB Reagent, 100 Tablets, Order Code 7024-J

Fluoride Replacement Electrode\*, Order Code 1757

Fluoride Standard, 1 ppm, 1000 mL, Order Code 2798-M Fluoride Standard, 1,000 ppm, 60 mL, Order Code 4154-H Fluoride Standard, 1,000 ppm, 500 mL, Order Code 4154-L

Fluoride:	0.1 to 10 ppm, max. resolution: 0.1 ppm, accuracy: ±3% rdg
Temperature	32°F to 140°F (0 to 60°C), max. resolution: 0.1 °F, accuracy: ±1.8°F/1°C
Accuracy:	EC, TDS, Salt: ± 2% FS; Temperature: ± 1°C (1.8°F)

#### See page 93 for Larger Sizes of Conductivity Standards

#### pH/TDS/SALT/CONDUCTIVITY/TEMP TRACER

#### Code 1766

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

#### **Options:**

. pH/EC/TDS/SAL Replacement Electrode\*, Order Code 1755 Sample Cups w/cap, Order Code 1745-1

Conductivity Standard, 84  $\mu$ S, 30 mL, Order Code 6312-G Conductivity Standard, 1413  $\mu$ S, 30 mL, Order Code 6354-G Conductivity Standard, 12,880  $\mu$ S, 30 mL, Order Code 6317-G

	Range	Resolution	Accuracy
Conductivity	O to 199.9 $\mu S$ , 200 to 1999 $\mu S$ , 2.00 to 19.99 mS	0.1 µS	±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)	±2%
pН	0.00 to 14.00 pH	0.01 pH	±0.01 pH
Temperature	32° to 149°F (O to 65°C)	0.1°F/°C	±1.8°F/°C

\*Not interchangeable with CI/pH/ORP TRACER

## **Dissolved Oxygen Meters**

Order Code 1761

Waterproof to IP67

**Dissolved Oxygen Tracer** 



	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" (36x176x41r	mm]		
Weight	3.8 oz (110g)			

Oxygen level displayed as % Saturation from 0 to 200.0% or Concentration from 0 to 20.00 ppm (mg/L)

Optional 3 ft [1m] or 16 ft [5m] extension cable; complete with DO electrode, protective sensor cap, spare membrane

Adjustable Altitude Compensation (0-20,000 ft in 1,000 ft increments)

Memory stores up to 25 data sets with D0 and Temperature reading

Self-calibration on power up; Data, Hold, Auto power off, Low battery indicator

cap, electrolyte, four 1.5V CR-2032 batteries, and 48" [1.2m] neckstrap

Adjustable Salinity Compensation from 0 to 50 ppt

#### Accessories

- DO Membrane Kit, 6 screw-on membranes and solution (Order Code 1761M)
- DO Sensor Module (Order Code 1762)
- 3 ft. Cable (Order Code 1763)
- 16 ft. Cable (Order Code 1764)

#### **Dissolved Oxygen Meter**

#### Order Code 5-0107-01

- No meter warm-up required
- Low-maintenance probe
- Key in salinity and pressure values manually
- Independent 100% and zero adjustment calibrations
- Offset adjustment capabilities
- Displays electrode diagnostics
- Easily toggle from mg/L (ppm) or % saturation to temperature mode



	Range	Resolution	Accuracy
mg/L (ppm)	0.00 to 20.00 mg/L (ppm)	0.01 mg/L (ppm)	±1.5% FS
% Saturation	0.0 to 200.0%	0.1%	±1.5% FS
Temp.	-5.0 to 105.0°C	0.1°C	±0.5°F
Salinity correction	0.0 to 50.0 ppt	0.1 ppt	Method: Key in manually or automatic correction
Barometric pressure correction	500 to 1499 mm Hg	1 mm Hg	Method: Key in manually or automatic correction
Temperature compensation	Automatic from 0 to 50°C		
Operating temperature	0 to 50°C		
Probe	Galvanic, 3 ft. probe cable		
Power	Four 1.5 V AAA batteries (included), >700 hrs continuous use		
Dimensions	5.5″L x 2.7″W x 1.3″H		
Weight	1.0 lb (0.45 kg)		

#### Accessories

- Replacement Probe (Order Code 5-0129)
- Replacement Membrane Package including electrolyte solution (Order Code 5-0137)



## PockeTesters



#### pH PockeTester 10

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

±0.1 pH accuracy

#### pH PockeTester 20

Order 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" (26.99 mm) display, which also displays diagnostic messages. Auto-off after 8.5 minutes to conserve battery life.

See page 29 for complete PockeTester specifications



#### **Double Junction ORP PockeTester**

#### Order Code 5-0079

- -999 mV to +1000 mV
- Large surface area platinum band sensor
- 1 mV resolution, 2 mV accuracy
- HOLD function, Auto-off

## **PockeTesters**



#### **Microprocessor-Based TDS Dual Range PockeTester**

#### Order Code 5-0080

- 0-2000 ppm (10 ppm resolution); 0-10.00 ppt (0.10 ppt resolution)
- ±1% full-scale accuracy
- Automatic temperature compensation (ATC)
- Replacement electrode
- Push-button calibration
- Auto shut-off
- Full reading displayed no need to multiply

#### Replacement Probe (Order Code 5-0084)

#### Salt PockeTester

#### Order Code 5-0078-01

- 0-10 ppt ( 0.10 ppt resolution)
- Carrying Case and calibration standard included

#### **Replacement Probe** (Order Code 5-0084)

#### **Microprocessor-Based EC Conductivity Dual Range PockeTester**

#### Order Code 5-0082

- 0-2000 μS (10 μS resolution); 0-20.00 mS (0.10 mS resolution)
- ±1% full-scale accuracy
- Automatic temperature compensation (ATC)
- Replacement electrode
- Push-button calibration
- Auto shut-off
- Full reading displayed no need to multiply Replacement Probe (Order Code 5-0084)

## **PockeTester Specifications**

	Specifications for pH PockeTesters		Specifications for Specialty PockeTesters		ers
Model	pH PockeTester 10	pH PockeTester 20	Min-Max Thermometer	ORP PockeTester	Salt
Code	5-0103	5-0104	5-0095	5-0079	5-0078-01
Range	–1.0 to 15.0 pH;	extended range	–10 to 200°F, 14 to 392°C	–999 mV to +1000 mV	0-10.00 ppt salinity
Resolution	0.1 pH	0.01 pH	0.1°F to 199.9°, 1°C above 200°	1 mV	0.10 ppt salinity
Accuracy	±0.1 pH	±0.01 pH	±1.8°F/±1.0°C	±2 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; O to 50°C	32 to 122°F; O to 50°C	32 to 122°F; O to 50°C
Temperature Compensation	Automatic (ATC) O 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)	On/Off or Auto- Off after 8.5 min.; HOLD; °F or °C scale selectable
Power & Battery Life	Four 1.5V alkaline button cell batteries (supplied), 500 hour use		LR-44 button cell. 2 yr life	Four 1.5V alkaline batteries (supplied) 500 hrs. use	Four 1.5V alkaline batteries (supplied) 150 hrs. use
Dimensions & Weight	8.5" (216 mm) L x 2.4" (61 mm) W x 2.5" (64 mm) H (boxed); 6.5" (165 mm) L x 1.5" (38 mm) Dia. (unit only); 4.5 oz/125 gms (boxed); 3.25 oz./90 gms (unit only) Memory Thermometer Probe: 4.3" (109 mm) x 0.14" (4 mm); top is 1.8" (46 mm); weight 3 oz				

	Specifications for TDS & EC Waterproof PockeTesters		
Model	TDS Dual Range	EC Dual Range	
Code	5-0080	5-0082	
Replacement Electrode	5-0084	5-0084	
Range	0-2000 ppm/ 0-10 ppt	0-2000 µS; 0 to 20 mS	
Resolution	10 ppm/0.10 ppt 10 μS; 0.10 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) O to 50°C		
Special Functions	Full reading displayed		
Power & Battery Life	Four 1.5V alkaline batteries (supplied); 150 hours		
Dimensions & Weight	8.5" (216 mm) L x 2.4" (61 mm) W x 2.5" (64 mm) H (boxed); 6.5" (165 mm) L x 1.5 (38 mm)" Dia. (unit only); 4.5 oz./125 gms (boxed); 3.25 oz./90 gms (unit only)		

## **Temperature Measurement**



Blue backlight: within temperature range



Red backlight plus audible alert: exceeds temperature

#### IR Meter with Color Alert System

#### Code 5-0133

Convenient non-contact temperature measurements, now with a laser sighting, plus color and sound alerts!

#### Features

- Fast and accurate measurements at 12" where the two lasers converge with 12:1 field of view
- Measures up to 950°F (510°C)
- Blue backlit dual LCD display changes to Red backlit outside set points
- Instantaneous response captures spikes in temperature
- Max mode captures and holds rapidly changing temperatures
- Lock function for continuous readings
- Adjustable emissivity increases measurement accuracy for different surfaces
- Double molded housing
- Complete with case and 9V battery
- Adjustable High/Low set points with color and audible alarms signal out of range temperature

Range:	-4 to 950°F (-20 to 510°C)
Resolution:	1°C/1°F
Accuracy:	25 to 260°C (77 to 500°F): ±(1% of rdg +2°F/1°C)
Repeatability:	±0.5% or 1.8°F/1°C
Response Time:	150mSec
Emissivity:	0.10 to 1.00 adjustable
Distance-to-Spot Size:	12:1
Power:	One 9V alkaline battery
Dimensions:	5.7 x 4 x 1.6 inches (146 x 104 x 43 mm)
Weight:	5.74 oz. (163g)

### "Min-Max" Memory Thermometer

Order Code 5-0095

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

## See page 29 for specifications



## **Economical Field Meters**

#### LaMotte pH, CON, TDS Meters

- Push button operation
- Up to five 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 6 meter)

Microprocessors have enabled meter manufacturers to combine many features into smaller designs with better accuracy. The 5 and 6 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 6 and Con 6 with carrying cases include two calibration standards
- All meters have two-year warranties



Model	рН 5 (рН)	pH 5 (Temperature)	CON 6 Meter (Conductivity)	TDS 6 Meter (TDS)	CON 6 & TDS 6 Meters (Temperature)
Order Code	w/out case 5-0034-01 with case 5-0035-01		w/out case 5-0038-02 with case 5-0039-02	w/out case 5-0036-02 with case 5-0037-02	
Replacement Probe	pH Probe Order Code 1904	Temperature Probe Order Code 1909		CON/TDS Probe Order Code 5-0106	
Range:	0.00 to 14.00 pH	0.0 to 100.0°C	0.0 to 20.00, 200, 2,000.0 μS 0 to 20.00, 200.0 mS	0.0 to 10.00, 100.0, 1000 ppm, 1.0 to 10.00, 100.0, 200 ppt	-10.0 to 110.0°C
Resolution:	0.01 pH	0.1°C	0.01, 0.1, 1 µS 0.01, 0.1 mS	0.01, 0.1, 1.0 ppm 0.01, 0.1 ppt	0.1°C
Accuracy:	±0.01 pH	±0.5°C	±1% full scale or ±1 digit	±1% full scale	±0.5°C
Calibration:	Up to 5 Buffer Values	Offset 0.1°C increments			Offset 0.1°C increments
Temperature Compensation:	Automatic Temperature Compensation (ATC)		Automatic fixed 2	c Temperature Compensation (ATC 1% per °C factor, adjustable 73%	;]
Power:	Four AAA alkaline batteries (supplied); >70 hours continuous use			AA alkaline batteries (supplied) 100 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	

## pHPLUS Direct Digital pH/ISE Meter



#### pHPLUS DIRECT Meter

Laboratory precision in a water-resistant design! Read pH, mV/R.mV, temperature, and concentration with accuracy—ISEs read concentration in ppm. Easy-to-use in any test mode. Includes pH probe, temperature probe, buffers and rubber boot with stand.

E LaMotte	
PHPLUS DIRECT	

#### Specifications

рН	
Range:	0.00 to 14.00
Resolution:	0.01
Accuracy:	0.01
Calibration:	Up to 5 points
Electrode:	Epoxy, Ag/AgCl
Temperature	
Range:	0 to 100°C
Resolution:	0.1°C
Accuracy:	±0.1°C
Concentration	
Range:	0.00 to 100
Resolution:	± LSD
Accuracy:	±0.5% or ±1 LSD
mV/R.mV	
Range:	±500mV
Accuracy:	±1 mV
Resolution:	1 mV
Calibration:	Up to 5 points
Inputs:	1 BNC, Temp probe, power, ref. pin
Power:	4 AAA batteries
Size (LxWxH):	2.75W x 5.75H x 1.375D in.

#### pHPLUS DIRECT Meter

Code	Description
5-1936-01	pHPLUS DIRECT Meter, liquid buffers (4, 7, 10) w/case
1904	pH Electrode, gel-filled
1909	Temperature Probe

#### **Optional ISE Electrodes\***

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

#### Ion Selective Electrodes

Code	Description
5-0043	Ammonia
5-0048	Fluoride
5-0052	Nitrate

#### Accessory Kits

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

\*Accessory Kit required to calibrate the ISE.

## **DPD** Reagents

#### DPD Instrument Grade TesTabs<sup>®</sup>

LaMotte has developed a rapid dissolve instrument grade DPD tablet system. Instrumental analyses require a clear, particle-free testing solution. In the past, it was necessary to use a crusher to dissolve the instrument grade tablets. Now, free and total chlorine samples can be done with instrument grade tablets that dissolve without crushing.

	Quantity/Order Code			
Tablet	50	100	1000	Ship Code
Chlorine DPD #1 Instrument*	6903A-H	6903A-J	6903A-M	NH
Chlorine DPD #3 Instrument*	6197A-H	6197A-J	6197A-M	NH
Chlorine DPD #4 Instrument*	6906A-H	6906A-J	6906A-M	NH

\* Instrument DPD featuring ultra-clear fast dissolving tablets.

#### See pages 71 for Visual Tablets



#### **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.

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

Code	Ship Code
Р-6740-Н	NH
P-6741-H	R2
P-6743-H	NH
	Р-6740-Н Р-6741-Н



## 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
4.01	2866-J 2866-L	120 mL 500 mL	7.00	2881-J 2881-L	120 mL 500 mL
6.86	2808-L	500 mL	9.18	2809-L	120 mL
Note: Oth	ier pH values a	vailable	10.00	2896-J 2896-L	120 mL 500 mL



#### 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

#### See page 93 for Additional Sizes

#### **Buffer Tablets**

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



#### 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.



## **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.

See page 93 for	
<b>Additional Sizes</b>	

Code	Description	Size
6416-L	74 µS/cm, 52 ppm	500 mL
6312-L	84 µS/cm, 59 ppm	500 mL
6417-L	718 µS/cm, 503 ppm	500 mL
6354-L	1,413 µS/cm,989 ppm	500 mL
6418-L	6,668 µS/cm, 4668 ppm	500 mL
6317-L	12,880 µS/cm, 9016 ppm	500 mL
6419-L	58,640 µS/cm, 41,048 ppm	500 mL

#### **Conductivity Neutralizing Solutions**

Used to neutralize hydroxl ion in boiler water, thus enabling accurate determinaion of ionic conductivity.

Code	Description	
6483-H (60 mL) 6483-L (500 mL) 6483-N (3800 mL)	Conductivity Neutralizing Solution	Contains citric acid and phenolphthalein. Add liquid until sample changes color. Available in 60 mL, pint, and gallon sizes.
6479-J	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.
3705-L	Acid Indicator	Contains acetic acid and phenolphthalein. Add liquid until sample changes color. Available in 500 mL (pint).



## **Convenient and Economical**

#### **Single Factor Test Strips**

LaMotte offers a convenient LaMotte test strips are a grea available for the factors belov Single Factor Test	Instatestanaumo				
Test Factor	Code	Range (ppm)	Water Testing Application*	# of Tests Per Factor/Per Vial	Values (ppm)
Alkalinity	2997	0-180	Drinking, Food/Beverage	50	0, 40, 80, 120, 180
Ammonia	3023-G	0-6	Food/Beverage/Drinking	25	0, 0.5, 1.0, 3.0, 6.0
Borate	3017-G	0-80	Pool	25	0, 15, 30, 50, 80
Chlorine Dioxide	2999LR	0-10	Drinking, Food/Beverage	50	0, 0.25, 0.5, 1, 3, 10
Chlorine Dioxide	3002	0-500	Medical, Food/Beverage	50	0, 10, 25, 50, 100, 250, 500
Chlorine, Free, Low Range	2964-G	0-10	Drinking, Food/Beverage, Medical	25	0, 0.5, 1, 3, 5, 10
Chlorine, Total, Low Range	2963LR-G	0-10	Drinking, Food/Beverage, Medical	25	0, 0.25, 0.5, 1, 3, 10
Chlorine, Total, Low Range	2963LR-J	0-10	Drinking, Food/Beverage, Medical	100	0, 0.25, 0.5, 1, 3, 10
Chlorine, Total, Low Range	2979	0-5	Drinking, Food/Beverage	50	0, 0.5, 1, 3, 5
Chlorine, Free & Total	3027-G	0-10	Drinking, Food/Beverage, Medical	25	0, 0.5, 1, 3, 5, 10
Chlorine, High Range	3031	0-800	Food/Beverage, Medical	50	0, 50, 100, 250, 500, 800
Copper	2991-G	0-3.0	Drinking, Pool	25	0, 0.3, 0.6, 1, 3
Hardness, Low Range	2981	0-180	Drinking, Food/Beverage	50	0, 30, 60, 120, 180
Iron	2935-G	0-5	Drinking, Pool	25	0, 0.3, 0.5, 1, 3, 5
Molybdenum Kit*	3628-01	0-5	Industrial	50	0, 0.5, 1, 2, 5
Nitrate	3012-G	0-200	Pool	25	0, 10, 30, 60, 120, 200
pH, Wide Range	2974	4-10 (pH)	Drinking, Food/Beverage	50	4, 5, 6, 7, 8, 9, 10
Peracetic Acid	3000	0-160	Food/Beverage	50	0, 10, 20, 50, 85, 160
Peracetic Acid, Low Range	3000LR	0-50	Food/Beverage	50	0, 5, 10, 20, 30, 50
Peracetic Acid, High Range	3000HR	0-1000	Food/Beverage	50	0, 50, 100, 250, 500, 1000
Hydrogen Peroxide HR	2984	0-90	Pool	25	0, 15, 30, 50, 90
Hydrogen Peroxide	2984LR	0-50	Drinking, Food/Beverage	25	0, 1, 3, 10, 30, 30, 50
Phosphate, Low Range	3021	0-2500 ppb	Pool	25/50	0, 100, 200, 300, 500, 1000, 2500 ppb
Phosphate, High Range	3040-G	3000-12000 ppb	Pool	25	3000, 6000, 12000 ppb
QAC Dual Range	2934	0-80 0-800	Food/Beverage	50	Low: 0, 10, 20, 40, 80 ppm High: 0, 100, 200, 400, 800 ppm
Sodium Chloride	2998	1500-5000	Pool	10, 50	1500, 2000, 2500, 3000, 3500, 4000, 5000

\* Kit includes a pre-treatment reagent.





ACCURATE & RELIABLE 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 WALL 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 common HDPE bottles.
# **Multi-Factor Test Strips**

Code

3001-G

Range

0-3 Copper

6.2-8.4 pH 0-240 Alkalinity

Test Factor

Copper, pH, & Alkalinity

(sold only in case of 12)

Iron & Copper

Wide Range (pH & Total Chlorine) 6-Way Drinking Water

Iron, pH, Hardness, Total Chlorine

5-Way Natural Water Fresh & Salt Water

		0-180 Total Hardne	SS		0, 30, 60, 120, 180
Nitrate & Nitrite	2996	0-50 (Nitrate) 0-10 (Nitrite)	Drinking	50 50	0, 5, 10, 25, 50 (NO <sub>3</sub> -N 0, 0.5, 1, 5, 10 (NO <sub>2</sub> -N)
*Strips shown have been eva Contact LaMotte Technical S			Use in other applications is subje	ect to pote	ntial interferences.

# Sanitizer Test Pa

Chemically treated paper 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 papers)
Chlorine, Free, High Range	3031	0, 50, 100, 250, 500, 800 ppm (50 strips)
lodine	2948-BJ	12, 25, 50, 100 ppm (200 papers)
QAC	2951	50, 100, 200, 400 ppm (100 strips)
QAC	3072-J	0, 100, 200, 300, 400, 500 ppm (100 strips)
QAC Dual Range Test Strips	2934	Low Range:   0, 10, 20, 40, 80 High Range:   0, 100, 200, 400, 800 (50 strips)
High Range QAC	2951HR	200, 400, 600, 1000, 1500 ppm (50 strips)

For PERACETIC ACID Test Strips, see page 36.

				LU	0, 10, 00, 100, 100, 1 10	and a second sec
	2994	0-5 Iron 0-3 Copper	Drinking, Pool	25 25	0, 0.3, 0.5, 1, 3, 5 0, 0.3, 0.6, 1, 3	G-W Nitrate, as Tell B
	2992	0-5 Iron 4-10 pH 0-400 Hard 0-10 TCl	Drinking, Industrial Water	25 25 25 25	0, 0.3, 0.5, 1, 3, 5 4, 5, 6, 7, 8, 9, 10 0, 50, 100, 200, 400	AY Ninite, pH, Free Chiorine, Total I pa
	2987-G	4-10 pH 0-50 TCl	Drinking, Pool, Food/Beverage	25 25	4, 5, 6, 7, 8, 9, 10 0, 1, 5, 10, 20, 50	e Chlorin
	2933-G	O-10 FCI O-10 TCI O-400 Total Hardness (O-23 gpg Total Hardness) 4-10 pH O-10 Nitrite O-10 Nitrate	Drinking	25	0, 0.5, 1, 3, 5, 10 0, 0.5, 1, 3, 5, 10 0, 50, 100, 200, 400 (gpg: 0, 3, 5.8, 11.7, 23) 4, 5, 6, 7, 8, 9, 10 0, 0.5, 1, 5, 10 0, 5, 10, 25, 50	Chiorine
	3038-G	0-200 Nitrate 0-10 Nitrite 6.0-9.0 pH 0-240 Alkalinity 0-180 Total Hardness	Environmental, Aquarium	25	0, 20, 40, 80, 160, 200 0, 0.5, 1, 3, 5, 10 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0 0, 40, 80, 120, 180, 240 0, 30, 60, 120, 180	E LoMotte & Total Handness
	2996	0-50 (Nitrate) 0-10 (Nitrite)	Drinking	50 50	0, 5, 10, 25, 50 (NO <sub>3</sub> -N) 0, 0.5, 1, 5, 10 (NO <sub>2</sub> -N)	
		e in these applications. Use in oth ore information.	ner applications is subject	to potenti	al interferences.	
ap	oers & S	Strips		10	50 14	100 PPM
r st	rips change	e to indicate sanitizer level. Str	ips and color chart are		as men of F	APERB

# of Tests

Per Factor/

Per Vial

25

25

25

Values (ppm)

0, 0.3, 0.6, 1, 3

6.2, 6.8, 7.2, 7.6, 8.0, 8.4 0, 40, 80, 120, 180, 240

Water Testing

Application\*

Pool



37

# **Micro Testing Simplified!**







# **BioPaddles**®

- Ready to use. Saves time!
- Longer shelf-life than traditional Petri dishes
- No refrigeration required

BioPaddles<sup>®</sup> are flexible dual-agar paddles each containing microbe-specific media enclosed in a sterile vial. Identify and quantify microbes in air, soil, water, or any surface!

**Liquid Sampling:** Remove the paddle from the vial and fill the vial (approximately 40ml) with the sample. Insert the paddle, swirl for 15 seconds. Pour out the liquid, replace the paddle in the vial, and incubate.

**Surface Sampling:** Remove the paddle from the vial and gently touch each paddle media surface to the sample surface. Replace paddle in the vial and incubate.

**Air Sampling:** Remove the paddle from the vial. Invert and mount the circular cap into the vial, exposing the agar covered paddle. Expose for 15 minutes. Replace the paddle in the vial and incubate.

All BioPaddles<sup>®</sup> products come with a **free app! LaMotte BioPaddles Colony ID™ App** lets users compare colony examples on BioPaddle agar types from 5 microhabitats (air, water, soil, surface and food). Also contains information regarding organisms, microbiological techniques, and more!

For fresh, brackish, and salt water use.

BioPaddles<sup>®</sup> Products—all packaged 10 paddles per box. Includes general instructions and provides access to detailed Technical Documents for each paddle type.

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-	-	international distance	100 0	-	_
	Rederivers & Ale			11.00	0.2



Type Of Agar(s)	Description	Code
Nutrient	For routine culture of non-fastidious bacteria.	5550
Sabouraud Dextrose	For selective cultivation of fungi (yeasts and molds)	5551
Tryptic Soy (TSA)/ Rose Bengal (RB)	For cultivation of a wide variety of microorganisms (TSA) and selective isolation of yeasts and molds (RB).	5552
Nutrient TTC/ MacConkey	<ul> <li>TTC. For field sampling cultivation and enumeration of coliform bacteria total coliform count (TCC). Gram (-) bacterial colonies appear as red dots. Gram (+) bacteria are usually inhibited.</li> <li>MAC. Medium gives improved differentiation between coliforms and non-lactose fermenting organisms. Gram (+) cocci are usually inhibited.</li> </ul>	5553



https://itunes.apple.com/us/app/id567584998

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1, r1) Small Qty. Hazardous Material - No Fees · (Lq, LQ, R2, r2, R3, 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.

# Total Coliform & E. coli Bacteria Test · 4-3616-UV

A simple 5-tube method to indicate the presence or absence of Total Coliform & E. coli Bacteria in drinking water. E. coli produces fluorescent compound.

- Presumptive test for Total Coliform & E. coli Bacteria
- NO incubation equipment required
- Results in 44-48 hours at room temperature
- (70° 85°F) or 24-hours at 110°F
- 18-month shelf life
- UV light source included (365 nm)
- Portable, no accessory labware required
- Ideal test for well water and coliform breakthrough in distribution systems
- Independent laboratory tested (results available upon request)





# Coliform Screening Test · 4-3616-UV

A simple 5-tube method to indicate the presence or absence of Total Coliform Bacteria in drinking water:



LIGHT SOURCE

- Presumptive test for Total Coliform Bacteria
- NO incubation equipment required
- Results in 44-48 hours at room temperature (70° - 85°F)
- 18-month shelf life
- Portable, no accessory labware required
- Ideal test for well water and coliform breakthrough in distribution systems
- Independent laboratory tested (results available upon request)

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

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.

# 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. 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

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





Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	Shipping Code (Weight/Lbs)				
	<b>ACIDITY</b> A standard base titrates acidity to the phenolphthalein endpoint. Kit 7182-01 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.								
7182-01	HCl, H <sub>2</sub> SO <sub>4</sub> , H <sub>3</sub> PO <sub>4</sub> Dropper Bottle	1 drop = 0.1 or 1.0% (as the particular acid)	50 at 10% (2)	R- <b>7182-01</b>	R1(1)				
	use titrations with standard alinity determinations.	acid to the phenolphthalein (P) and/or total ("	T) alkalinity endpoint. T	he mixed indicate	or, BCG-MR, is				
4491-DR-01	Total Alkalinity Direct Reading Titrator	0-200 ppm/4ppm as CaCO <sub>3</sub> CaCO <sub>3</sub>	50 at 200 ppm (2)	R-4491- DR-01	NH [1]				
4533-DR-01	P & T Alkalinity Direct Reading Titrator	0–200 ppm/4 ppm as CaCO <sub>3</sub>	50 at 200 ppm (3)	R-4533- DR-01	NH (1)				
4533-01	P & T Alkalinity Dropper Pipet	1 drop = 10 ppm as CaCO <sub>3</sub>	50 at 200 ppm (3)	R- <b>4533</b>	NH (1)				
7240-02	P & T Alkalinity Dropper Bottle	1 drop = 10, 25, or 50 ppm as $CaCO_3$	100 at 500 ppm (3)	R- <b>7240-02</b>	R1 (2)				
3467-01*†	P & T Alkalinity Direct Reading Titrator	0-200 ppm/4 ppm as CaCO <sub>3</sub>	50 at 200 ppm (3)	R- <b>3467-01</b>	R1(1)				
ALUMINUM A pin	k to red color will form when	aluminum reacts with Eriochrome Cyanine R	at pH 6.						
3569-01	Octa-Slide 2 Comparator	0, 0.1, 0.15, 0.2, 0.25, 0.3, 0.4, 0.5 ppm Al <sup>3+</sup>	50 (2)	R- <b>3569-01</b>	NH (1)				

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Ammonia Nitrogen | Bromine



Shipping Code (Weight/Lbs) Test System # of Tests **Reagent Refill** Order Code Range/Sensitivity (Detailed On Pages 6-7) [# Reagents] Order Code 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. 3304-01 Salicylate, 0.0, 0.05, 0.1, 0.25, 0.5, 1.0, 2.0 ppm NH<sub>3</sub>-N 50 (3) R-3304-01 R2 [1] Octa-Slide 2 Comparator 5864-01 Salicylate 0.1, 0.25, 0.50, 1.0, 2.0, 4.0 ppm NH<sub>3</sub>-N 50 (2) R-5864-01 R1 [1] Color<sup>'</sup>Chart 4795-01 Nessler, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0 ppm NH<sub>3</sub>-N 50 (2) R-3315 R1 [1] Octa-Slide 2 Comparator 3241 Nessler 0-5.0/0.05 60 R-3241 R1 [5] DC1500-NH Colorimeter 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. 4053-02 <4, 4, 8, 10, 12, 14, 16, 20, 25, 30, 50, 85, R-4053-02 Test Strip 50 R1 (8) 100, 150, 175, 200, 300, 400 ppb **BACTERIA** See Microbiological Testing section pages 36-38. **BLEACH** [See Chlorine Bleach] 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. 3624-01 0-10 ppm/0.2 ppm Cl or Br FAS Chlorine or Bromine, Direct 50 at 10 R-3624-01 NH [1] **Reading Titrator** 0-100 ppm/2 ppm Cl or Br ppm (3)



	Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	Shipping Code (Weight/Lbs)
	CADMIUM A dithize	one extraction of cadmium	produces a pink to red color.			
-	7839-02	Octa-Slide 2 Comparator	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0 ppm Cd	20 (4)	R- <b>7839-02</b>	HF (1)
	CALCIUM (See Har	dness]				
	CARBON DIOXIDE	A standard alkali is used to t	titrate samples to the phenolphthalein endp	point.		
	7297-DR-01	Direct Reading Titrator	0-50 ppm/1.0 ppm CO <sub>2</sub>	50 at 50 ppm (2)	R- <b>7297-DR-01</b>	R1(1)
ĥ	<b>CAUSTIC</b> A sample 7181-01 includes a	e is reacted with barium to p a 1:10 dilution, resulting in a	recipitate any carbonates, then is titrated w a 1 drop = 0.1% or 1 drop = 1% equivalence.	vith a standard acid to	the phenolphthale	in endpoint. Kit
	7516-DR-02	Direct Reading Titrator	0–10%/0.2% NaOH	50 at 10% (4)	R-7516-DR-02	R1(1)
	7181-01	Dropper Bottle	1 drop = 0.1 or 1% NaOH	50 at 10% (3)	R- <b>7181-01</b>	R1(1)
			the back titration of a hardness test, with n chelant determinations. Both tests use diffe			
1	7144-01	Free Chelant Dropper Bottle	1 drop = 2 ppm EDTA 1 drop = 2 ppm NTA	100 (3)	R- <b>7144-01</b>	R1(1)
1	7143-01	Total Chelant Dropper Bottle	1 drop = 5 ppm EDTA 1 drop = 5 ppm NTA	100 (3)	R- <b>7143-01</b>	HF (1)
		entometric method is used L72-02 to eliminate sulfite i	with all kits. This employs a chromate indicant	ator and silver nitrate	titrant. Hydrogen p	eroxide is
	3468-01*†	Direct Reading Titrator	0-50 ppm/1 ppm Cl <sup>-</sup>	50 (2)	R- <b>3468-01</b>	NH (1)
	4503-DR-02	Direct Reading Titrator	0–200 ppm/4 ppm Cl= 0–20,000 ppm/400 ppm	50 at 200 ppm (4)	R- <b>4503-DR-02</b>	R1(1)
	7459-02	Salinity Direct Reading Titrator	0-20 ppt/0.4 ppt Salinity	50 at 20 ppt (2)	R- <b>7459-02</b>	R1(1)
	7172-02	Dropper Bottle	1 drop = 10, 25, or 50 ppm Cl <sup>_</sup>	120 at 100 ppm (5)	R- <b>7172-02</b>	R1 (2)
5	Contrast of Contrast				1.11	
- Lake		AT A PARTY OF				

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Chlorine

# TWO CHOICES FOR REFILLS:

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



Code 3240

Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	Shipping Code (Weight/Lbs)		
<b>CHLORINE</b> 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							
3308-01*	DPD Tablet Octa-Slide 2 Comparator	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0 ppm Cl	50 (2)	R-3308-01	NH (1)		
3312-01*	DPD Tablet Octa-Slide 2 Comparator	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.8, 1.0 ppm Cl	50 (2)	R-3312-01	NH (1)		
3314-01*	DPD Tablet Octa-Slide 2 Comparator	Low: 0.1–1.0 ppm Cl High: 1.0–6.0 ppm Cl	100 (2)	R-3314-01	NH (1)		
3328-01	DPD Tablet Octa-Slide 2 Comparator	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 ppm Cl	50 (2)	R-3328-01	NH (1)		
3240 DC1500	DPD Tablet Colorimeter	0–4.0 ppm/0.05 ppm Cl	100 (2)	R-3670-01	NH (4)		
3240-LI DC1500-LI	DPD Liquid Colorimeter	0-4.0 ppm/0.05 ppm Cl	144 [3]	R-3670-01-LI	R1 (5)		
DPD FREE, MON	IO & DICHLORAMINES, TOTA	L CHLORINE, pH					
6980-01	DPD Tablet/	Low: 0.1–1.0 ppm Cl	200 (5)	R- <b>6980</b>	NH [7]		

Phenol Red Tablet Hi Octa-Slide 2 Comparator ph

Low: 0.1–1.0 ppm Cl High: 1.0–6.0 ppm Cl parator pH: 6.8–8.2



# Chlorine | Chlorine Test Papers



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

Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	Shipping Code (Weight/Lbs)			
CHLORINEC	ontinued							
DPD-FAS TITRATION FOR FREE AND TOTAL CHLORINE								
3176-02*†	Direct Reading Titrator	0–10 ppm/0.2 ppm Cl	50 at 10 ppm (4)	R- <b>3176-02</b>	R1 (2)			
3624-01	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)	R- <b>3624-01</b>	NH (1)			
7514-01	FAS Dropper Bottle Titration	1 drop = 0.2 or 0.5 ppm Cl	50 (3)	R- <b>7514-01</b>	NH (1)			
IODOMETRIC T	TITRATION (For higher total	chlorine levels)						
4497-DR-01	Direct Reading Titrator	0–200 ppm/4 ppm Cl	50 at 200 ppm (3)	R-4497-DR-01	R2 [1]			
4497-01	Dropper Pipet	1 drop = 10 ppm Cl	50 at 200 ppm (3)	R- <b>4497-01</b>	R2 [1]			
4501-01	Dropper Pipet	1 drop = 1 ppm Cl	50 (3)	R- <b>4501-01</b>	R2 [1]			
CHLORINE BLE	ACH, IODOMETRIC TITRAT	ION .						
7105-03	Direct Reading Titrator	0-10%/0.2% Cl	50 at 10% (3)	R- <b>7105-03</b>	R1 (2)			
7894-01	Dropper Pipet	1 drop = 0.005%, 0.05%, or 0.5% Cl	50 at 0.1, 1.0, or 10% (3)	R- <b>7894-01</b>	R1 (1)			
CHLORINE TES	T PAPERS/STRIPS See ot	her Chlorine test strips on page 36.						
4250-BJ	Chlorine Test Papers	10, 50, 100, 200 ppm, Cl	200 [1]	R- <b>4250-BJ</b>	NH [1]			
2964-G	Chlorine Test Strips	0, 0.5, 1, 3, 5, 10 ppm, Free Cl	25 [1]	R- <b>2964-G</b>	á			
2963LR-G	Chlorine Test Strips	0, 0.1, 0.25, 0.5, 1, 3, 10 ppm, Total Cl	25 [1]	R-2963LR-G				
3031	Chlorine Test Strips	0, 50, 100, 250, 500, 800 ppm Cl	50 (1)	R- <b>3031</b>				
2979	Chlorine Test Strips	0, 0.5, 1, 3, 5 ppm Total Cl	50 (1)	R- <b>2979</b>				
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Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Chlorine Dioxide | Detergents

Reagent Tip: Determine when your reagent was made and bottled. The first two numbers of a lot number signify the week, the third is the year the reagent was made. Thus 506XXX was made in the 50th week of 2016. For more details see page 76.



Code 6616-01

	Test System		# of Tests	Reagent Refill	Shipping Code		
Order Code	(Detailed On Pages 6-7)	Range/Sensitivity	(# Reagents)	Order Code	(Weight/Lbs)		
<b>CHLORINE DIOXIDE</b> 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.							
2999LR	Test Strip	0, 0.25, 0.50, 1.0, 3.0, 10 ppm	50	R-2999LR	NH [1]		
3002	Test Strip	0, 10, 25, 50, 100, 250, 500 ppm	50	R-3002	NH [1]		
3244 DC1500-CLO	Colorimeter	0-7 ppm/0.05 ppm ClO <sub>2</sub>	100 (2)	R-3244	NH [3]		
CHROMATE Diph	enylcarbazide reacts with c	hromate (hexavalent chromium) to form a red to v	iolet color in an acio	l solution.			
4430-01	Diphenylcarbazide Octa-Slide 2 Comparator	5, 10, 15, 20, 25, 30, 35, 40 ppm Na <sub>2</sub> CrO <sub>4</sub> (lower or higher ranges by dilution)	50 (1)	R- <b>4430-01</b>	R1(1)		
<b>COLIFORM</b> See a	also Microbiological Testing	section pages 36-38.					
<b>COLOR</b> The color	r of water is measured by c	omparing the water to platinum cobalt color standa	ards representing Al	PHA Standard Co	olor Units.		
3528-01	LRC Comparator	0, 20, 50, 80, 110, 140, 170, 200 APHA color unit	s Unlimited (0)	R-3528-01	NH (2)		
<b>COPPER</b> A yellow Cuprizone.	<i>i</i> color is formed when copp	per reacts with diethyldithiocarbamate (DDC). A blu	e color is formed wł	nen copper react	s with		
3619	Cuprizone Color Chart	0.05, 0.10, 0.15, 0.20, 0.30, 0.50, 0.70, 1.0 ppm (	Cu 50 (2)	R- <b>3619</b>	R1 (1)		
3245, DC1500-CO	DDC Colorimeter	0-8 ppm/0.03 ppm Cu	100 (1)	R- <b>3673-01</b>	NH [7]		
<b>CYANIDE</b> The cya red-blue color. Th	anide is first reacted with a ne test is also applicable as	chlorine donor to form cyanogen chloride, which th a screening test for concentrations up to 250 ppm	en reacts with pyric	line-barbituric a	cid to form a		
7387-02	Octa-Slide 2 Comparator	0.0, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40 ppm Free CN-	50 (5)	R-7387-02	R1 (3)		
<b>DEHA</b> Diethylhyd	roxylamine reacts with ferr	ic iron to form ferrous iron, which is then measured	l by a standard iron	test.			
4790-01	Octa-Slide 2 Comparator	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5 ppm DEHA	100 (3)	R-4790-01	R1(1)		
	ionic surfactants are extra reagent is then used to det	cted with toluene and break up an ion pair, releasing ermine the concentration.	g bromphenol blue i	nto a water laye	r.		
4507-02	Dropper Pipet	1 drop = 1.0 ppm Detergent	60 at 5.0 ppm (3)	R-4507-02	R1 (2)		
4515-01	Dropper Pipet	1 drop = 0.1 ppm Detergent	30 (4)	R-4515-01	LQ (2)		

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

# Fluoride | Hardness



	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Test (# Reagen		Shipping Code (Weight/Lbs)				
	, <u> </u>	Tuoride to form a colorless solution, whic		-,					
3243 DC1500-FL	Colorimeter	0–2.0 ppm/0.03 ppm FI <sup>_</sup>	100 (2)	] R-3243	LQ (7+5)				
FORMALDEHYDE The colorimetric analysis uses a modified Schiff reaction in which an acidified pararosaniline and dichlorosulfitomercurate II complex form a violet color.									
6701-01		0.0, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm Formaldehyde	100 (3)	) R-6701-01	LQ (2+5)				
GLUTARALDEHYD	E High concentrations are	determined by a titration with sulfuric ac	cid after reaction with s	sulfite.					
7064-01	Direct Reading Titrator	1 mL = 250 ppm Glutaraldehyde	25 (5)	R-7064-01	R2 (3)				
<b>HARDNESS</b> 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 <sub>3</sub> ; 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.									
3609-01	Fresh & Salt Water Calcium Hardness Direct Reading Titrator	0–200 ppm/4 ppm CaCO <sub>3</sub> 0-2,500 ppm by dilution	50 (3)	R- <b>3609-01</b>	R1 (1)				
4482-DR-LI-01	Total Hardness Direct Reading Titrator	0–200 ppm/4ppm CaCO <sub>3</sub> Liquid indicator	50 at 200 ppm (3)	R-4482-DR-LI-01	R1 (1)				
4482-LI-02	Total Hardness Dropper Bottle	1 drop = 10 ppm or 1 gpg CaCO <sub>3</sub> Liquid indicator	50 at 200 ppm or 20 gpg (3)	R-4482-LI-02	R1(1)				
4482-DR-LT-01	Total Hardness Direct Reading Titrator	0–200 ppm/4 ppm CaCO <sub>3</sub> Tablet indicator	50 at 200 ppm (3)	R-4482-DR-LT-01	R1 (1)				
4824-lt-02	Calcium, Magnesium, Tot Hardness Dropper Bottle	al 1 drop = 10 ppm or 1 gpg CaCO <sub>3</sub> Tablet indicator	50 at 200 ppm or 20 gpg (5)	R-4824-LT-02	R1 (1)				
4824-DR-LT-01	Calcium, Magnesium, Tot Hardness Direct Reading Titrator	al 0–200 ppm/4 ppm CaCO <sub>3</sub> Tablet indicator	50 at 200 ppm (5)	R-4824-DR-LT-01	R1 (1)				
3037-DR-01	Low Range Total Hardnes Direct Reading Titrator	s     0–10 ppm/0.2 ppm CaCO <sub>3</sub>	50 at 10 ppm (3)	R-3037-DR-01	R1 (1)				
			Hardness continued	next page					

# Hardness | Iron

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.



Code 4482-LI-02

	Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	Shipping Code (Weight/Lbs)
6	HARDNESS	Continued				
	7171-02	Total Hardness Dropper Bottle	1 drop = 10, 25, or 50 ppm $CaCO_3$	100 (3)	R-7171-02	R1 (1)
n a	7246-02	Total Hardness Dropper Bottle	1 drop = 2, 5, or 10 ppm $CaCO_3$	100 (3)	R- <b>7246-02</b>	R1 (1)
	HYDROGEN P standard thio	<b>EROXIDE</b> Although peroxide sulfate solution. Both metho	may be tested colorimetrically with DPD, the r ds are offered.	nost common method i	s iodometric titrati	on using a
1.01	7138-DB- 01	lodometric Dropper Bottle	$1 \operatorname{drop} = 5 \operatorname{ppm} H_2 O_2$	50 (4)	R-7138-DB-01	LQ (2)
1	7150-01	lodometric Dropper Bottle	1 drop = 0.5% H <sub>2</sub> O <sub>2</sub>	50 (4)	R- <b>7150-01</b>	LQ (2)
	2984LR	Test Strips	0, 1, 3, 10, 30, 50	25 [1]	R-2984LR-H	NH (1)
٧	IODINE As wi	th many other oxidizers, iodi	ne may be titrated with a standard thiosulfate	solution, hence the nam	ne iodometric titrat	tion.
	7253-DR- 01	Direct Reading Titrator	0–50 ppm/1 ppm I <sub>2</sub>	50 at 50 ppm (3)	R-7253-DR-01	R1(1)
	7253-01	Dropper Pipet	1 drop = 2.5 ppm I <sub>2</sub>	100 at 25 ppm (3)	R-7253-DR-01	R1 (1)
	2948-BJ	Test Papers	12, 25, 50, 100 ppm l <sub>2</sub>	200	R- <b>2948-B</b> J	NH (1)
			hat tests total iron after any ferric iron is reduc ction step. A similar ferrous indicator, 1,10 phe			erric may be
l	7787-01	Total Iron LRC Comparator	0.05, 0.10, 0.20, 0.30, 0.40, 0.60, 0.80, 1.0 pp	m Fe 30 (2)	R- <b>7787-01</b>	R1(1)
	4447-01	Total Iron Octa-Slide	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	90 (2)	R- <b>3318</b>	R1 (1)
	3347-01	Ferrous/Ferric Iron Octa-Slide 2 Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm Fe	100 (3)	R- <b>3347-01</b>	R1 (1)
	3248 DC1500-FE	Total Iron 1, 10 Phenanthroline Colorimeter	0–4.0 ppm/0.25 ppm Fe	100 (2)	R-3681-01	R1(1)

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Lead | Molybdate/Molybdenum



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	Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Order Code	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.											
	3588-02	PAN Octa-Slide 2 Comparator	0.05, 0.1, 0.2, 0.4, 0.6, 0.8, 1.0 ppm Mn	50 (4)	R- <b>3588-02</b>	LQ (2)						
i	MICROBIOLOGICAL TESTING See section pages 36-38.											
	a pink color wit reads 0, 0.5, 1,	h molybdate. Thioglycolate fo	e colorimetric methods and one titration method avorms a yellow color for low to high determinations. Sourms a yellow color for low to high determinations. Source in about 1 minute. The 3632 titration employ Livalence.	The 3628 uses a n	ew test strip tech	nology that						
	3628-01	Test Strip	0, 0.5, 1.0, 2.0, 5.0 ppm	50 (1)	R- <b>3628-01</b>	R1 (1)						
	6628-01	Xanthate, Sodium Molybda Octa-Slide 2 Comparator	e 1, 2, 3, 4, 5, 6, 8, 10 ppm Sodium Molybdate	100 (2)	R-6628-01	R1(1)						
	3346-01	Thioglycolate, Molybdate Octa-Slide 2 Comparator	30, 60, 90, 120, 150, 180, 240, 300 ppm Molybdate	50 (2)	R- <b>3346-01</b>	NH (1)						
2	3160-01	Thioglycolate, Molybdenum Octa-Slide 2 Comparator	2, 5, 8, 10, 12, 15, 18, 20 ppm Molybdenum	50 (3)	R- <b>3160-01</b>	R3 [2]						
	3632-01	Molybdenum Dropper Pipet	1 drop = 2 or 20 ppm Molybdenum	50 (3)	R- <b>3632-01</b>	LQ (2+5)						
	3246 DC1500-M0	Thioglycolate Colorimeter	0-30 ppm/0.1 ppm Molybdenum	50 (3)	R-3246	R3 [7]						

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Nitrate Nitrogen | Nitrite



## Molybdenum x 1.6 = Molybdate Sodium Molybdate Dihydrate x 0.4 = Molybdenum Molybdate x 0.63 = Molybdenum

Code 6628-01

ELaMote

Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Oder Code	Shipping Code (Weight/Lbs)
below use cadr both nitrate an	mium except 3354-01, whic nd nitrite. The kit 3119-01 us	to nitrite by cadmium or zinc and this undergoes on the uses zinc and which also contains a reagent that wes one comparator that contains both nitrate and age 17 for Total Nitrogen Digestion Tube Test.	t eliminates nitrite ir	nterference. Kit 35	19-01 tests
3119-01	Cadmium Reduction Nitrate/Phosphate LRC Comparator	0.2, 0.4, 0.6, 1.0 ppm NO <sub>3</sub> <sup>-</sup> –N; 0.2, 0.4, 0.6, 1.0 ppm PO <sub>4</sub> <sup>3–</sup>	Nitrate: 40 (2) Phosphate: 50 (2)	R-3119-01	R1 (2)
3615-01	Cadmium Reduction, Nitrate/Nitrite LRC Comparator	O, O.2, O.4, O.6, O.8, 1.0 ppm NO₃⁻−N	50 (2)	R-3615-01	R1 (2)
3519-01	Cadmium Reduction Octa-Slide 2 Comparator	0.25, 0.5, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0 ppm NO <sub>3</sub> <sup>-</sup> -N	40 (3)	R-3519-01	R1(1)
3354-01	Zinc Reduction Octa-Slide 2 Comparator	0.0, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 15.0 ppm NO <sub>3</sub> <sup>-</sup> -N	N 50 (2)	R- <b>3354-01</b>	NH (2)
NITRITE NITRO	GEN As with nitrate, above, t	the diazotization/coupling reaction is used to form	n a pink color with ni	trite.	
3352-01	Octa-Slide 2 Comparator	0.05, 0.10, 0.20, 0.30, 0.40, 0.50, 0.60, 0.80 ppm N0 <sub>2</sub> N	50 (3)	R-3352-01	NH (2)
📱 the nitrite is ox	kidized, the permanganate tu	using one of two methods. After acidifying the sa Irns the sample pink. Ceric Ammonium Nitrate (CA ne CAN method is preferred if glycol is present.	mple, permanganat N) also oxidizes the	e will oxidize nitrite nitrite in the prese	e. When all of ence of ferroin
7101-DR-01	Permanganate Direct Reading Titrator	0–1000 ppm/20 ppm NaNO <sub>2</sub>	50 at 1000 ppm (2)	R-7101-DR-01	R1(1)
7101-01	Permanganate Dropper Pipet	1 drop = 50 or 100 ppm NaNO <sub>2</sub>	50 at 1000 or 2000 ppm (2)	R- <b>7101-01</b>	R1(1)
3036-DR-02	CAN Direct Reading Titrator	0–1000 ppm/20 ppm NaNO <sub>2</sub>	50 at 1000 ppm (2)	R-3036-DR-02	R1(1)
7183-02	CAN Dropper Bottle	1 drop = 50 ppm NaNO <sub>2</sub>	50 at 1000 ppm (2)	R- <b>7183-02</b>	R1(1)
			-		

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Oxygen, Dissolved | pH



Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Oder Code	Shipping Code (Weight/Lbs)		
alkali, oxidize	s manganese, which in tu	cation of the Winkler method is a mod rn reacts with iodide to form iodine. Ti int. Azide eliminates nitrite interference	his is titrated with a standa				
5860-01	All liquid reagents Direct Reading Titrator	0–10 ppm/0.2 ppm 0 <sub>2</sub>	50 at 10 ppm (5)	R-5860-01	R1 (2)		
		y other oxidizers will interfere. The Ind . It is preferred for the analysis of salt		ludes a step to eliminate	chlorine		
3249 DC1500-0Z	Indigo Trisulfonate Colorimeter	0–0.4 ppm/0.04 ppm 0 <sub>3</sub>	100 [3]	R-3678-01	NH [7]		
<b>PERACETIC ACID/HYDROGEN PEROXIDE</b> This test is a combination of two separate titrations. The first is a cerium titration of peroxide. The second is an iodometric titration of peroxide acid.							
7191-02	Dropper Bottle	1 drop = 50 ppm Peroxide 1 drop = 6, 15 or 300 ppm Peracetic	50 (5) c Acid	R- <b>7191-02</b>	R1 (2)		
PERACETIC A	CID TEST STRIP						
3000	Test Strips	0, 10, 20, 50, 85, 160 ppm	50	—	NH (1)		
3000LR	Test Strips	0, 5, 10, 20, 30, 50 ppm	50	_	NH (1)		
3000HR	Test Strips	0, 50, 100, 250, 500, 1000	50	_	NH (1)		
pH TEST PAPI	ERS						
2907	Test Papers	6.8-8.4 pH/0.4 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)		
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)		
	A ANACA				- California		

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, R2, R3) Hazardous Material - Air Fees Only · (HF) Hazardous Material - Air & Ground Fees \*(NPDWR) EPA Accepted + 1 (NPDES) EPA Accepted + Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

# рΗ

**Individual Test Kits** 

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

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.



Code 5858-01

#### LaMotte pH Test Kits

The "Precision Wide Range" pH kit includes the Octa-Slide comparator and reagents to provide 100 tests. Other pH test kits consist of an Octa-Slide Comparator, and a reagent 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 cover pH units in increments of 0.5.

#### 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 the Precision 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 use a pH meter.



See Instrument Section, pages 24-32 for pH meters.

Order Code	pH Indicator	Octa-Slide Comparator Color Standard Values In pH Units						Reagent Refill Oder Code	Hazard (Shipping Weight/Lbs)		
рH											
2109-01	Bromthymol Blue	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	R-2109-01	NH (1)
2110-01	Phenol Red	6.8	7.0	7.2	7.4	7.6	7.8	8.0	8.2	R-2110-01	NH (1)
2111-01	Cresol Red	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	R-2111-01	NH (1)
2112-01	Thymol Blue	8.0	8.2	8.4	8.6	8.8	9.0	9.2	9.4	R-2112-01	NH (1)
5858-01	Precision Wide Range	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	R-5858-01	R1 (1)
3030-01	FIELISIUIT WILLE KALIYE	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	K-9090-01	RI[I]
3353-01	Precision Wide Range	5.0	6.0	6.5	7.0	7.5	8.0	9.0	10.0	R- <b>3353-01</b>	R1
*											

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.



Code 3114-02

Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity		of Tests eagents)	Reagent Refill Oder Code	Shipping Code (Weight/Lbs)
<b>PHOSPHATE</b> T produce a blue	here are 3 colorimetric test color. In a third, phosphate	methods. In two, a phosphomolybdate com forms a yellow complex with vanadomolybd	plex is reduced by late.	stannous	chloride or asco	orbic acid to
3242 DC1500-PLR	Ascorbic Acid Colorimeter	0–3.0 ppm/0.07 ppm P0 <sub>4</sub> 3–	1(	DO (2)	R- <b>3242</b>	R2 [7]
3121-02	Ascorbic Acid LRC Comparator	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0 ppm PO <sub>4</sub> <sup>3-</sup>	- 5	iO (2)	R- <b>3121-02</b>	R1 (1)
3114-02	Ascorbic Acid Octa-Slide 2 Comparator	0.5, 1.0, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0 ppm an 20.0, 30.0, 40.0, 60.0, 80.0, 100.0 ppm P0	d 5.0, 10.0, 5 4 <sup>3 -</sup>	iO (2)	R- <b>3114-02</b>	R1 (1)
4408-01	Stannous Chloride Octa-Slide 2 Comparator	Low: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0 pp High: 10, 20, 30, 40, 50, 60, 80, 100 ppm F		iO (2)	R- <b>4408-01</b>	LQ (1)
4401-02	Vanadate Molybdate Octa-Slide 2 Comparator	10, 20, 30, 40, 50, 60, 70, 80 ppm PO <sub>4</sub> <sup>3–</sup>	5	iO (1)	R- <b>4401-02</b>	R1 (1)
PHOSPHATE (T	<b>OTAL )</b> Polynhosnhates (acir	I-hydrolyzable or condensed) and phospho	nates (organic ph		are reverted	HF (2)
using the reag acid and subse microwaving s	ents and apparatus in the 78 quent neutralization; the ph	184 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the nosphate, any of the tests in the orthophos	ates require boilir addition of an oxid	dizer in th	owaving with e boiling/	
using the reag acid and subse microwaving st analysis. See p PHOSPHONATI	ents and apparatus in the 76 quent neutralization; the ph ep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho	184 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the nosphate, any of the tests in the orthophos	ates require boilir addition of an oxic phate section abo AS), Belcor 575 (x	dizer in the ve may be co) and Be	owaving with e boiling/ e used for Isperse 161 pho	sphonates
using the reag acid and subse microwaving st analysis. See p PHOSPHONATI	ents and apparatus in the 76 quent neutralization; the ph ep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho	084 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the nosphate, any of the tests in the orthophos Digestion Tube Tests. d may be used for Dequest (xo), Bayhibit (C or very high alkalinity samples. It also includ 0-20 ppm/0.4 ppm HEDP/PBTC	ates require boilir addition of an oxic phate section abo AS), Belcor 575 (x	dizer in the ve may be co) and Be pitor reage	owaving with e boiling/ e used for Isperse 161 pho	sphonates R1 (1)
using the reag acid and subse microwaving st analysis. See p PHOSPHONATI (CAS). An addit	ents and apparatus in the 76 equent neutralization; the ph cep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho ional liquid acid is included f CAS	084 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the nosphate, any of the tests in the orthophos Digestion Tube Tests. d may be used for Dequest (xo), Bayhibit (C or very high alkalinity samples. It also includ 0-20 ppm/0.4 ppm HEDP/PBTC	ates rèquire boilir addition of an oxic phate section abo (AS), Belcor 575 (x des a fluoride inhil	dizer in thi ve may be co) and Be pitor reage 1 (5) R-	owaving with e boiling/ a used for Isperse 161 pho ent.	•
using the reag acid and subse microwaving st analysis. See p PHOSPHONATI (CAS). An addit 7625-DR-01	ents and apparatus in the 76 equent neutralization; the ph ep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho ional liquid acid is included f CAS Direct Reading Titrato CAS	184 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the hosphate, any of the tests in the orthophos Digestion Tube Tests. d may be used for Dequest (xo), Bayhibit (C or very high alkalinity samples. It also includ 0-20 ppm/0.4 ppm HEDP/PBTC r 1 drop = 1.25 ppm HEDP 1 drop = 1.4 ppm PBTC 0-20 ppm/0.4 ppm NaAMP	ates rèquire boilir addition of an oxic phate section abo XAS), Belcor 575 (x des a fluoride inhil 50 at 20 ppm	dizer in thi ve may be co) and Be pitor reage (5) R- (5)	owaving with e boiling/ a used for Isperse 161 pho ent. -7625-DR-01	R1 (1)
using the reag acid and subse microwaving st analysis. See p PHOSPHONATI (CAS). An addit 7625-DR-01 7625-01	ents and apparatus in the 76 equent neutralization; the ph tep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho ional liquid acid is included f CAS Direct Reading Titrato CAS Dropper Pipet XO	184 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the hosphate, any of the tests in the orthophos Digestion Tube Tests. d may be used for Dequest (xo), Bayhibit (C or very high alkalinity samples. It also includ 0-20 ppm/0.4 ppm HEDP/PBTC r 1 drop = 1.25 ppm HEDP 1 drop = 1.4 ppm PBTC 0-20 ppm/0.4 ppm NaAMP	ates rèquire boilir addition of an oxic phate section abo (AS), Belcor 575 (x des a fluoride inhil 50 at 20 ppm 50 at 20 ppm	dizer in thi ve may be oitor reage (5) R- (5) R-	owaving with e boiling/ a used for Isperse 161 pho ent. -7625-DR-01 R-7625-01	R1 (1)
<ul> <li>using the reagination of the reagination o</li></ul>	ents and apparatus in the 76 equent neutralization; the ph ep. Once reverted to orthop age 17 for Total Phosphorus The Chromazurol S metho ional liquid acid is included f CAS Direct Reading Titrato CAS Dropper Pipet XO Direct Reading Titrato XO Direct Reading Titrato	184 Auxiliary Phosphate kit. The polyphosph osphonates require the same, but with the hosphate, any of the tests in the orthophos Digestion Tube Tests. d may be used for Dequest (xo), Bayhibit (C or very high alkalinity samples. It also includ 0-20 ppm/0.4 ppm HEDP/PBTC r 1 drop = 1.25 ppm HEDP 1 drop = 1.4 ppm PBTC 0-20 ppm/0.4 ppm NaAMP r	ates rèquire boilir addition of an oxic phate section abo AS), Belcor 575 (× des a fluoride inhil 50 at 20 ppm 50 at 20 ppm 50 at 20 ppm	dizer in thi ve may be noitor reage (5) R- (5) R- (5) R- (5) R-	owaving with e boiling/ e used for Isperse 161 pho ent. -7625-DR-01 R-7625-01 -7530-DR-01	R1 (1) R1 (1) R1 (2) R1 (2)

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Potassium | Sulfate

54



Code 7625-01

Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Oder Code	Shipping Code (Weight/Lbs)
	odium tetraphenylboron read centration which is measure	cts with potassium to form a white precipitate. d in a calibrated tube.	The turbidity of the so	lution is proporti	onal to
3138-01	Turbidity Reading Tube	e 6, 8, 10, 20, 30, 40, 50 ppm K⁺	100 (2)	R-3138-01	R1(1)
added to comp		bromphenol blue indicator is added to the sam anges to red. This method is best suited to hig high concentrations.			
3043-DR-01	BPB Direct Reading Titrator	0–500 ppm/10 ppm Alkyl dimethyl benzyl ammonium chloride	50 at 500 ppm (2)	R-3043- DR-01	NH (1)
3042-01	BPB Direct Reading Titrator	0-1,000 ppm/20 ppm 0-5,000 ppm/100 ppm with dilution	50 at 1,000 ppm (2)	R- <b>3042-01</b>	NH (1)
7057-01	Polyelectrolytic Dropper Bottle	1 drop = 2, 5, or 10 ppm Alkyl dimethyl benzyl ammonium chloride	100+ (5)	R- <b>7057-01</b>	R1 (2)
2951	Test Papers	50, 100, 200, 400 ppm	100	_	NH (1)
2951HR	Test Strips	200, 400, 600, 1000, 1500 ppm	50	_	NH [1]
<b>SALINITY</b> Salin concentration.	ity is based on the concentra	ation of chloride. An argentometric titration wit	th silver nitrate is used	to determine the	e chloride
7459-02	Direct Reading Titrator	0–40 ppt/0.4 ppt Salinity	50 at 20 ppt (2)	R- <b>7459-02</b>	R1(1)
<b>SILICA</b> The het ppm.	eropoly blue method tests fo	or "molybdate-reactive" silica. The 4463 uses a	a 1:10 dilution to expan	id the range of th	ne kit to 100
4463-01	Octa-Slide 2 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 <sub>2</sub>	50 (4)	R- <b>4463-01</b>	R1 (1)
SODIUM NITRI	<b>FE</b> (See Nitrite, Sodium)				
SULFATE Bariu	im forms a precipitate with s	ulfate. The turbidity formed is measured using	comparator standards	s or a meter.	
7778-01	Tablet Octa-Slide 2 Comparator	20, 40, 60, 80, 100, 120, 160, 200 ppm SO <sub>4</sub> 2 <sup></sup>	50 (1)	R- <b>7778-01</b>	R1 (1)
3247 DC1500-SU	Colorimeter	0–100 ppm/1.0 ppm S0 <sub>4</sub> 2–	100 (1)	R- <b>3247</b>	R1 (6)
Star Star	and the second s	and a state of the	and the second	and the second	THE OWNER

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Sulfide | Zinc



	Order Code	Test System (Detailed On Pages 6-7)	Range/Sensitivity	# of Tests (# Reagents)	Reagent Refill Oder Code	Shipping Code (Weight/Lbs)
LUND I	Total, dissolved an unreacted s	l and hydrogen sulfide can b sample until it matches a rea	vlene blue method for analysis. The colorimetric e separated in the titration test. The total sulfide acted sample. The same procedure is used for dis ined by measuring pH and multiplying the dissol	e is determined using ssolved sulfide, after	g a color dye whi r insoluble matte	ch is added to r is removed by
	4456-01	Total Sulfide Octa-Slide 2 Comparator	0.2, 0.5, 1.0, 2.0, 5.0, 10.0, 15.0, 20.0 ppm S <sup>2-</sup>	50 (3)	R- <b>4456-01</b>	R1 (1)
	4630†*	Total, Dissolved <del>&amp;</del> Hydrogen Sulfide Dropper Pipet	1 drop = 1.0 or 0.1 ppm S <sup>2-</sup> or H <sub>2</sub> S	70 at 10 ppm (8)	R- <b>4630</b> †*	LQ (10)
		dide-iodate titrant oxidizes s a blue color signifying the e	sulfite to sulfate under acid conditions, until all o ndpoint.	f the sulfite is reacte	ed. The titrant th	en reacts with
	7175-DR-01	Direct Reading Titrator	0–100 ppm/2 ppm S0 <sub>3</sub> 2–	50 at 100 ppm (3)	R-7175- DR-01	R1(1)
	7175-01	Dropper Pipet	1 drop = 5 ppm SO <sub>3</sub> 2–	50 at 100 ppm (3)	R- <b>7175-01</b>	R1 (1)
à	7132-01	Dropper Bottle	1 drop = 2, 5, or 10 ppm SO <sub>3</sub> <sup>2–</sup>	100+ [3]	R- <b>7132-01</b>	R1 (1)
-	TANNIN/LIGNIN	Tungstophosphoric and m	olybdophosphoric acids are reduced by tannins	and lignins to form a	ı blue color.	
	7831-01	Octa-Slide 2 Comparator	1, 2, 3, 4, 5, 6, 8, 10 ppm Tannin or lignin like substances	50 (2)	R- <b>7831-01</b>	R1(1)
	TOLCIDE PS BI (THPS). The iod	<b>OCIDE</b> This kit was develope dometric titration may be us	d in cooperation with Solvay, for the determinati ed for fresh or salt water in oilfields, towers, pulp	on of tetrakishydrox and paper, etc.	y-methyl phosph	nonium sulfate
-	4-8776-01	Direct Reading Titrator	0-100/2 ppm THPS	60 (5)	R- <b>4-8776-01</b>	NH (1)
	TURBIDITY Tes	sting for turbidity in regulate	d water systems is a critical step in assuring cor	mpliance and treatm	ent efficacy.	
	See page 12-1	5 for instumentaion.				
	ZINC In a solut	tion buffered to pH 9, zincon	reacts with zinc to form a blue color.			
	7391-02	Octa-Slide 2 Comparator	0, 1, 2, 3, 4, 6, 8, 10 ppm Zn	50 (2)	R- <b>7391-02</b>	NH (1)
	7417-02	Octa-Slide 2 Comparator	0, 0.2, 0.4, 0.6, 0.8, 1.0, 1.2, 1.4 ppm Zn	50 (2)	R- <b>7417-02</b>	NH (1)
						-

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

# **Fresh Water Outfit**

#### Model AQ-2, Order Code 3633-05 (Ship Code LQ; 16 lbs.) Reagent Refill, Order Code R-3633-05 (Ship Code LQ)

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 (# of Tests)
Ammonia Nitrogen	Salicylate	0.05-2.0 ppm (50)
Nitrite Nitrogen	Diazotization/Coupline	g 0.05–0.8 ppm (50)
рН	Wide Range	5.0-10.0 (50)
Factor	Method R	ange (# 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 3635-05 (Ship Code LQ; 16 lbs.) Reagent Refill, Order Code R-3635-04 (Ship Code LQ)

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 (# of 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 bardness in aquarium industry		

\*Often referred to as carbonate hardness in aquarium industry.

Factor	Method	Range (# of 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)
рН	Wide Range	5.0-10.0 (50)

Factor	Range	Sensitivity
Armored Thermometer	–5° to 45°C	0.5°C



Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Elementary, Secondary, Vocational, Outdoor, & College Science

# Water Quality Educator Monitoring Outfit

#### Order Code 5870-01 (Ship Code R1; 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.

	EnMotte onitors backback
Factor	Range (# Tests)
рН	pH 3.0-10.5 (100)
Nitrate-Nitrogen	0–15 ppm (50)
Phosphate	0–2.0 ppm (50)
Dissolved Oxygen	0–10.0 ppm (50)
Alkalinity, Total	0-200 ppm (50)
Turbidity	0-200 JTU (50)
Temperature	–5° to 45°C

## 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*.



Jdies Science Science Kits

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

# Elementary, Secondary, Vocational, Outdoor & College Science



## 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.





## Limnology Outfit

Code 5902-02 (Ship Code R1; 13 lbs.)

Reagent Refill Code R-5902-01 (Ship Code R1; 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.

#### **Comparator Tests**

Comparator	10000
Factor	Range (# Tests)
Nitrate- Nitrogen	0.2–1.0 ppm (40)
Phosphate	0.2–1.0 ppm (50)
рН	3.0–10.0 pH (50)
Silica	0.5–10 ppm (50)
<b>Direct Readi</b>	ng Titrator Tests
Factor	Range (# Tests)
Carbon Dioxide	0–50 ppm (50)
Dissolved Oxygen	0–10 ppm (50)
охуден	
Hardness	0–200 ppm (50)

## 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 US EPA Rapid Bioassessment Protocols for benthic invertebrates.



# Secchi Disk

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



Weighted 20 cm diameter disk has a braided stretch-resistant line marked every half meter and at every meter up to 20 meters.



# **Marine Science Outfit**

Code 5903-03	
(Ship Code R1; 13 lbs.)	
Reagent Refill	
Code R-5903-02	
(Ship Code R1; 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		
Range (# Tests)		
3-10 (50)		
7.7-8.4 (50)		
litration Tests		
Range (# Tests)		
0–10.0 ppm (50)		
0–200 ppm (50)		
0–50 ppm (50)		

0-200 ppm (50)

0-20 ppm (50)

Ship Codes: (NH) Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, R2, R3] Hazardous Material - Air Fees Only · [HF] Hazardous Material - Air & Ground Fees \*(NPDWR) EPA Accepted · 1(NPDES) EPA Accepted · Direct Reading Titrators have a specific range, but may be refilled to test higher concentrations.

Alkalinity

Salinity

# Elementary, Secondary, Vocational, Outdoor, & College Science

# The Tour Series

Each Tour is a complete, hands-on, science curriculum with safe, simple TesTabs<sup>®</sup> tablet tests. Each Tour includes lecture materials, illustrated handouts, teacher tips, test procedures, TesTab reagents, data sheets, and games to reinforce key concepts. The Tour Series is designed for grades 4 through 8 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.



#### **Shore Tour**

#### Shore Tour, Order Code 5939 (Ship Code NH; 5 lbs.) Reagent Refill, Order Code R-5939 (Ship Code NH; 1 lb.)

Five units teach students through classroom lectures and activities how their everyday actions affect the ocean. Topics include an introduction to coastal ecosystems, oil spills, shoreline development and marine debris. Includes teacher tested activities from EPA, NOAA, and The Marine Mammal Center, links to activities and information from ocean experts, CD with printable handouts, data sheets, and more. Materials for 40 students working in groups.

## Watershed Tour

#### Watershed Tour, Order Code 5419 (Ship Code NH; 4 lbs.) Reagent Refill, Order Code R-5419 (Ship Code NH; 1 lb.)

A classroom-based tour of a virtual watershed, designed for teachers who are unable to visit a stream with their students. Students will "test" four stations along a river continuum to study how the river changes and how human activities can influence water quality. Developed by the Stroud Water Research Center in cooperation with LaMotte Company. Materials for 30 students working in groups.

# **Topsoil Tour**

#### Topsoil Tour, Order Code5425-01 (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.

# 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.

# **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, hard-ness, copper, and iron of tapwater from their homes. Tablets and sample test bags for 50 students. Ideal for educational outreach for public health/utilities.

# Call for our Environmental Science Education Products Catalog



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# Elementary, Secondary, Vocational, Outdoor & College Science

ELNMoth

Glossary

Teacher/Student quide

Chemical Reactions

Graphics Files

Data Spreadsheets

"known" microbe colonies.

STEM Extension Activities

Water Quality Test Procedures

#### Order Code 5845-PKG (Ship Code R1 (1)

The AP® Environmental Science WATER OUALITY ASSESSMENT PACKAGE is an extensive curriculum that uses the exploration of the Water Quality Index to teach students STEM-based skills that they will apply through classroom and field activities to satisfy Section VI (Water

The Teacher Resource CD-ROM (included with the Water Quality Index Module) contains:

Also includes a Free LaMotte BioPaddle Colony Identification App which lets users capture the Bio-

Paddle image to compare the "unknown" microbe growth on the BioPaddle to a library of photos of

Pollution) of the AP<sup>®</sup> Environmental Topics Outline. In a culminating field activity, students utilize appropriate techniques

and instrumentation to identify their watershed and perform chemical and biological analyses to determine the water quality index of a local waterway.

> The following environmental concepts are covered: watersheds, Water Quality Index, physical, chemical and biological water quality parameters, nutrient loading, hydrological variables, watershed ecology, remediation measures, and point, non-point pollution sources.

In four classroom activities, students use actual data from the Kansas River watershed to:

- Perform independent research
- Analyze data
- Create spreadsheets
- Calculate the water quality index
- Generate graphs
- Collect data
- Perform statistical analysis
- Access real-time hydrological data
- Locate local watersheds
- Observe environmental systems
- Communicate accurately

#### Water Quality Assessment Curriculum Module, Code 5845 (sold separately)

- Nutrient TTC/MacConkey BioPaddles (Code 5553) for coliform testing
- Salt/TDS/Temp Tracer [Code 1749] for temperature and TDS determination
- Teacher Resource CD-ROM

#### Water Quality Educator, Code 5870-01 (See page 57)

- Thermometer, Armored, Code 1066
- Dissolved Oxygen Kit, Code 5860-01.
- pH Kit, Code 5858-01

PowerPoint Presentations and Quick Time iPad/iPod Videos

- Nitrate-Nitrogen Kit, Code 3354-01
- Phosphate Kit, Code 3121-02
- Turbidity Kit, Code 7519-01
- Alkalinity Kit Code 4491-DR-01



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.

Earth Force Low-Cost Water Monitoring Kit

A popular, economical tool for learning the basics of water quality.



Order Code 3-5886 (Ship Code NH; 1 lb.)



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**Combination Kits** 

# Food/Laundry

# Dairy Producers, Food Processors, Commercial Launderers

# erers

**Combination Kits** 

# Food Sanitizer Kits

For Caustic Soda

#### Model TK-10, Order Code 8225-01 (Ship Code R2; 2 lbs.) Reagent Refill, Order Code 8228-H (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

- 0.25%/urup Causut Soua by w
   0.01% /drop sodium oxido
- 0.01%/drop sodium oxide

# Also Available...

Factor	Order Code	Method	Range (# Test)	Ship Codes
Chlorine	4497-01	lodometric	10 ppm/drop (50)	R2
Chlorinated Cleaner	8226-01	Neutralization	0.01% NaOH/drop (50)	R2





# Standard pH Test Papers

Order Code	pH Range	Order Code	pH Range
2907	6.8-8.4	2954	0-13
2912	3.0-10.0	2956	1-11
3-2950	0-14	2959	8-12
2953	4.5-7.5		



# Sanitizer Test Papers and Strips

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.

## **Test Papers**

Factor	Code (Qty.)	Range
Chlorine	4250-BJ (200)	10, 50, 100, 200 ppm
lodine	2948-BJ (200)	12, 25, 50, 100 ppm
QAC	2951 (100)	50, 100, 200, 400 ppm
High Range QAC	2951HR (50)	200, 400, 600, 1000, 1500 ppm

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

# **Test Strips**

Factor	Code (Qty.)	Range
Peracetic Acid	3000 (50)	0, 10, 20, 40, 60, 85, 160
Peracetic Acid, Low Range	3000LR (50)	0, 5, 10, 20, 30, 50
Peracetic Acid, High Range	3000HR (50)	0, 50, 100, 250, 500, 1000
QAC	3072-J (100)	0, 100, 200, 300, 400, 500 ppm
High Range Chlorine	3031 (50)	0, 50, 100, 250, 500, 800 ppm
Dual Range QAC	2934 (50)	LR: 0, 10, 20, 40, 80 ppm HR: 0, 100, 200, 400, 800 ppm



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# Food/Laundry

# Dairy Producers, Food Processors, Commercial Launderers



# Laundry Outfit

For control of water supplies, cleaning operations, and rinses

#### Model LDR, Order Code 3095-02 (Shipping Code LQ)

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)	рН 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

-	Application
0.5%/drop	Available chlorine in bleach solutions
10 ppm or 1 gpg/drop	Water Supply
Yes/No (Soil)	Presence of soil in solution
	10 ppm or 1 gpg/drop

# Also Available...

Code	Description	Ship Codes
7250-02	P Alkalinity 1 drop = 10 ppm or 100 ppm Total Hardness 1 drop = 1 gpg Chlorine Strips 10, 50, 100, 200 ppm	R2
7196-01	Chlorine 1 drop = 10 ppm Oxygenated Bleach 1 drop = 10 ppm	R2
3541-01	Spot test for presence/absence of Chlorine and Iron. Wide Range pH	R1
7894-01	High Range–1 dr = 0.5% Cl <sub>2</sub> Mid Range–1 dr = 0.05% Cl <sub>2</sub> Low Range–1 dr = 0.005% Cl <sub>2</sub>	R1





Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Laboratories, Government Agencies

## **SMART Water Analysis Laboratory**

MODEL SCL-05, Order Code 1951-03 (Shipping Code LQ; 37 lbs.) Reagent Refill, Order Code R-1951-03 (Shipping Code LQ; 10 lbs.)

This portable lab measures 24 water quality parameters for pollution detection, environmental studies, and industrial water and wastes. The SMART3 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.

## See specifications on next page.



Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.

# General Water Analysis

# Laboratories, Government Agencies

#### **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)
lodine	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 (∞)

#### **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)
pН	5-0034-01	pH5	pH 0–14
Conductivity	5-0038-02	CON5	0.0–19.99 mS

# Also Available...

Description	Code	Model	Ship Code (Wgt.)
Model SCL-04, SMART Water Analysis Laboratory, <i>without</i> pH & Conductivity Meters	1991-02	SCL-04	LQ (34 lbs.)
Reagent Refill	R-1991-02		LQ (10 lbs.)



Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.

# Industrial Water

# 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 41-55) or the instrumentation section (pages 8-35). Squeeze valve (pinchcock) style burets are standard equipment with these kits, but glass or Teflon<sup>®</sup> stopcock burets may be ordered for an additional charge.



## Model AB-152

#### Order Code 7643-01 (Ship Code LQ)

Factor	Method	Equivalence (# Tests)
рН	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 =6 0.25 mg (50+)
Sulfite	lodometric	1 mL = 1.0 mg (50+)

Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.

# Industrial Water

# Water Treatment Companies, Engineers, Consultants

# **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	4069	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	lodide lodate, N/40
	6106	lodide lodate, N/80
	4556	lodide lodate, N/63
	8667	lodide lodate, N/126

Dependable LaMotte reagents are available in a wide variety of sizes. Call Customer Service for assistance.







Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Pool & Spa Water

# Professionals, Public Operators, Private Owners





For more

## WaterLink<sup>®</sup> Spin Touch<sup>™</sup>

#### Code 3580 | 3580-EU Europe

Includes: Photometer, Instruction Manual, Quick-Start Guide, 3 Syringes, Meter Check Disk, USB Cord with USB Wall Adapter, In-Store Kit [counter mat, banner, etc.]



## Mobile WaterLink® Spin Touch™

#### Code 3581 | 3581-EU Europe

Includes: All of the above plus Waterproof Carrying Case with Foam Inserts (holds meter and accessories); does not include In-Store Kit

# Mobile Commercial WaterLink® Spin Touch™

#### Code 3582 | 3582-EU Europe

Includes: All of the above plus Upright Waterproof Carrying Case with Foam Insert—ideal for 3-Use disk users (holds meter and accessories) does not include In-Store Kit



Instrument Type:	Centrifugal Fluidics Photometer
6 Wavelengths:	390 nm, 428 nm, 470 nm, 525 nm, 568 nm, 635 nm
Display:	Color Capacitive Touchscreen, 3.5", 320 X 240 pixel resolution
Batteries:	Lithium Ion, Rechargeable (Full Charge in 10 hours), 150 tests per charge
Communication:	Bluetooth, USB-C
Calibration:	Factory Set, Field Calibration via Internet Connection
Data Storage:	Last 250 Test Results with Date and Time
Water Resistance:	Rubber Over-molded Base, Rubber USB Port Plug, Gasketed Display and Hinge
Size & Weight:	22.6 L x 12.7 W x 11.4 H cm, 0.79 kg; 8.5 L x 4.9 W x 4.1 H", 1.74 lb.
Operation:	Single On/Off/Reset Button with Indicator Light, Touchscreen
Firmware:	Internet Updateable (New Tests, New Test Calibrations, etc.)
Software (optional):	Android & iOS Apps, DataMate® Web, DataMate® 10
Languages	English, French, Spanish, German, Italian, Portuguese, Dutch, Swedish, Chinese
Certification	CE
Printer:	Optional Bluetooth Printer (Code 3-0066); 384 dots per line at 8 dots/mm resolution Available in 2018

#### **Reliable Results**

- Virtually eliminates User-Error
- Pre-Measured Reagents and Pre-Measured Sample\*
- Exact Reaction Time and Auto-Blanking
- Meter Calibration Check System
- New 6-Wavelength Photometer

#### Super Fast & Simple

- 30 Seconds for 3-Test Disk, 60 Seconds for 10-Test Disk
- Fill Disk and Insert > Tap "Start Test" > Read Results

#### Auto-Record Keeping

- Stores Test Dates, Times, Results
- Upload to Cloud, Download to Computer

#### Stand-Alone or Cloud Ready!

- No Computer, Smartphone, or Tablet Needed
- Touchscreen Operation
- Communicates through Bluetooth<sup>®</sup> or USB

#### New 3-Use Disk Cuts Costs

- New 3-Use Disk for Free Chlorine, Total Chlorine (Bromine), Combined Chlorine, and pH—Results in 30 Seconds!
- Meter knows which Test Section is New Test
- Also runs 10-Test Disks for Full Test Battery—Results in 60 Seconds!

#### **Rugged and Portable**

- Innovative Water-Resistant Housing Design
- Internal, Rechargeable Batteries
- Optional Heavy-Duty, Waterproof Carrying Case

#### Advanced Cloud Software

- Android and iPhone WaterLink<sup>®</sup> Connect Apps enable Live Connections to DataMate<sup>®</sup> Web Cloud Software
- DataMate<sup>®</sup> Web Software offers Treatment Recommendations, Test Result Collection, Service Scheduling, E-Door Hanger Emails and much more! [see next page]

#### In-Store Testing

Fully compatible with DataMate<sup>®</sup> 10 and DataMate<sup>®</sup> Web

#### Advanced Optics

Immune to Power or Computer Outages (can still run tests and get results)

# Professionals, Public Operators, Private Owners

# Insta-TEST<sup>®</sup> Plus Strips

The Insta-TEST® 3, PR0400, and 5-way pool and spa test strips are the only strips of their kind that do not require any specific waiting period. Just dip the strip in the pool or spa for accurate and reliable results. The 3-way test strip measures 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 PR0400 provides 100 strips and measures the Free Chlorine or Bromine, Total Chlorine, pH and Alkalinity. The PopTop bottle 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<sup>®</sup> strip is an easy one step procedure for measuring Sodium Chloride in salt-water pools. Just dip and read to get results in only 20 seconds. The strip measures salt water pool samples over the range of 1,500 to 5,000 ppm. Each bottle contains 50 strips in a convenient, black PopTop bottle. A desiccant liner inside the bottle protects the strips from moisture intrusion and UV light.

The Wide Range pH and Total Chlorine Insta-TEST<sup>®</sup> 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.

. See pages 36-37 for additional test strips.



Code	Model	Free Chlorine	Bromine	Total Chlorine	Alkalinity	рН	Total Hardness	Salt	Case Pack Size	Ship Code
2976	Insta-TEST 3 Plus	0 to 10	0 to 20	_	0 to 240	6.2 to 9.0	—	_	12, 24 or 100	NH
2977	Insta-TEST 5 Plus	0 to 10	0 to 20	0 to 10	0 to 240	6.2 to 9.0	50 to 800	_	12 or 100	NH
2978	Insta-TEST PRO 400 Plus	0 to 10	0 to 20	0 to 10	0 to 240	6.2 to 9.0	_	_	12 or 100	NH
2998	Insta-TEST Salt	—	—	—	—	_	—	1500 to 5000	12 or 100	NH
2987-G	Insta-TEST Wide Range pH/Total Chlorine	—	—	0 to 50	-	4 to 10	-	—	12	NH



Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Pool & Spa Water

# Professionals, Public Operators, Private 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.

- 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 (71/2" x 41/2")
- 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	рН	Calcium Alkalinity	Calcium Hardness	Acid Demand	Base Demand	Суа	Ship Code
7011-01/ DT-3	0.5-10.0	0.5-10.0	6.8-8.2	(This kit incl	udes 50 DPD tablets for	each Chlorine te	st]	—	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	



## 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	рН	Total Alkalinity	Calcium Hardness	Acid Demand	Cyanuric Acid	Ship Code
3366-BR-01/PM-41-BR	Bromine	0-10.0	6.8-8.2	60-400	60-400	Calc.	-	NH
3366-01/PM-41	0.2-3.0	0.2-3.0	6.8-8.2	60-400	60-400	Calc.	-	NH
3366-NJ-01/PM-41-NJ	0.5-10.0	0.5-10.0	6.8-8.2	60-400	60-400	Calc.	-	NH
3368-01/PM-51	0.2-3.0	0.2-3.0	6.8-8.2	60-400	60-400	Calc.	0-100	NH
3368-NJ-01/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-01/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 · [LQ, 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.

# Pool & Spa Water

# Professionals, Public Operators, Private Owners



## PR0250

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 PR0250 PLUS outfit includes all of the above plus Copper and Iron tests.

Every PRO250 SERIES kit includes color-coded caps to prevent mixups and diagramed 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	рН	Total Alkalinity	Calcium Hardness	Acid & Base Demand	Суа	Copper	Iron	Ship Code
7001-NJ-01/ PR0250-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-01/ PR0250 PLUS-NJ	0.2-3.0 & 0.5 -10.0	0.2-3.0 & 0.5 -10.0	6.8-8.2	1 drop =1 0 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	

# ColorQ PRO 9 TESTAB® KIT

#### Model PRO 9, Order Code 2069 (Ship Code R1; 4 lbs.)

The unique, multi-test ColorQ hand-held photometer reads NINE pool and spa test factors directly on a digital display. Featuring an innovative dualoptic design, the ColorQ provides more accuracy and more test factors. The ColorQ eliminates the need to visually determine slight color variations or use look-up tables, thus taking the guesswork out of poolside water analysis.

Test Factor	Range	Method	
Free Chlorine (DPD)	0-10.0 ppm	Colorimeter	
Total Chlorine (DPD)	0-10.0 ppm	Colorimeter	
Bromine (DPD)	0-22.0 ppm	Colorimeter	
pН	6.5-8.5 pH	Colorimeter	
Calcium Hardness	0-400 ppm	Colorimeter	
Total Alkalinity	0-250 ppm	Colorimeter	
Iron	0-3.0 ppm	Colorimeter	
Copper	0-4.0 ppm	Colorimeter	
Cyanuric Acid	0-125 ppm	Colorimeter	



Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.

# Professionals, Public Operators, Private Owners

## DPD TesTabs<sup>®</sup> - All new packaging for easier use!

As the only North American manufacturer of DPD tablets, LaMotte has replaced traditional foil-on-foil strip packaging with blister-style foil packaging. The user can dispense each tablet into a small vial by pressing the tablet through the foil. This eliminates the need to manually tear open a foil packet and carefully dispense the tablet. The package carries the customary 10 tablets per strip in a compact 3.35" x 1.35" size. In addition to the convenient package, the DPD #1R rapid dissolving formula for measuring Free Chlorine has been enhanced for faster dissolution. Listed below are visual grade tablets.



		Quantity/Or	der Code	
Tablet	50	100	1000	Ship Code
Chlorine DPD #1 Rapid	6999A-H	6999A-J	6999A-M	NH
Chlorine DPD #3 Rapid	6905A-H	6905A-J	6905A-M	NH
Chlorine DPD #4 Rapid	6899A-H	6899A-J	6899A-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)	6911A-H	6911A-J	N/A	NH

# See page 33 for instrument tablets

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





Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

Ship Code

NH

R2

NH

# Water & Wastewater

# Municipal & Industrial Water & Wastewater Systems

## StormWatch MS4 Water Analysis Kit

#### Model MS4 · Order Code 7449 (Ship Code R1; 10 lbs.)

The LaMotte Stormwater MS4 Kit has instrumentation and reagent systems to provide a preliminary screening of stormwater outflow, and to determine whether it is contributing to the overall pollutant load from precipitation events. Meets quidance as set forth by USEPA.

#### Features

- Fast Most tests can be completed in under 2-minutes
- Easy All meters and tests come with easy-to-follow instructions
- Unique Design All-in-one kit covers your testing needs in one carrying case
- Expandable To over 80 tests

Test Factor	Range (# Tests)			
Ammonia	0.05-4.00 ppm			
Color	20-1,000 color units			
Conductivity	0-19.99 uS/cm			
Hardness	1 drop = 10, 25 or 50 ppm			
рН	0.00-14.00 pH			
Potassium	0.05-10 ppm			
TDS	0-999 ppm			
Turbidity	3-400 FAU			



= LaMotte

SMART3

Colorimeter

Operator's Manual

Scan here to see our **Stormwater MS4 Guidance video** 

STORMWATCH

MS4 WATER SCREENING KT

LaMotte

Expanded range for all factors available by dilution.

Shipping Code Description - R1: Small Quantity Hazardous Materials, No Fees



Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.
# Municipal & Industrial Water & Wastewater Systems



#### StormWatch Drain Monitoring Kit Model SD · Code 7446-01 (Ship Code LQ; 10 lbs.)

The Model SD Monitoring Kit was specifically designed and manufactured to meet US EPA requirements for field test procedures approved in the Federal Register [Volume 55, No. 217], to monitor illicit storm drain connections. Each unit includes tests for pH, Total Chlorine, Total Copper, Phenols, Detergent Surfactants, and Turbidity. The Model SD is packaged in a rugged portable carrying case for on-site use. Includes diagrammed instructions.

Factor	Range	Method	Color Bar Values
Phenols	0-5.0 ppm	4-Aminoantipyrine Slide	0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0
Copper	0-4.0 ppm	Thiocarbamate Slide	0.0, 0.25, 0.5, 1.0, 1.5, 2.0, 3.0, 4.0
Detergents	0.1 ppm sensitivity	Titration	
Total Residual Chlorine	0.2-3.0 ppm	DPD Slide	0.2, 0.4, 0.6, 0.8, 1.0, 1.5, 2.0, 3.0
Turbidity	0 to 500 FTU	Formazin Equivalent	Low, Med, High
Meters	Range		

Tracer pH PockeTester 0-14 pH, 0.01 pH

Shipping Code Description - LQ: Hazardous Materials, Air Fees Only

## **Corrosion Control Kit**

#### Model CCK, Order Code 7436-02 (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	Complexor	netric	0–200 ppm(50)	
P & T Alkalinity	Neutralizat	ion	0–200 ppm (50)	
Orthophosphate	Ascorbic Ad	cid	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	ІрН	
Waterproof TDS 1 P	ockeTester	10-1	.990 ppm	

Ship Codes: (NH) Non-Hazardous Material - No Fees · (R1) Small Qty. Hazardous Material - No Fees · (LQ, 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.

# Water Conditioning

# **Residential & Commercial Water Treatment Specialists**

# Customize Your Water Quality Sales Demonstrations. **Choose the Softener that Meets Your Needs!**

LaMotte Model AT-Q Digital and AT Visual series outfits are the most popular and effective sales tools for on-site demonstrations. The tests clearly demonstrate the benefits between untreated and treated water.

## **AT-Q Digital Series**

#### Featuring the ColorQ DW digital colorimeter

- New digital versions
- New rugged case
- with locks
- Fast & simple tests
- More custom options
- Competitive pricing





Code 4-3051-01



AT-Q with DuoSoft • Code 4-3055-01



AT-Q with DirectFlo . Code 4-3071-01

AT-Q with DirectFlo DuoSoft Code 4-3075-01

#### AT-Q Digital Kit Tests (9 Included)

	Hardness	рН	Iron	Nitrate	Chlorine Free 윤 Total	Sulfide	Precipitation	Soap Consumption
Range	1-41 gpg*	5-9	0-3.0 ppm*	0-25	0-10 ppm	0-3.0 ppm*	Before/After	Before/After
Resolution	1 gpg	0.5 pH	0.5	1 ppm	0.2 ppm	0.2 ppm	_	
# of Tests	140	70	50	50	50	120	100	100

\*Higher Concentrations by dilution; instructions included.

# **AT Visual Series**







AT with DirectFlo Code 4-3010-01



Code 4-3015-01



## AT Visual Kit Tests (5 Included)

				Precipitation	Consumption
Range 1 c	drop = 10 ppm/1 gpg	5.0-10 ppm	0.5-10* ppm	Before/After	Before/After
# of Tests 10	0	100	100	100	100

\*Higher Concentrations by dilution; instructions included.

#### **Optional Add-On Kits and TDS Meter:**

Chlorine (0.2-3.0 ppm), 50 Tests; Code 4-3006 Nitrate (0-15 ppm), 50 Tests; Code 4-3004 TDS Meter, Code 5-0080 (see page 26)

Ship Codes: [NH] Non-Hazardous Material - No Fees · [R1] Small Qty. Hazardous Material - No Fees · [LQ, 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.

# Water Conditioning

# Residential & Commercial Water Treatment Specialists

## **Demonstration Softener Units**



#### Model S

Order Code 1002

Single chamber, filled with resin



Order Code 1022
Dual chamber, shipped empty

Order Code 1022-FLDDual chamber, filled with carbon and resin



DirectFlo

Order Code 1026 Hose Free

 Single chamber, filled with resin



DirectFlo DuoSoft

#### Order Code 1028

- Hose Free
- Dual chamber, filled with carbon and resin

Please visit www.lamotte.com for details

# Packaged Drinking Water Test Strips

#### Code 4-2936FP-100

Each LaMotte Drinking Water Test Strip tests 5 important water quality parameters for both municipal and well water sources in only seconds! With a 2-second dip, each strip determines Free Chlorine, Total Chlorine, Total Hardness, pH, and Nitrate. Sold in case of 100 packets!



Each plastic packet contains: 2 individually packed test strips, full-color instructions, and color chart.

Factor	Range	Factor
Free Chlorine, Total Chl Total Hardness, pH, and N	itrate 0-10 (TCI) 0-400 (Hard) 4-10 (pH)	0, 0.5, 1, 3, 5, 10 0, 0.5, 1, 3, 5, 10 0, 50, 100, 200, 400 0, 3, 5.8, 11.7, 23 (gpg) 4, 5, 6, 7, 8, 9, 10 0, 5, 10, 25, 50 (N0 <sub>3</sub> -N)

## Water Quality Outfit

#### Model AR-42, Order Code 3590-03 (Ship Code R1, 7 lbs.)

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.

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)
рН	Wide Range	pH 5.0–10.0 (50)
Iron	Bipyridyl	0.5–10.0 ppm (100)
Hardness	Titration	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 · [LQ, 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.

# 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 fo 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 Phenol Red Solution (Reagent Code Number 2211), use the letter "-H", and order by code number "2211-H".

NOTE: A reagent is available only in the sizes indicated under the kit's listing in this section.

-A	1	1mL	1 gram
-В	2	2 mL	2 grams
-C	5	5 mL	5 grams
-D	10	10 mL	10 grams
-Е	15	15 mL	15 grams
-F	20	20 mL	20 grams
-G	30	30mL	30 grams
-H	60	60mL	60 grams
-J	120	120mL	120 grams
-K	250	250-285mL	1200-500 grams
-L	500	470-525mL	450-500 grams
-M	1000	950-1000mL	
-N		3800mL	

# How to Determine Reagent Manufacture and Expiration Dates

On the lower, left corner of the label of each LaMotte reagent is a six (sometimes seven), digit number. This is not a code number, but the lot number of that reagent. A lot number records the date of manufacture and identifies the reagent as part of a specific batch of reagent produced on that date. The first two digits of the lot number identify the week, and the third digit identifies the year of manufacture.

If the shelf-life of your reagent is unknown, one year from the date of manufacture is still a good rule of thumb.



Lot# (Including Week, Year, & Batch Information)

it Code	Reagent #	Description	
036-01	2220-H	Range Finding Indicator	
081-02	2218-G	Wide Range	
	2212-G	Cresol Red	
109-01	2210-G	Bromthymol Blue	
110-01	2211-G	Phenol Red	
111-01	2212-G	Cresol Red	
112-01	2213-G	Thymol Blue	
	2214-G	Oleo Red B	
)36-DR-02	6410-E	Ferroin	
	6411PS-H	Nitrite DRT	
)37-DR-01	4483-E	Hardness 5	
	4257-H	Hardness Titration	
	6522-E	CM Indicator	
043-DR-01	6413-E	QAC Indicator	
	6412-H	Titration Reagent	
95-02	6434-H	Hypochlorite Indicator	
	7941PS-H	Hypochlorite Reagent C	
	2301-G	Nitro Green Indicator	
	4483-E	Hardness Reagent 5	
	4485-E	Hardness Reagent 6	
	4487PS-H	Hardness Reagent 7	
	2246-E	Phenolphthalein	
	2230-E	Methyl Orange Indicator	
	6130PS-H	Hydrochloric Acid 1N	
	6323-H	Hydrochloric Acid 0.1N	
	6432-H	Sour Indicator	
10-01	V-6278-H	Mixed Acid	
	V-6279-C	Nitrate Reducing	
14-02	V-6282-G	Phosphate Acid	
	V-6283-C	Phosphate Reducing	
19-01	V-6278-J	Mixed Acid	
	V-6279-C	Nitrate Reducing	
	V-6282-H	Phosphate Acid	
	V-6283-C	Phosphate Reducing	
21-02	V-6282-G	Phosphate Acid	
	V-6283-C	Phosphate Reducing	
38-01	6364-C	Tetraphenylboron	
	7745-E	Sodium Hydroxide	
.60-01	6484-H	, Molybdenum Buffer	
	6485-H	, Molybdenum Oxidizing	
	6486-S	Molybdenum Indicator	
176-02	6807-C	DPD 1	
	6905-H	DPD 3R	
	6815-G	Ferrous Ammonium Sulfate	

( <b>P</b> )
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Kit Code	Reagent #	Description
3240-01	6903-J	DPD 1
	6197-J	DPD 3
3240-li	P-6740-G	DPD 1A
	P-6741-G	DPD 1B
	P-6743-G	DPD 3
3241	V-4797-G	Ammonia Nitrogen 1
	V-4798-G	Ammonia Nitrogen 2
3242	V-6282-H	Phosphate Acid
	V-6283-D	Phosphate Reducing
3243	3875-J	Acid Zirconyl SPADNS
	4128-H	Sodium Arsenite
3245	6446-G	Copper 1
3246	6485-G	Molybdenum Oxidizing
	3997-H	MO Buffer
	6486-S	Molybdenum Indicator
3247	V-6277-D	Sulfate
3248	2776-Е	Acid Phenanthroline
	2777-C	Iron Reducing
3304-02	3978LWT-H	Salicylate Ammonia #1
	3979WT-G	Salicylate Ammonia #2
	3982WT-G	Salicylate Ammonia #3
3308-01	6999-H	DPD 1R
	6905-H	DPD 3R
3312-01	6999-H	DPD 1R
	6905-H	DPD 3R
3314-01	6999-J	DPD 1R
	6905-J	DPD 3R
3328-01	6999-H	DPD 1R
	6905-H	DPD 3R
3346-01	3962-H	Molybdate 1 HR
	3963-H	Molybdate 2 HR
3347-01	4450-G	Iron Reagent 1
	4451-S	Iron Reagent 2 Powder
	4453-S	Ferrous Iron Reagent
3352-01	V-6278-J	Mixed Acid Reagent
	V-6281-C	Color Developing Reagent
3354-01	2799-H	Nitrate 1
	NN-3703-H	Nitrate 2
3363-01	6915-H	Phenol Red
-	6905-6999	DPD 1, DPD 3
3363-NJ-01	6915-H	Phenol Red
	6905-6999	DPD 1, DPD 3
	0000 0000	J. D 1, DI D 0
3366-01	6905-6999	DPD 1, DPD 3

Kit Code	Reagent #	Description
3366-BR-01	6999-J	DPD 1R
	6915-3box	pH, Alk, Hard
3368-01	6905-6999	DPD 1, DPD 3
	3920-4box	pH, Alk, Hard, CYA
3467-01	3870-E	Alkalinity Indicator 1
	3869-E	Alkalinity Indicator 2
	4493DR-H	Alkalinity B
3468-01	4069-E	Chloride A
	4070-H	Chloride B
3519-01	V-6278-J	Mixed Acid
	V-6279-C	Nitrate Reducing
	V-6281-C	Color Developing
3541-01	6381-G	Hydrochloric Acid
	4100-G	O-Tolidine
	5116WT-G	Ferric Iron Test
	9078WT-G	Sour Indicator
3569-01	3943-H	Aluminum 1
	3944-H	Aluminum 2
3588-02	4255-H	Hardness Buffer
	3956-G	Manganese
	6203-J	Chloroform
	2785-E	Metal Inhibitor
3609-01	4259-E	Sodium Hydroxide
	T-5250-H	Calcium Hardness
	4487DR-H	Hardness 7
3615-01	V-6278-K	Mixed Acid
	V-6279-D	Nitrate Reducing
3619	Р-6367-Е	Copper A
	P-6368-E	Copper B
3624-01	6807-C	DPD 1
	6905-H	DPD 3R
	3992DR-H	Chlorine/Bromine
3628-01	7646-G	Molybdenum Buffer
3632-01	3997-J	MO Buffer
	3998-H	Denatured Alcohol
	3999-H	MO Titrant
	4001-S	Carbazone

Kit Code	Reagent #	Description
3633-05	4797WT-G	Ammonia Nitrogen 1
	4798WT-G	Ammonia Nitrogen 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	Alkaline Potassium Iodide-Azide
	6141WT-G	Sulfuric Acid
	4170PS-G	Starch Indicator
	4253DR-H	Carbon Dioxide B
3635-05	2218-G	Wide Range pH 3
	3978LWT-H	Salicylate Ammonia 1
	3979WT-G	Salicylate Ammonia 2
	3982WT-G	Salicylate Ammonia 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 Potassium Iodide-Azide
	6141WT-G	Sulfuric Acid
	4170PS-G	Starch Indicator
3639-SC	4004WT-G	Sodium Hydroxide
	6364-C	Tetraphenylboron
3640-SC	T-3808-H	Copper Tablets
3641-01-SC	7865-C	Aluminum Inhibitor
	7866-J	Aluminum Buffer
	7867-J	Aluminum Indicator
	7868-E	Aluminum Complexing

Kit Code	Reagent #	Description
3642-SC	V-4797-G	Ammonia Nitrogen 1
	V-4798-G	Ammonia Nitrogen 2
643-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
3646-SC	6446-E	Copper 1
3647-02-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-Е	Chlorine Inhibitor
	3991-K	Ozone Buffer
652-01-SC	7825-C	Aminoantipyrine
	7826-G	Ammonium Hydroxide
	7827-H	Potassium Ferricyanide
653-SC	V-6282-H	Phosphate Acid
-	V-6283-C	Phosphate Reducing
654-02-SC	V-4458-G	Sulfide A
	V-4459-E	Sulfide B
	4460-H	Sulfide C
655-SC	4410-H	Phosphate
656-01-SC	4842-D	Reagent B
	4841-H	Hydrazine A
658-01-SC	3956-G	Manganese Indicator
	4255-G	Hardness Buffer
	6565-E	Sodium Cyanide
8659-01-SC	3978-H	Salicylate Ammonia 1
1013-01-90		,
	7457-D	Salicylate 2
	7458-C	Salicylate 3
3660-01-SC	6130-E	Hydrochloric Acid
	4004-E	Sodium Hydroxide
	2850PS-H	Cyanide Buffer
	2794DS-C	Cyanide CL
	2793DS-C	Cyanide Indicator
3661-01-SC	4856-K	Cyanuric Acid Rgt.
3662-SC	6452-G	Hydrogen Peroxide 1
	6454	Hydrogen Peroxide Tabs

Kit Code	Reagent #	Description
3663-01-SC	6251PS-H	Hydrochloric Acid
	6253-K	Sodium Citrate
	6254-H	Dimethylglyoxime
	6537-H	Ammonium Hydroxide
	6566-G	Ammonium Pers
	6346WT-G	Silver Nitrate
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.
3666-01-SC	7833-G	Tannin 1
	7834-H	Tannin 2
3667-01-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
3240-01	6903-J	DPD 1
	6197-J	DPD 3
3240-LI	P-6740-G	DPD 1A
	P-6741-G	DPD 1B
	P-6743-G	DPD 3
3245	6446-G	Copper 1
3243	3875-J	Acid Zirconyl SPADNS
	4128-H	Sodium Arsenite
3246	6485-G	Molybden. Oxidizing
	3997-Н	MO Buffer
	6486-S	Molybdenum Indicator
3242	V-6282-H	Phosphate Acid
JETE	V-6283-D	Phosphate Reducing
	V-0E0J-D	
3241	V-4797-G	Ammonia Nitrogen 1
3241		Ammonia Nitrogen 1 Ammonia Nitrogen 2
	V-4797-G	
	V-4797-G V-4798-G	Ammonia Nitrogen 2
3241 3248 3247	V-4797-G V-4798-G 2776-E	Ammonia Nitrogen 2 Acid Phenanthroline
3248 3247	V-4797-G V-4798-G 2776-E 2777-C	Ammonia Nitrogen 2 Acid Phenanthroline Iron Reducing
3248	V-4797-G V-4798-G 2776-E 2777-C V-6277-D	Ammonia Nitrogen 2 Acid Phenanthroline Iron Reducing Sulfate Rgt.

Kit Code	Reagent #	Description	
3688-SC	4167-G	Manganous Sulfate	
	7166-G	Alkaline Pot. lodide-Azide	
	6141WT-G	Sulfuric Acid	
3698-SC	7681-H	Sulfuric Acid	
	V-6276-D	Chromium Rgt.	
	7683-E	Sodium Azide	
	7682-G	Potassium Permanganate	
	5115PT-H	Deionized Water	
8699-03-SC	3997-G	MO Buffer	
	6485-G	Molybdenum Oxidizing	
	6486-S	Molybdenum Indicator	
700-01-SC	V-2209-H	TRL Chlorphenol Red	
	V-2304-H	TRL Phenol Red	
	V-2213-H	TRL Thymol Blue	
1-3003-02	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	
I-8776-01	4133	DSP Reagent 10%	
	4135	Borate Buffer	
	4134	PSSA Reagent 5%	
	4170	Starch Indicator	
	6377	lodine Solution 0.025N	
	3843	Zinc Acetate 2.0N	
1031-01	4032	Ammonia Chloride Buffer	
	6565	Sodium Cyanide 10%	
	4033	PAR Indicator	
	4022	Stabilizing Reagent	
1401-02	4410-G	VM Phosphate	
408-01	6405-G	Reducing Rgt.	
	4410-H	VM Phosphate	
4430-01	4431-G	Chromate Indicator	
1447-01	4450-G	Iron 1	
	4451-S	Iron 2	
4456-01	4458-G	Sulfide A	
	4459-E	Sulfide B	
	4460-H	Sulfide C	

Kit Code	Reagent #	Description	
4463-01	4571-G	Silica 1	
	4467-E	Silica 2	
	4468-E	Silica 3	
	6405-C	Reducing Rgt.	
4482-DR-LI-01	4483-E	Hardness 5	
	4485-E	Hardness 6	
	4487DR-H	Hardness 7	
4482-DR-LT-01	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487DR-H	Hardness 7	
4482-LI-02	4483-E	Hardness 5	
	4485-E	Hardness 6	
	4487WT-H	Hardness 7	
4482-LT-02	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
4491-DR-01	Т-2311-Н	BCG-MR Indicator	
	4493DR-H	Alkalinity Titration B	
4497-01	4498WT-H	Chlorine 1	
	4499WT-H	Chlorine 2	
	4500PA-H	Chlorine 3	
4497-DR-01	4498WT-H	Chlorine 1	
	4499WT-H	Chlorine 2	
	4500DR-H	Chlorine 3	
4501-01	4498-E	Chlorine 1	
	4499-E	Chlorine 2	
	3819-H	Sodium Thiosulfate	
4503-DR-02	4504-E	Chloride 1	
	2246-E	Phenolphthalein	
	6090-E	Sulfuric Acid	
	4505DR-G	Chloride 2	
4507-02	4508-G	DS Indicator	
	4509-H	pH Adjustment	
	4513-E	DS Reference	
4515-01	7444-H	Detergent Reagent 1	
	6037-J	Detergent Reagent 2	
	7445-J	Detergent Reagent 3	
4533-01	T-2246-J	Phenolphthalein	
	T-2311-J	BCG-MR Indicator	
	4493PS-H	Alkalinity Titration B	
4533-DR-01	T-2246-J	Phenolphthalein	
	T-2311-J	BCG-MR Indicator	
	4493DR-H	Alkalinity Titration B	

Kit Code	Reagent #	Description	
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	
4766	4768-H	Hardness Soap	
4783-03	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
	4450-G	Iron 1	
	4451-S	Iron 2	
	2218-G	Wide Range	
4790-01	4791-E	DEHA 1	
	4792-E	DEHA 2	
	4793-E	DEHA 3	
4801-DR-01	4802DR-H	TDS A	
	4803DR-H	TDS B	
	2299-E	Methyl Orange	
4824-DR-LT-01	4259-E	Sod. Hydroxide	
	Т-5250-Н	Calcium Hardness	
	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487DR-H	Hardness 7	
4824-LT-02	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487WT-H	Hardness 7	
	4259-E	Sod. Hydroxide	
	T-5250-H	Calcium Hardness	
5858-01	2218-G	Wide Range Indicator	
5860-01	4167-G	Manqanous Sulfate	
	4169-H	Sodium Thiosulfate	
	4170-H	Starch Indicator	
	6141WT-G	Sulfuric Acid	
	7166-G	Alkaline Potassium Iodide-Azide	
5864-01	3968A-H	Ammonia #1 Tab	
000101	3969A-H	Ammonia #1 Tab Ammonia #2 Tab	
6616-01	6446-E	Copper 1	
6628-01	6630-D	Molybdenum Rgt.	

Kit Code	Reagent #	Description
6701-01	6697-J	Formaldehyde 1
	6698-C	Formaldehyde 2
	6699-J	Formaldehyde 3
6896-01	6999-J	DPD 1R
	6915-H	Phenol Red
6980-01	6999	DPD 1R
	6904	DPD 2R
	6905	DPD 3R
	6899	DPD 4R
	6915	Phenol Red
7001-NJ-01	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
7002-NJ-01	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
	Т-4451-Н	Iron 2
	P-6446-E	Copper 1
7011-01	6905-6999	DPD 1, DPD 3
1011-01	0000 0000	

	Reagent #	Description	
/013	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	
	Р-6460-Е	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	
056-01	7125-H	Polyquat Titrating	
	2258-E	Phenolphthalein	
	6090-E	Sulfuric Acid	
	3995-G	Toluidine Blue O	
	7117-H	EDTA	
057-01	3996-H	Quat Titrating	
	3995-G	Toluidine Blue O	
	7117-Н	EDTA	
	2258-E	Phenolphthalein	
	6090-E	Sulfuric Acid	
064-01	6289-H	Sulfuric Acid	
	6289WT-H	Sulfuric Acid	
	5168-J	Sodium Hydroxide	
	2246-E	Phenolphthalein	
	7114-H	Glutaraldehyde Test Powder	
	5175PT-K	Distilled Water	
101-01	7102-G	Nitrite 1	
	7103PS-H	Nitrite 2	
L01-DR-01	7102-G	Nitrite 1	
	7103DR-H	Nitrite 2	
05-03	7939PS-G	Hypochlorite A	
	2790-H	Hypochlorite D	
	6809-D	Potassium lodide	
.32-01	2258-E	Phenolphthalein	
	6385-D	Starch Acid	
	2779WT-H	lodide lodate	
L38-DB-01	6809-D	Potassium lodide	
	4170WT-G	Starch Indicator	
	7139-Н	Peroxide Titrant	
	7140-H	Acidified Catalyst	
L43-01	2780-D	T.C. Indicator	
	6025-H	Hydrochloric Acid	
	2781WT-H	T.C. Titrant	

Kit Code	Reagent #	Description	
7144-01	4483-G	Hardness 5	
	4485-E	Hardness 6	
	2782WT-H	Free Chelant Titrant	
7150-01	6809-D	Potassium lodide	
	4170WT-G	Starch Indicator	
	7456WT-H	Peroxide Titrant	
	7140-H	Acidified Catalyst	
7171-02	4483WT-G	Hardness 5	
	4485-G	Hardness 6	
	2783WT-H	Hardness 10	
7172-02	6091WT-G	Hydrogen Peroxide	
	4069WT-G	Chloride A	
	6090WT-G	Sulfuric Acid	
	2258-E	Phenolphthalein	
	3824WT-G	Silver Nitrate	
7175-01	7327-E	Sulfite A	
	7328-E	Sulfite B	
	7329PS-H	Sulfite C	
7175-DR-01	7327-E	Sulfite A	
	7328-E	Sulfite B	
	7329DR-H	Sulfite C	
7181-01	5649WT-G	Hydrochloric Acid	
	2258-E	Phenolphthalein	
	6117-G	Barium Chloride	
7182-01	5648-G	Sodium Hydroxide	
	2258-E	Phenolphthalein	
7183-02	6410-E	Ferroin	
	2789WT-G	Can Solution	
7191-02	6141WT-G	Sulfuric Acid	
	6410-E	Ferroin	
	5650LWT-G	Hydrogen Peroxide	
	6521-G	Potassium lodide	
	S-6155-H	Peracetic Acid Titrant	
7196-01	6434WT-G	Hypochlorite	
	4500WT-H	Chlorine 3	
	6452-G	Hydrogen Peroxide 1	
7240-02	2258-E	Phenolphthalein	
	2786-E	Total Alkalinity	
	7748WT-G	Sulfuric Acid	
7246-02	2788WT-G	Hardness 2	
	4483WT-G	Hardness 5	
	4485-G	Hardness 6	

Kit Code	Reagent #	Description	
7250-02	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	
7253-01	7254-E	lodine 1	
	7255-E	lodine 2	
	6406PS-H	lodine 3	
7253-DR-01	7254-E	lodine 1	
	7255-E	lodine 2	
	6406DR-H	lodine 3	
7297-DR-01	2246-E	Phenolphthalein	
	4253DR-H	Carbon Dioxide B	
7387-02	6130-E	Hydrochloric Acid	
	4004-E	Sodium Hydroxide	
	2850PS-H	Cyanide Buffer	
	2794DS-C	Cyanide CL	
	2793DS-C	Cyanide Indicator	
	2955	pH Test Paper	
7391-02	7393-G	Zinc Rgt.	
	7361-E	Zinc Conditioning	
7417-02	7393-G	Zinc Rgt.	
	7361-E	Zinc Conditioning	
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	
7446-01	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	
7459-02	7460-E	Salinity A	
	7461DR-G	Salinity B	

**Reagent Refills** 

751/1 01	Reagent #		
7514-01	6807-C	DPD 1	
	6905-H	DPD 3R	
	3992WT-H	Chlorine/Bromine	
7516-DR-02	5115PT-H	Deionized Water	
	6073-G	Barium Chloride	
	2246-E	Phenolphthalein	
	6251DR-G	Hydrochloric Acid	
7519-01	7520-H	Standard Turbidity	
7530-DR-01	6130-E	Hydrochloric Acid	
	6155-E	Sodium Thiosulfate	
	6165-D	Xylenol Orange	
	6158PS-H	Thorium Nitrate	
	3929-E	Fluoride Inhibitor	
7530-WT-01	6130-E	Hydrochloric Acid	
	6155-E	Sodium Thiosulfate	
	6165-D	Xylenol Orange	
	6158WT-H	Thorium Nitrate	
	3929-Е	Fluoride Inhibitor	
7625-01	6155-E	Sodium Thiosulfate	
	6323-E	Hydrochloric Acid	
	3964-E	Chrome Azurol S	
	3965-Н	Thorium Nitrate	
	6130-E	Hydrochloric Acid	
7625-DR-01	6155-E	Sodium Thiosulfate	
	6323-E	Hydrochloric Acid	
	3965-H	Thorium Nitrate	
	6130-E	Hydrochloric Acid	
	3964-E	Chrome Azurol S	
7634-DR-01	2202-G	Meta Cresol Purple	
	6130-E	Hydrochloric Acid	
	6155-E	Sodium Thiosulfate	
	6165-D	Xylenol Orange	
	6158PS-H	Thorium Nitrate	
7778-01	6456-H	Sulfate Turb	
7787-01	4450-G	Iron 1	
	4451-S	Iron 2	
7791-DR-02	2786-E	Total Alkalinity	
	6111DR-H	Sulfuric Acid	
	6248DR-H	Sodium Hydroxide	
	4483-E	Hardness 5	
	4484-J	Hardness 6	
	4487DR-H	Hardness 7	
7831-01	7833-E	Tannin 1	
	7834-H	Tannin 2	

Kit Code	Reagent #	Description
7884	7885-H	Sulfuric Acid
	7886-J	Sodium Hydroxide
	2246-E	Phenolphthalein
	6566-G	Ammonium Persulfate
	5115PT-J	Deionized Water
	7888-D	Boiling Stones
7894-01	7939PS-G	Hypochlorite A
	7940-G	Hypochlorite B
	7941PS-H	Hypochlorite C
8225-01	8228-H	TK-10 Rgt.
8226-01	8230PA-H	Chl. Cleaner 1
	8233PA-H	Chl. Cleaner 2
	8234PA-H	Chl. Cleaner 3

# 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.

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

Plastic Order Code	Description
0944	Beaker, 50 mL
0896	Beaker, 100 mL
-	Beaker, 200 mL
0609	Beaker, 250 mL
2-2013	Beaker, 400 mL
—	Beaker, 1,000 mL
	0944 0896  0609

# Imhoff Cone Brush

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, 1.5 inch bottom diameter, tip 3 inch long, length including handle 30 inch.



Order Code	Description
1930-D10	Brush, Imhoff cone



## Flask/BOD Bottle Brush

Allows access to entire inside surface of flasks or BOD bottles. Black hog bristle brush 4.25 inches. long mounted on a flat steel shank attached to a pivoting shaft.



Order Code	Description
1929-R35	Brush, 16 inch, Pk 3

## 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

# **Bod - Cleaners**

# Cleaners

## Alconox<sup>®</sup> 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

# COD Heater

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 17 for additional specifications.

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	310 x 250 x 80mm (LxWxH)
CE Mark:	Yes
Oven Temp Cutoff:	212°C



Order Code	Description
5-0102	COD Heater Block, 120V
5-0102-EX2	COD Heater Block, 230V

#### 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.



# **Cleaners - Coliform**

## Coliform

## Thomas<sup>®</sup> Coliform Water Sample Bag

Twist tie top seals with a 5 mm wide metal strip. Large textured label area. Meets EPA requirements for microbiological samples 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.



Urder Code	Description
1303-R90	Sample Bag, 100/bag

## Thomas<sup>®</sup> Coliform Water Sampling Vial

Improved sample container for microbiological testing. Ideal when filtration or the Colilert<sup>®</sup> 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-Q41	Vial with tablet, Bg 100

## 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	Volume (MI)	Graduation Intervals (MI)	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	_
2-2082	1,000	10.0	_

# Cylinders - Flasks

# 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
Whatman			
0471	No. 2, Qual.	9	Medium
2-2098	No. 42, Ashless, Quan.	9	Slow
2-2100	No. 42, Ashless, Quan.	12.5	Slow

## 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 0.625 inch 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
1174	Check-valve
0598	Filter Holder
Membrane, 25 mm	
1103	0.45 micron, pkg. 100



## Whatman<sup>®</sup> Quantitative Ashless Filter Papers

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



Order Code	Description
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

Flasks

#### Nalge<sup>®</sup> 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
2-2116	Flask, 125 mL	0431
2-2117	Flask, 250 mL	0433

# Flasks - Hydrometers

## Flasks, Corning Volumetric

 $\mathsf{Pyrex}^{\texttt{B}}$  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

# Funnels, Plastic

Reinforced rim. Ridges outside and inside permit air passage and improve filtering efficiency. Withstand continuous use at temperatures up to  $130^{\circ}$ C.

Order Code	Description
2-2134	Funnel, 9 mL
2-2135	Funnel, 20 mL
0459	Funnel, 37 mL
2-2137	Funnel, 95 mL

## **Hydrometers**

#### Specific Gravity 1 to 1.6

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

Order Code	Description
2-2150	Hydrometer, 1.000-1.220: 0.002 interval
2-2151	Hydrometer, 1.200-1.420: 0.002 interval
2-2155	Hydrometer, 1.000-1.600: 0.005 interval

## Corning Pyrex<sup>®</sup> 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

## Magnifier

MacroLens

MacroLens with 5X magnification covers the entire petri dish. 4 inch diameter.



Orde	er Code	Description
5508	3	MacroLens
5508	3-10	MacroLens 10 Pack



## Pipets: Corning Transfer Pipets

Pyrex<sup>®</sup> 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



## 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

## **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 11.5 inches.

Order Code	Description
2-2185	Stirring Bar, .3125 x 1 inch
2-2186	Stirring Bar, .3125 x 1.625 inch
2-2187	Magnetic Pick Up Rod

# **Stopcock Grease - Thermometers**

# Stopcock Grease

## Lubriseal<sup>®</sup> 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-Н	Lubriseal, 75g tube	
	E E	
	To grant a to To grant a Reconnect Labricity Labricity Pressil de Pressil de Pressil de Righ secur	
	Coll. No. 8 Coll. No. 8 preud (dat colt	
	state provide the second s	
1		

## Thermometer, Armored

A precision, NON-MERCURY thermometer encased in a protective, plastic jacket. Window opening views engraved graduation on white tubing which increases readability. Full range of -5° to 45° in 0.5° increments.

Order Code	Full Range
1066	-5° to 45°C in 0.5° increments

#### Thermometer, Thomas<sup>®</sup> Switchable, °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  $\pm$ 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



# **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.

## **Science Education Products**

#### 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.

## Food & Beverage Safety Testing Products

#### Code 1658

A comprehensive collection of test kits, test strips, and instruments for use in Industrial and Food/Beverage applications.



## 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

#### 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

#### 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

#### **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

#### 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

#### 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

#### 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



# LaMotte has available a large variety of standards to be used in many applications.

	1		1	
Primary Standards	Concentration	Order Code	Quantity (mL)	Shelf Life
Ammonia Nitrogen	100 ppm	3871-H	60	2 yrs.
Chlorine	250 ppm	6973-H	60	6 mo.
Chlorine	250 ppm	6973-L	475	6 mo.
Chlorine Equivalent	1000 ppm	3858-H	60	6 mo.
COD Equivalent	500 ppm	7589-L	475	2 yrs.
Color	500 cu	6058-H	60	З yrs.
Color	500 cu	6058-L	500	З yrs.
Conductivity/ TDS	84 µS/59 ppm	6312-L	500	1.5 yrs.
Conductivity/ TDS	718 µS/ 503 ppm	6417-J	120	1.5 yrs.
Conductivity/ TDS	718 µS/ 503 ppm	6417-L	500	1.5 yrs.
Conductivity/ TDS	718 µS/ 503 ppm	6417-N	3800	1.5 yrs.
Conductivity/ TDS	1413 µS/ 989 ppm	6354-J	120	1.5 yrs.
Conductivity/ TDS	1413 µS/ 989 ppm	6354-L	500	1.5 yrs.
Conductivity/ TDS	1413 µS/ 989 ppm	6354-N	3800	1.5 yrs.
Conductivity/ TDS	6668 µS/ 4668 ppm	6418-J	100	1.5 yrs.
Conductivity/ TDS	6668 µS/ 4668 ppm	6418-L	500	1.5 yrs.
Conductivity/ TDS	12880 μS/ 9016 ppm	6317-G	30	1.5 yrs.
Conductivity/ TDS	12880 μS/ 9016 ppm	6317-J	120	1.5 yrs.
Conductivity/ TDS	12880 μS/ 9016 ppm	6317-L	500	1.5 yrs.
Conductivity/ TDS	58640 μS/ 41048 ppm	6419-L	500	1.5 yrs.
Copper	100 ppm	6181-L	475	2 yrs.
Fluoride	1000 ppm	4154-H	60	1 yr.
Fluoride	1000 ppm	4154-L	500	1 yr.
Fluoride	1 ppm	2798-M	1000	2 yrs.
Hard Water	120 ppm	5617-L	500	3 yrs.
Ferric Iron	200 ppm	3860-H	60	1.5 yrs.
Nickel	1000 ppm	6196-H	60	2 yrs.
Nitrate Nitrogen	1000 ppm	5392-H	60	2 yrs.
pН	2.0	2856-L	500	1.5 yrs.
pH Buffer Tablets	4.0	3983A-H	50 Tabs	З yrs.

Primary Standards	Concentration	Order Code	Quantity (mL)	Shelf Life
pH Buffer Tablets	4.0	3983A-J	100 Tabs	З yrs.
рН	4.01	2866-J	120	1.5 yrs.
pН	4.01	2866-L	500	1.5 yrs.
рН	4.01	2866-N	3800	1.5 yrs.
pH Color Coded Red	4.01	3771-L	500	1.5 yrs.
рН	6.86	2808-L	500	1.5 yrs.
pH Buffer Tablets	7.0	3984A-H	50 Tabs	3 yrs.
pH Buffer Tablets	7.0	3984A-J	100 Tabs	3 yrs.
рH	7.00	2881-H	60	1.5 yrs.
рН	7.00	2881-J	120	1.5 yrs.
рН	7.00	2881-L	500	1.5 yrs.
рН	7.00	2881-N	3800	1.5 yrs.
pH Color Coded Yellow	7.00	3772-L	500	1.5 yrs.
рН	8.0	2886-L	500	1.5 yrs.
рН	9.0	2891-L	500	1.5 yrs.
рН	9.18	2809-L	500	1.5 yrs.
pH Buffer Tablets	10.0	3985A-H	50 Tabs	3 yrs.
pH Buffer Tablets	10.0	3985A-J	100 Tabs	З yrs.
pН	10.0	2896-J	120	1.5 yrs.
рН	10.0	2896-L	500	1.5 yrs.
pH Color Coded Blue	10.0	3773-L	500	1.5 yrs.
рН	11.0	2897-L	500	1.5 yrs.
рН	12.0	2898-L	500	1.5 yrs.
Phosphate PO <sub>4</sub>	1000 ppm	6184-L	475	1 yr.
Phosphate PO <sub>4</sub>	3080 ppm	5393-H	60	2 yrs.
Phosphate PO <sub>4</sub>	3080 ppm	5393-L	475	2 yrs.
Phosphorus (Total)	1000 ppm	5393-H	60	2 yrs.
Phosphorus (Total)	1000 ppm	5393-L	475	2 yrs.
Potassium	1000 ppm	6187-L	475	2 yrs.
Sulfate	2000 ppm	7120-H	60	2 yrs.
Turbidity 2020we	O NTU	1480	60	1 yr.
Turbidity 2020we	1 NTU	1450	60	1 yr.

continued next page...

# LaMotte has available a large variety of standards to be used in many applications.

Primary Standards	Concentration	Order Code	Quantity (mL)	Shelf Life
Turbidity 2020t	O NTU	1440	60	1 yr.
Turbidity 2020t	1 NTU	1441	60	1 yr.
Turbidity 2020t	10 NTU	1442	60	1 yr.
Turbidity 2020t	100 NTU	1443	60	1 yr.
Turbidity 2020t	280 NTU	1444	60	1 yr.
Turbidity 2020i	O NTU	1440	60	1 yr.
Turbidity 2020i	1 NTU	1446	60	1 yr.
Turbidity 2020i	10	1447	60	1 yr.
Turbidity 2020i	100	1448	60	1 yr.
Turbidity 2020i	280	1449	60	1 yr.
Turbidity 2020we	10 NTU	1451	60	1 yr.
Turbidity 2020we	100 NTU	1452	60	1 yr.
Turbidity 2020wi	O NTU	1480	60	1 yr.
Turbidity 2020wi	1 NTU	1453	60	1 yr.
Turbidity 2020wi	10 NTU	1454	60	1 yr.
Turbidity 2020wi	100 NTU	1455	60	1 yr.
Turbidity Formazin	4000 NTU	6195-H	60	1 yr.
Zinc	100 ppm	5394-L	475	2 yrs.

Secondary Standards	Concentration	Order Code	Quantity (mL)	Shelf Life
Chlorine DPD	0, 0.2, 1.0, 2.5 ppm	4140-03	10	1 yr
Smartcheck	Various Absorbance Units	4141-01	10	1 yr



# A

Absorbance Colorimeter 22
Acidity
Individual Test Kits41, 61
Alkalinity
Buret Reagents66
Individual Test Kits41
Test Strips
TesTabs
UDV SMART Reagent
Aluminum
Individual Test Kits41
SMART Reagent System 19-20
AMCO Turbidity Standards 13, 15
Ammonia Nitrogen
Colorimeter Kit, 1500
Individual Test Kits42
SMART Reagent System 19-20
Apparatus
Alphabetical Listing
Aquaculture & Aquarium Testing Products Catalog91
Aquaculture Combination Outfits
Fresh Water
Salt Water56
Arsenic
Automatic Buret Reagents 66

# B

BART Biodetectors
Battery Pack for SMART Spectro $\dots 16$
Beakers
Benzotriazole
SMART Reagent System 19-20
Biopaddles
Biochemical Oxygen Demand (BOD)
Brush
Bleach
Individual Test Kits42, 45
Boron
SMART Reagent System 19-20
Bromine
Colorimeter Kit, 1500
Individual Test Kits
SMART Reagent System 19-20

#### Brushes

General	 84
Flask/BOD	 84
Imhoff Cone	 84

#### Buffers

pH, Standardized	. 34
Color Coded Solutions	. 34
Tablets	. 34
Buret Combination Kits	-73
Buret Reagents	. 66
Burets	. 84

# C

Cadmium
Individual Test Kit
SMART Reagent System 19-20
Calcium Hardness See Hardness
Carbon Dioxide
Individual Test Kits
Carbohydrazide
SMART Reagent System 19-20
Cases 10
SMART Spectro
Catalogs, Market Specific
Caustic
Individual Test Kits
Individual Test Kits
Chemistry and Control of Modern Chlorination Handbook
Chloride
Buret Reagents66
Individual Test Kits
SMART Reagent System 19-20
Chlorine
Colorimeter Kit, Liquid, 1500 21, 44
Colorimeter Kit, Tablet, 1500 21, 44
Individual Test Kits
Secondary Standards Kit
Primary Standards23
Reagents
SMART Reagent System 19-20
Tracer
Test Papers
Test Strips

TesTabs for Tracer	24
Tri-Meters	14-15
Chlorine Dioxide	
Colorimeter Kit, 1500	
Individual Test Kits	46
SMART Reagent System	19-20
Test Strips	36
Chromate	
Individual Test Kit	46
Chromium	
SMART Reagent System	19-20
Cleaners	
Alconox®	85
Kimwipes®	86
Cobalt	
SMART Reagent Systems	19-20
COD	
Adapter for SMART Colorimeter	11
Heater Blocks	85
SMART Reagent System	19-20
Reagents	
Coliform	
Filter Flasks	87
Filter Paper	
Individual Test Kit	
Sample Bags	
Sample Vials	
Color	
Individual Test Kit	46
SMART Reagent System	
TC-3000	
Tri-Meters	
ColorO Colorimeter	
ColorQ Pro-9	
Colorimeter	
Single Test	22-23
Single Test Accessories	
Single Wavelength Absorbance	
SMART3 Colorimeter	
UDV	
Colorimeter Series, DC1500	
Combination Buret Outfits	כס
Conductivity	01
5 and 6 Series Meters	
Standards	24-29

Tracer Meter	24
Copper	
Colorimeter Kit, DC1500	21
Individual Test Kits	46
SMART Reagent System 19-2	20
Test Strips 36-3	37

Corrosion Control Kit
Custom Test Kit Services
Cyanide
Individual Test Kit
SMART Reagent System 19-20
Cyanuric Acid
SMART Reagent System 19-20
Tablets
Cylinders 87

# D

# E

Electrode Soaker Bottle	4
Electrodes for PockeTesters 24-29	9
Environmental Science Education Catalog92	1
Environmental Science Education Combination Outfits 57-60	0

Fn	/tho	rhic	Acid
EN	ytno	rdic	ACIO

SMART Reagent System ...... 19-20

# F

Filter Papers	
General Lab87	
Filter/Syringe Assembly87	
5 and 6 Series Meters	
Flasks	
Brush	
Erlenmeyer87	
Filter Flasks 88	
Volumetric	
Fluoride	
Colorimeter Kit, DC1500 22, 47	
ISE25	
ISE Accessory Kit 25	
SMART Reagent System 19-20	
Food Sanitizer Kits	
Formaldehyde	
Individual Test Kit47	
Fresh Water Aquaculture Combination Outfits	
Funnels, Plastic88	

# G

General Water Analysis Combination Outfit	4
Graduated Cylinders	3
GREEN	
Low-Cost Water Monitoring Kit60	)

# Η

Specific Gravity	88
Hydroquinone	
SMART Reagent System	19-20

# 

International Sales
lodine
Individual Test Kits
SMART Reagent System 19-20
Test Papers
Ion Specific Electrode
Accessory Kits
pH Plus Direct Meter
Probes
Tracer Meter24
Individual Test Kits
By Test Factor
Industrial Titration Reagents
Industrial Water
Combination Outfits
Insta-Test® Strips
Instrumentation8-35
Investigating Water Problems Handbook92
Iron
Colorimeter Kit, DC1500
Individual Test Kits
SMART Reagent System 19-20

# Κ

Kick-Net	•										•	•			5	8	
Kimwipes®															8	5	

A Laboratory Manual for Marine Science Studies Handbook92
The LaMotte Soil Handbook
Laundry Combination Outfits
Laundry Spot Tests
Lead
SMART Reagent System 19-20
Lead in Solder
Individual Test Kit49
Leaf Pack Stream Ecology Kit 57
Limnology: An Introduction to the Fresh
Water Environment Handbook
Limnology Combination Outfit
Lubriseal®90

# Μ

Manganese
Individual Test Kits
SMART Reagent System 19-20
Magnetic Stirrers 89
Marine Aquarium Handbook
Marine Science Outfit
Mercury
SMART Reagent System 19-20
Methods, Test
Methylethylketoxime
SMART Reagent System 19-20
Microbiological Tests
Min/Max Thermometer
Molybdate/Molybdenum
Individual Test Kits
Colorimeter Kit, DC1500
SMART Reagent System 19-20
Monitor's Handbook
MPS-OUT TesTabs

# Ν

Nickel
SMART Reagent System 19-20
Nitrate Nitrogen
Individual Test Kits50
SMART Reagent System 19-20
Test Strips
Nitrite Nitrogen
Individual Test Kits
SMART Reagent System 19-20
Test Strips
Nitrite, Sodium
Individual Test Kits50
Nitrogen, Total Digestion Tubes17

# 0

ORP PockeTester
<b>ORP Tracer</b>
Our Environment Battles Water Pollution Handbook
Oxygen, Dissolved
Individual Test Kit51
SMART Reagent System 19-20
Tracer Meter
Oxygen Scavenger
SMART Reagent Systems 19-20

#### Ozone

Individual Test Kit	51
SMART Reagent System	19-20
Colorimeter Kit, DC1500	22

# Ρ

Individual Test Kit	51
Test Strips 36, 6	61
Peroxide	

## See Hydrogen Peroxide

#### рН

pii
5 Series pH Meter 31
Buffers
Electrodes for pHPLUS Meter
Individual Test Kits51
Electrode Soaker Bottle
Meters
pHPLUS Direct Meter
PockeTesters 24, 25, 27
SMART Reagent System 19-20
Tablets
Test Papers 51, 61
Test Strips
Tracer
pH/Conductivity
Tracer Meter25
pH, Buffers & Acid/Base Titrations Handbook92
Phenols
SMART Reagent System 19-20
Phosphate
Colorimeter Kit, DC1500
Individual Test Kits53
SMART Reagent System 19-20
Phosphonate
Individual Test Kits53
Phosphorus, Digestion Tubes
Pipets
Safety Bulb89
Transfer
Plankton Net
Plant Nutrition Studies Handbook 92
PockeTesters 24-29
Electrodes 24-29
Polyphosphates
Individual Test Kit53

#### Polyquat

Individual Test Kit53
Pool & Spa Combination Outfits 69-71
Pool & Spa Testing Equipment Catalog91
Pool MGR. Handbook
Pool MGR. Series Kits
Potassium
Individual Test Kit54
SMART Reagent System 19-20
Powder Pop DPD Dispensers
For Free & Total Chlorine
<b>PR0250 Kit</b>
Product Price List

# QAC

Individual Test Kits	54
Test Papers	37, 61

# R

Reagent Refills .		76-83
-------------------	--	-------

# S

Safety Bulb
Pipet
Salinity
Individual Test Kit54
Salt Water Aquaculture Combination Outfit
Salt Water PockeTesters 25, 28
Salt Water Test Strips 36, 68
Sample Bags
Coliform
Secchi Disk 58
Silica
Individual Test Kits54
SMART Reagent System 19-20
Single Test Colorimeters 21, 22
SMART3 Colorimeter <sup>®</sup>
Accessories11
Meter10, 11
SMART Reagent Systems 19-20
Water Analysis Lab

SMART Spectro Spectrophotometer
Accessories17
Instrument16
Reagent Systems 19-20
Sodium Chloride
Test Strips
PockeTesters
Sodium Nitrite See Nitrite
<b>Softeners</b>
Softener Sales Demo Kits
Soil Testing Products Catalog91
Spa/Pool Combination Outfits 67-71
Standards
Full Listing93, 94
Chlorine
Turbidity 13-15
TDS/Conductivity 25, 35
Stir Bars
Retrievers
Stirrers
Accessories
Stopcock Grease
Lubriseal®90
StormWatch Kit72
A Study of Soil Science Handbook92
A Study of Water Quality Handbook92
Sulfate
Colorimeter Kit, DC1500
Individual Test Kits54
SMART Reagent System 19-20
Sulfide
Individual Test Kits55
SMART Reagent System 19-20
Sulfite
Buret Reagents66
Individual Test Kits
Surfactants
SMART Reagent System 19-20
<b>T</b>

# T

Tannin	
Individual Test Kit5	5
SMART Reagent System 19-20	0
Temperature	
Min/Max PockeTester	0

Probe, pHPLUS Direct	32
Temptestr IR	30
Test Methods	6-7
Test Papers	
pH, Chlorine, Iodine, QAC	37, 61
Test Strips	
Alkalinity	36-37
Chlorine	36-37
Hardness	36-37
Insta-Test Pool/Spa Series	68
рН	
Hydrogen Peroxide	
Multi-factor	
Single Factor	
Sodium Chloride	36, 68
TesTabs	
Thermometers	
Armoured Thermometer	90
Dual Scale	
Min/Max PockeTester	
Switchable	
Temptestr IR	
Titrimetric Methods	
Tolcide PS	
Tolcide PS Tolyltriazole	
Tolyltriazole	55
Tolyltriazole SMART Reagent System	55
Tolyltriazole	55 19-20
Tolyltriazole SMART Reagent System Total Dissolved Solids (TDS)	55 19-20 31
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters	55 19-20 31 25, 28
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandards	55 19-20 31 25, 28 25
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters	55 19-20 31 25, 28 25
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters         Standards         Tracer Meter         Tour Series	55 19-20 31 25, 28 25 25
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater Tour	55 19-20 31 25, 28 25 25 59
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore Tour	55 19-20 31 25, 28 25 25 59 59
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters         Standards         Tracer Meter         Tour Series         Pondwater Tour         Shore Tour         Tapwater Tour	55 19-20 31 25, 28 25 25 59 59 59
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters         Standards         Tracer Meter         Tour Series         Pondwater Tour         Shore Tour         Tapwater Tour	55 19-20 31 25, 28 25 25 59 59 59 59
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed Tour	55 19-20 31 25, 28 25 25 59 59 59 59 59 59
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters         Standards         Tracer Meter         Tour Series         Pondwater Tour         Shore Tour         Topsoil Tour         Watershed Tour         Tracer Meter Series	55 19-20 31 25, 28 25 25 59 59 59 24-26
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessories	55 19-20 31 25, 28 25 25 59 59 59 59 24-26 24-26
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessoriesChlorine, pH, ORP	55 19-20 31 25, 28 25 25 59 59 59 24-26 24-26 24
Tolyltriazole         SMART Reagent System         Total Dissolved Solids (TDS)         6 Series Meters         PockeTesters         Standards         Tracer Meter         Tour Series         Pondwater Tour         Shore Tour         Topsoil Tour         Watershed Tour         Kacessories         Chlorine, pH, ORP         Dissolved Oxygen	55 19-20 31 25, 28 25 25 59 59 59 24-26 24-26 24-26 24 26
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessoriesChlorine, pH, ORPDissolved OxygenpH/Conductivity	55 19-20 31 25, 28 25 25 59 59 24-26 24-26 24-26 24 26 25
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessoriesChlorine, pH, ORPDissolved OxygenpH/ConductivityTDS/Salt	55 19-20 31 25, 28 25 25 59 59 59 24-26 24-26 24-26 24-26 24 25 25
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessoriesChlorine, pH, ORPDissolved OxygenpH/ConductivityTDS/SaltTransfer Pipets	55 19-20 31 25, 28 25 25 59 59 59 24-26 24-26 24-26 24-26 24 25 25
TolyltriazoleSMART Reagent SystemTotal Dissolved Solids (TDS)6 Series MetersPockeTestersStandardsTracer MeterTour SeriesPondwater TourShore TourTapwater TourTopsoil TourWatershed TourTracer Meter SeriesAccessoriesChlorine, pH, ORPDissolved OxygenpH/ConductivityTDS/Salt	55 19-20 31 25, 28 25 25 59 59 59 24-26 24-26 24-26 24-26 24 24-26 25 25 25 25 25 25 25 24-26 25 25 24-26 25 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 24-26 26 26 26 26 26 26 26 26 26 26 26 26 2

#### Turbidity Meters

Turbidity: Its Meaning & Measurement Handbook	92
TC-3000t/i	. 14-15
2020i	. 12-13
2020t	. 12-13

# 

UDV	
Adapters	11
Colorimeters	22
UV-VIS Spectrophotometer	18

# V

Vials	
Sampling, Coliform8	6

# W

Wastewater Lab63
Water & Wastewater Combination Outfits65
Water Conditioning Combination Outfits
Water Conditioning Testing Equipment Catalog91
Water Quality Educator Monitoring Outfit57
Water Quality Combination Outfits 65
WaterLink <sup>®</sup> Spin Touch67
WaterLink <sup>®</sup> Spin Touch DW8-9
Wide Range pH

# Ζ

## Zinc

Individual Test Kits	55
SMART Reagent System	19-20



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