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Solutions



Testers



Meters



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Oakton[®] Pocket
Testers

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 NIST Technical Note 1297 ISO 9000:2000

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Oakton® EcoTestr™
 pH2+ Pocket Tester
 ★★★★★
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Oakton® pH 150
 Waterproof Meter
 ★★★★★
 Customer Approved

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Oakton® Waterproof EcoTestr™ pH1 Pocket Tester

Economical, easy to use

- Automatically recognizes pH buffer standards
- Rugged IP67-rated housing is waterproof, dustproof, and floats in water
- Leakproof cap with fill line functions as a sample/calibration and hydrating cup



Model		EcoTestr pH1
Catalog number		LR-35634-05
Range	pH	0 to 14.0 pH
	Temperature	32 to 122°F (0 to 50°C)
Resolution	pH	0.1 pH
	Temperature	0.1°F/°C
Accuracy	pH	±0.1 pH
	Temperature	±0.9°F (0.5°C)
Temperature compensation		Automatic, 32 to 122°F (0 to 50°C)
Calibration		1 to 3 points
Buffer recognition		USA, NIST
Power		Four AAA batteries (included), 400 hours of continuous use
Price		



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Oakton® Waterproof EcoTestr™ pH2+ Pocket Tester

Better results—easier and faster

- Large dual-line display shows pH and temperature readings simultaneously
- Automatic temperature compensation ensures accuracy
- Easier, more intuitive interface and indicators for calibration, readiness, and battery life
- Use redesigned cap as sample cup and as a stabilizing base to stand the meter upright
- Secure—attach a lanyard to prevent dropping in the field



Model		EcoTestr pH2+
Catalog number		LR-35423-01
Range	pH	0.0 to 14.0 pH
	Temperature	32.0 to 122.0°F (0.0 to 50.0°C)
Resolution	pH	0.1 pH
	Temperature	0.1°F (0.1°C)
Accuracy	pH	±0.1 pH
	Temperature	±0.9°F (0.5°C) + 1 LSD
Temperature compensation		Automatic
Calibration		Up to 3 points
Buffer recognition		USA, NIST
Power		Four 1.5 V miniature alkaline batteries (included)
Price		



Oakton® Waterproof Testr™ 5 Pocket Testers

Save money by replacing sensor, not the tester

- Unique three-color backlight indicates operating mode
- Simple to calibrate with automatic standard recognition—USA and NIST
- Rugged IP67-rated housing is waterproof, dustproof, and floats in water with sensor cap on
- Leakproof cap with fill line functions as a sample/calibration and hydrating cup
- Choose model with flat probe for surface or micro-volume testing, or spear tip for testing semisolid and solid materials



Model	pH5	pH5F	pH5S	ORP5
Catalog number	LR-35634-16	LR-35634-46	LR-35634-52	LR-35634-54
Sensor type	Glass bulb	Flat surface	Spear tip	Glass bulb
Range	pH	-2 to 16 pH		—
	ORP			±1000 mV
	Temp	32 to 122°F (0 to 50°C)		
Resolution	pH	0.01 pH		—
	ORP			1 mV
	Temp	0.1°F/°C		
Accuracy	pH	±0.01 pH ±1 digit		—
	ORP	±0.2% FS		±0.2% FS
	Temp	±0.9°F (0.5°C)		
Temp compensation	Automatic, 32 to 122°F (0 to 50°C)			—
Calibration	1 to 3 points			1 point
Power	Four AAA batteries (included), 400 hours continuous use			
Price				



Oakton® Waterproof pHTestr® 30 Pocket Tester

Use with confidence

- Features ±0.01 pH accuracy—suitable for most ASTM and EPA test procedures
- Resistant to most chemicals with Valox® sensor housing
- Auto buffer recognition for calibration up to 3 points
- Don't let temperature interfere—ATC minimizes impact

Double-junction electrode sensor handles wastewater and solutions containing sulfides, heavy metals, and Tris buffers. Replaceable electrode sensor features a clog-resistant Kynar® PVDF junction and a recessed, glass pH bulb to prevent breakage.



Model		pHTestr 30
Catalog number		LR-35634-30
Range	pH	-1.00 to 15.00 pH
	Temperature	32 to 122°F (0 to 50°C)
Resolution	pH	0.01 pH
	Temperature	0.1°F/°C
Accuracy	pH	±0.01 pH
	Temperature	±0.9°F (0.5°C)
Temperature compensation		Automatic, 32 to 122°F (0 to 50°C)
Calibration		Up to three pH points
Buffer recognition		4.01, 7.00, 10.01 USA; 4.01, 6.86, 9.18 NIST
Power		Four 1.5 V button cell batteries (included)
Price		





Oakton® PCTSTestr™ 50 Multiparameter Pocket Tester

One tester measures it all!

NEW

- Versatile tester combines up to five measurements in one pocket-sized meter
- Parameters include pH, conductivity, TDS, salinity, and temperature
- Compatible with a wide range of samples with long-life pH electrode and stainless steel pin-style conductivity sensor
- Features up to 3-point pH calibration with NIST or USA autobuffer recognition, user-adjustable temperature coefficient, and self-adjusting TDS and salinity factor
- Leakproof cap functions as a sample/calibration cup, hydrating cup and as a stabilizing base to stand the meter upright
- Easy-to-replace sensor module lets you use tester body over and over again



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CERTIFIED SUPPLIER



Model	PCTSTestr 50	
Catalog number	LR-35634-35	
Range	pH	-1.00 to 15.00 pH
	Conductivity	0.0 to 200.0 µS, 200 to 2000 µS; 2.00 to 20.00 mS
	TDS	0.0 to 100.0 ppm, 100 to 1000 ppm; 0.10 to 10.00 ppt (TDS factor 0.5)
	Salinity	0.00 to 10.00 ppt
	Temperature	32 to 140°F (0 to 60°C)
Resolution	pH	0.01 pH
	Conductivity	0.1 µS, 1 µS; 0.01 mS
	TDS	0.1 ppm, 1 ppm; 0.01 ppt
	Salinity	0.10 ppt
	Temperature	0.1°F/°C
Accuracy	pH	±0.01 pH
	Conductivity	±1% full-scale
	TDS	±1% full-scale
	Salinity	±1% full-scale
	Temperature	±0.9°F (0.5°C) from 32 to 122°F (0 to 50°C); ±1.8°F (1.0°C) from 122 to 140°F (50 to 60°C)
Temperature compensation	Automatic, 32 to 144°F (0 to 60°C)	
Calibration	3 points (pH, conductivity, TDS); 1 point (salinity)	
Buffer recognition	USA 4.01, 7.00, 10.01; NIST 4.01, 6.86, 9.18	
Power	Four AAA 1.5 V batteries (included)	
Price		

Oakton® pHTestr® 50 Pocket Tester

NEW

Bring the performance of your lab instruments into the field

- High ±0.01 pH accuracy—suitable for most ASTM and EPA test procedures
- Clog-resistant, double-junction pH electrode sensor is dependable and long-lasting!
- Use with confidence—even with demanding samples containing sulfides, heavy metals, organics, Tris buffer, or protein solutions
- Save money—replaceable sensor module lets you use tester body over and over again
- Set up and calibrate quickly with easy-to-navigate interface
- Don't let temperature interfere—automatic temperature compensation minimizes impact
- Recessed, glass pH bulb protects against breakage
- Leakproof, stabilizing cap—use to calibrate, stand upright, and store sensor
- Waterproof, IP67-rated housing resists most chemicals



ISO9001:2008
CERTIFIED SUPPLIER



Model	pHTestr 50	
Catalog number	LR-35634-15	
Range	pH	-1.00 to 15.00 pH
	Temperature	32 to 140°F (0 to 60°C)
Resolution	pH	0.01 pH
	Temperature	0.1°F/°C
Accuracy	pH	±0.01 pH
	Temperature	±0.9°F (0.5°C) + 1 LSD from 32 to 122°F (0 to 50°C); ±1.8°F (1.0°C) + 1 LSD from 122 to 140°F (50 to 60°C)
Temperature compensation	Automatic, 32 to 140°F (0 to 60°C)	
Calibration	Up to 3 points	
Buffer recognition	USA 4.01, 7.00, 10.01; NIST 4.01, 6.86, 9.18	
Power	Four AAA 1.5 V batteries (included)	
Price		

Oakton ORPTestr® 50 Pocket Tester

Get quick and easy ORP readings

- Double-junction platinum electrode is ideal for checking dirty water, heavy metals, sulfides, and organics
- Wide mV range for a variety of common applications, including industrial waste treatment, oxidation of cyanide, pulp bleaching, bleach manufacturing, and water sanitation
- Leakproof, stabilizing cap—use to calibrate, stand upright, and store sensor
- Waterproof, IP67-rated housing resists most chemicals



ISO9001:2008
CERTIFIED SUPPLIER



Model	ORPTestr 50
Catalog number	LR-35634-45
Range	-1000 to 1000 mV
Resolution	±1 mV
Accuracy	±2 mV
Temperature compensation	Manual
Calibration	1 point, offset ±200 mV
Temperature range	32 to 140°F (0 to 60°C)
Temperature resolution	0.1°F/°C
Power	Four AAA 1.5 V batteries (included)
Price	



Cole-Parmer® pH and pH/Con Handheld Meters

Get basic measurements—affordably

- Measure pH, mV, conductivity, TDS, salinity and temperature
- No need to adjust for temperature changes—includes automatic temperature compensation
- Take hands-free measurements with protective rubber boot that features a convenient fold-out stand
- Intuitive interface and large, easy-read display
- IP57 waterproof rating



pH Meter (59200-02) reads pH and mV modes of measurement with temperature. Features three calibration points with auto-buffer recognition.

pH/Con Meter (59200-04) adds conductivity, TDS, and salinity modes with temperature readout. Features convenient auto ranging with four calibration points; up to one point per each measurement range.

What's included: pH electrode, protective rubber boot with stand, and batteries. Model 59200-04 also includes a conductivity probe, K = 1.



Model	pH	pH/Con
Catalog number	LR-59200-02	LR-59200-04
Range	pH	0 to 14
	mV	±1999
	Conductivity	0 to 200 mS
	TDS	0 to 100 g/L
	Salinity	0 to 100 ppt
	Temperature	32 to 212°F (0 to 100°C)
Resolution	pH	0.01
	mV	0.1
	Conductivity	0.1/1 µS; 0.01/0.1 mS
	TDS	0.1/1
	Salinity	0.1/1
Accuracy	Temperature	0.1
	pH	±0.01
	mV	±0.1%
	Conductivity	±1.0% ±1 digit
	TDS	±1.0% ±1 digit
	Salinity	±1.0% ±1 digit
Temperature compensation	±0.5°C ±1 digit	
Power	Automatic 0 to 80°C or manual	
Price	Three AA batteries (included)	

Accessories

- [LR-59200-06](#) Replacement pH probe with temperature
- [LR-59200-09](#) Replacement conductivity probe, K = 1
- [LR-59200-11](#) Conductivity probe, K = 0.1
- [LR-59200-13](#) Conductivity probe, K = 10
- [LR-09376-01](#) Replacement batteries, AA. Pack of 4

Oakton® pH 5+ and pH 6+ Meters

Get high accuracy at low prices

- Autobuffer recognition for up to five-point calibration provides ±0.01 pH accuracy
- Take this compact unit anywhere
- Get pH and temperature readings at the push of a button
- Improve your accuracy with automatic temperature compensation (ATC) from 0 to 100°C
- Protect your unit with protective rubber boot that doubles as a stand
- Choose the pH 6+ meter to also read mV



Meter includes: ATC probe, protective rubber boot, and batteries.

Meter with probe adds: pH electrode 59001-65.

Meter kit adds: “All-in-one” pH electrode, pH buffer solutions, sample bottles, rinse bottle, and carrying case.

Save time, save money!

Choose Precalibrated
Includes a data-rich, ISO 17025-compliant certificate!

Precalibrated by **INNOCAL**
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Specifications

Mode	pH	mV (pH 6+ only)	Temperature
Range	0.00 to 14.00 pH	±1000 mV or rel mV	0 to 100.0°C
Resolution	0.01 pH	1 mV	0.1°C
Accuracy	±0.01 pH	±2 mV	±0.5°C
Calibration	Up to five points: pH 1.68, 4.01, 7.00, 10.00, 12.45 (USA); pH 1.68, 4.01, 6.86, 9.18, 12.45 (NIST) pH 4.10, 6.97 (Pb)	±20 mV	Offset 0.1°C increments

Temp compensation: automatic with ATC probe, 0 to 100°C

Power: four AAA batteries (included)

Model	Description	Meter		Precalibrated	
		Cat. no.	Price	Cat. no.	Price
pH 5+	Meter only	LR-35613-50		LR-35613-51	
pH 6+		LR-35613-20		LR-35613-41	
pH 5+	Meter with probe	LR-35613-52		LR-35613-53	
pH 6+		LR-35613-22		LR-35613-42	
pH 5+	Meter kit	LR-35613-54		LR-35613-55	
pH 6+		LR-35613-24		LR-35613-44	

Accessories

- [LR-59001-65](#) Replacement pH electrode; single-junction, gel-filled. Epoxy body, BNC connector
- [LR-35811-71](#) “All-in-one” combination pH probe with built-in ATC; single-junction sealed, epoxy body, BNC connector
- [LR-35811-72](#) “All-in-one” combination pH probe with built-in ATC; double-junction sealed, epoxy body, BNC connector
- [LR-35613-05](#) Replacement ATC probe, stainless steel
- [LR-09376-00](#) Replacement batteries, AAA. Pack of 12



Oakton® Ion 6+ Meter

Get precise readings at an affordable price

- Compact and easy-to-use with preprogrammed ion calibration points
- mV mode allows you to check electrode calibration and performance
- ±1999 mV range is compatible with virtually all ISE electrodes

Features include all push-button calibration, hold function, auto-off, and splash-resistant keypad. Read concentration in ppm and mV as well as pH and temperature in °C. The included protective rubber boot also acts as a meter stand for benchtop use.

Meter includes: ATC probe, protective rubber boot and batteries.

Meter kit adds: pH electrode, pH buffer solutions, solution bottles, rinse bottle, and carrying case.



Specifications

Mode	Ion	mV	pH	Temperature
Range	0.01 to 1999 ppm	±500 mV	0.00 to 14.00	0.0 to 100.0°C
Resolution	0.01 ppm (0.01 to 0.99 ppm) 0.1 ppm (1.0 to 199.9 ppm) 1 ppm (200 to 1999 ppm)	1 mV	0.01	0.1°C
Accuracy	±1% of reading	±1 mV	±0.01	±0.5°C
Calibration	2 to 3 points: 0.1; 1; 10; 1000 ppm (minimum 2 points)	±50 mV	Up to 5 points: 1.68, 4.01; 7.00; 10.00, 12.45 (USA) 1.68, 4.01; 6.86; 9.18, 12.45 (NIST) 4.10; 6.97 (Pb)	Offset 0.1°C increments

Temp compensation: automatic with ATC probe, 0 to 100°C

Power: four AAA batteries (included)

Model	Description	Meter		Precalibrated meter	
		Cat. no.	Price	Cat. no.	Price
Ion 6+	Meter only	LR-35613-80		—	—
	Meter kit	LR-35613-82		LR-35613-83	

[LR-27504-14](#) Fluoride electrode, double-junction, refillable. Epoxy body, BNC connector

[LR-27502-00](#) Ammonia electrode, double-junction, refillable. Epoxy body, BNC connector

[LR-27504-22](#) Nitrate electrode, double-junction, refillable. Epoxy body, BNC connector

[LR-09376-00](#) Replacement batteries, AAA. Pack of 12

[LR-17106-20](#) NIST-traceable calibration with data for pH meter

Search

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Oakton® Waterproof pH 150 Meter

Get more for your money!

- Intuitive, user-friendly icons show electrode status as pH slope
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Recall more data with expanded data logging for up to 150 data sets
- mV offset for calibration of ORP standards, zeroing mV value, and pH diagnostics
- Use as a benchtop meter as well—built-in stand or wall-mount option



View more simultaneously with large, three-line LCD providing pH or mV measurement with temperature and calibration % slope. Get faster calibration with auto buffer recognition which identifies the correct pH buffer. Be more accurate with up to six calibration points from USA, NIST, and DIN pH buffer sets and automatic temperature compensation (ATC).

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm (visible), battery-life indicator, and electrode status.

Meter only includes: Grip-Clip holder and two AA batteries.

Meter with probe adds: "All-in-One" pH electrode (35808-71).

Meter kit further adds: pH buffers, storage solution, rinse solution, and hard carrying case.



Description	Meter only	Meter with probe	Meter kit
Model	pH 150		
Catalog number	LR-35614-32	LR-35614-30	LR-35614-90
Precalibrated cat. no.	LR-35614-34	LR-35614-33	LR-35614-91
Range	pH	-2.00 to 16.00	
	mV	±2000 mV	
Temperature	-17.0° to 230.0° F (-10.0° to 110.0°C)		
Resolution	pH	0.01	
	mV	0.1 mV ±999.9 mV; 1 mV beyond	
Temperature	0.1°F/C		
Accuracy	pH	±0.01	
	mV	±0.2 mV ±2 LSD or ±0.5% of reading; whichever is greater	
Temperature	±0.9°F (±0.5°C)		
Calibration	pH	Up to 6 points: USA, NIST, DIN	
	mV	±200 mV	
Temperature	Offset 0.1 increments		
Temperature compensation	Automatic or manual from -10 to 110°C		
Data logging	Stores up to 150 data sets		
Power	Two AA batteries (included); universal power adapter (optional)		
Price			
Precalibrated price			

[LR-35808-71](#) Replacement "All-in-One" combination pH electrode with built-in ATC; single-junction, epoxy body, BNC connector

[LR-35618-05](#) ATC probe. Use with any standard pH electrode for temperature compensation

[LR-35614-50](#) Replacement Grip-Clip, holder attaches probe to side of container for hands-free measurement

[LR-35614-51](#) Hard carrying case, for 150/450 meters

[LR-35420-72](#) Optional power adapter, 110/220 VAC

[LR-09376-01](#) Replacement batteries, AA. Pack of 4

[LR-17106-20](#) NIST-traceable calibration with data for pH meter

Oakton® Waterproof pH 450 Meter

Easy-to-read measurements

- Use it in any environment with backlit display and rugged design
- Intuitive, user-friendly icons show electrode status as pH slope
- Easily attach electrode to a beaker or container with Grip-Clip™ holder
- Download and analyze up to 500 data sets with USB or RS-232 output
- Use as a benchtop meter as well—built-in stand and wall-mount option



Waterproof, IP67-rated meter is ideal for even the harshest environments. View the main measurement simultaneously with temperature and calibration data with % slope on the large, backlit LCD. Be more accurate with up to six calibration points from USA, NIST, DIN, and custom pH buffers. Automatic temperature compensation (ATC) ensures measurement accuracy even in fluctuating temperatures.

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm (visible), battery-life indicator, and electrode status.

Meter only includes: Grip-Clip holder and two AA batteries.

Meter with probe adds: "All-in-one" pH/temperature electrode (model 35808-71).

Meter kit further adds: pH buffer solutions, storage solution, rinse solution, and hard carrying case.



Meter only

Description	Meter only	Meter with probe	Meter kit
Model	pH 450		
Catalog number	LR-35618-32	LR-35618-30	LR-35618-90
Precalibrated cat. no.	LR-35618-34	LR-35618-33	LR-35618-91
Range	pH	-2.00 to 16.00	
	mV	±2000 mV	
	Ion	0.0 to 19,999	
	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)	
Resolution	pH	0.01	
	mV	0.1 mV ±999.9 mV; 1 mV beyond	
	Ion	0.01	
	Temperature	0.1°F/°C	
Accuracy	pH	±0.01	
	mV	±0.2 mV ±2 LSD or ±0.5% of reading; whichever is greater	
	Ion	±0.5% full-scale (monovalent); ±1% full-scale (divalent)	
	Temperature	±0.9°F (±0.5°C)	
Calibration	pH	Up to 6 points: USA, NIST, DIN	
	mV	±200 mV	
	Ion	Up to 6 points	
	Temperature	Offset 0.1 increments	
Temperature compensation	Automatic or manual from -10 to 110°C		
Output	USB or RS-232		
Data logging	500 data sets		
Power	Two AA batteries (included) or optional universal power adapter (sold at right)		
Price			
Precalibrated price			

Oakton® Waterproof pH/DO 450 Meter

Eliminate maintenance time and costs

- Rugged, waterproof and dustproof with an IP67 rating for use in any environment
- No costly, tiresome membranes or solutions
- More accurate readings with barometric pressure and salinity correction
- Download and analyze data easily with USB and RS-232 output for up to 500 data sets
- Take it with you—500 hours battery life or optional universal power adapter



Get faster response, long-term stability, and minimal maintenance with optical measurement technology. Automatic temperature compensation (ATC), barometric pressure compensation, and salinity correction. Get more readings simultaneously with pH, mV, % saturation, or mg/L (ppm) shown on large, backlit LCD.

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm, and battery-life indicator.

Meter only: batteries.

Meter kit adds: pH probe (59002-75), RDO probe (35640-51), sensor cap, calibration solutions, and hard carrying case.



Meter only

Description	Meter only	Meter kit
Model	PD 450	
Catalog number	LR-35632-32	LR-35632-80
Precalibrated cat. no.	—	LR-35632-81
Range/Resolution	pH	-2.00 to 16.00/0.01
	mV	±2000 mV (Resolution 0.1 ±999.9 mV; 1 mV beyond)
	Dissolved oxygen	0 to 20 ppm; 0 to 200%
	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)
Accuracy	pH	±0.01
	mV	±0.2 (>199.9 mV); ±2 mV (beyond)
	Dissolved oxygen	±2%
	Temperature	±0.5°C
Barometric pressure correction	Manual	
Salinity correction	Manual; 0 to 45	
Temperature compensation	Automatic or manual from -10 to 110°C	
Output	USB or RS-232	
Data logging	Stores up to 500 data sets	
Power	Two AA batteries (included); or optional universal power adapter	
Price		
Precalibrated price	—	

[LR-59002-75](#) "All-in-One" pH electrode with built-in ATC. Single-junction; epoxy body; BNC connector

[LR-35618-05](#) ATC probe. Use with any standard pH electrode for temperature compensation

[LR-35640-51](#) Replacement RDO sensor cap

[LR-35640-53](#) Replacement RDO probe, 10-ft (3-m) cable

[LR-35640-55](#) RDO probe, 20-ft (6-m) cable

[LR-35640-57](#) RDO probe, 50-ft (15-m) cable

[LR-35418-83](#) Optional adapter, 110/220 VAC

[LR-35630-53](#) Data cable for USB connectivity

[LR-35420-01](#) Data cable for RS-232 connectivity

[LR-09376-01](#) Replacement batteries, AA. Pack of 4

[LR-17106-20](#) NIST-traceable calibration with data for pH meter

Oakton® Waterproof pH/CON 450 Meter

Achieve more measurements in one meter

- Get both pH and conductivity measurements with combination pH/CON probe or separate pH and conductivity probes
- Use it in any environment with backlit display and rugged design
- Intuitive, user-friendly icons show electrode status as pH slope and all constant
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Download and analyze up to 500 data sets with USB or RS-232 output
- Use as a benchtop meter as well—built-in stand and wall-mount option

Ideal meter for any environment with its rugged, waterproof housing. View both the main measurement and temperature simultaneously with large, backlit LCD. Ensure the accuracy of your measurements with up to six calibration points from USA, NIST, DIN, and custom pH buffer sets. Autocal feature for conductivity has one calibration point per range. Don't worry about accuracy in fluctuating temperature—ATC ensures measurement accuracy.

Meter features include ready (stability) indicator, smart averaging, user-selectable °C/°F units, hold function, calibration alarm, battery-life indicator, and electrode status. Choose combination pH/CON probe or separate probe options.

pH/CON 450 meter with combination probe includes: combination pH/CON probe (model 35630-51), Grip-Clip holder, and two AA batteries.

pH/CON 450 meter with separate probes includes: pH electrode (model 35641-51), conductivity probe (model 35608-50, K = 1.0), Grip-Clip holder, and two AA batteries.

pH/CON 450 kits add: calibration standards and hard carrying case.



Description	Meter with combination probe	Meter with separate probes	Meter kit with combination probe	Meter kit with separate probes
Model	PC 450			
Catalog number	LR-35630-10	LR-35630-12	LR-35630-80	LR-35630-90
Pre-calibrated catalog number	LR-35630-11	LR-35630-13	LR-35630-81	LR-35630-91
Range	pH	-2.00 to 16.00		
	mV	±2000 mV		
	Conductivity	0 to 200 mS		
	TDS	0 to 200 ppt		
	Salinity	0 to 50 ppt		
Resolution	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)		
	pH	0.01		
	mV	0.1 mV ±999.9 mV; 1 mV beyond		
	Conductivity	0.01 µS to 0.1 mS		
	TDS	0.01 ppm to 0.1 ppt		
Accuracy	Salinity	0.01		
	Temperature	0.1°F/°C		
	pH	±0.01		
	mV	±0.2 mV ±2 LSD or ±0.5% of reading; whichever is greater		
	Conductivity	±0.5% full-scale (monovalent); ±1% full-scale (divalent)		
Calibration	TDS	±1% full-scale		
	Salinity	±1% full-scale		
	Temperature	±0.9°F (±0.5°C)		
	pH	Up to six points: USA, NIST, DIN, PWB, or custom		
	mV	±200 mV		
Temperature compensation	Conductivity	Up to six points		
	TDS	Auto/manual; one point per range		
	Salinity	Auto/manual; one point per range		
	Temperature	±5.0° offset		
	Output	Automatic or manual from -10 to 110°C		
Data logging	USB or RS-232			
Power	Stores up to 500 data sets			
Price	Two AA batteries (included), 500 hours (without backlight); AC adapter (optional)			
Pre-calibrated price				

Accessories

LR-35641-51 Replacement pH electrode. Double-junction; epoxy body; BNC connector

LR-35618-05 ATC probe. Use with any standard pH electrode for temperature compensation

LR-35630-51 Replacement combination pH/CON/ATC probe

LR-35608-55 Conductivity cell, K = 0.1

LR-35608-50 Replacement conductivity cell, K = 0.1

LR-35608-51 Conductivity cell, K = 1.0

LR-35614-50 Replacement Grip-Clip holder

LR-35614-51 Hard carrying case, for 150/450 meters

LR-35630-53 Data cable for USB connectivity

LR-35420-01 Data cable for RS-232 connectivity

LR-35420-72 Optional AC adapter, 110/220 VAC

LR-09376-01 Replacement batteries, AA. Pack of 4

LR-17106-20 NIST-traceable calibration with data for pH meter

LR-17090-30 NIST-traceable calibration with data for conductivity meter



METTLER TOLEDO Seven2Go™ Pro Handheld pH/Ion Meter

No more juggling while multitasking

NEW

- Comfortable, single-handed operation frees a hand for other tasks
- Robust IP67-rated housing protects meter from harsh conditions
- Enhanced contrast screen is readable in any light condition—even bright sunlight
- Compatible with InLab® ISM sensors for quick electrode changes without recalibration



Choose meter only or select a convenient kit with electrode that best fits your application. The InLab Expert Pro-ISM electrode is ideal for general applications in or out of doors, with a rugged PEEK body and double junction to protect the sensor from dirty samples. The InLab Routine Pro-ISM electrode is best suited to analytical laboratory applications, providing fast results with a greater degree of chemical resistance. For fluoride measurements, the perfectION™ combination ion-selective electrode features the built-in Click & Clear™ reference junction to prevent clogging and provide faster, more stable readings.

What's included: LabX direct pH software, USB cable, electrode holder, stabilizing/mounting base, wrist strap, test report, and batteries.



Specifications

Range	pH	-2 to 20
	mV	±1999
	ISE	Depends on the ISE used†
	Temperature	-5 to 130°C
Resolution	pH	0.001, 0.01, 0.1
	mV	0.1, 1
	ISE	3 or 4 digits (autorange)
	Temperature	0.1°C
Accuracy	pH	±0.002
	mV	±0.1
	ISE	±0.5%
	Temperature	±0.2°C up to 105°C, ±0.5°C above 105°C
Temperature compensation	Automatic or manual	
Calibration	Up to 5 points	
Buffer recognition	NIST, DIN, JIS, MERCK, MT USA, MT Europe, JIG 119, Technical, custom	
Data logging	2000 readings with time and date	
Output	Micro-USB	
Power	Four AA batteries or USB	

†The perfectION Fluoride electrode (included in the Fluoride kit) has a lower limit of detection of 0.02 mg/L

Description	Catalog number	Price
Seven2Go Pro pH/ion meter with standard accessories	LR-35903-61	
Standard kit: adds InLab Expert Pro pH electrode and buffer sachet set	LR-35903-62	
Field kit: adds InLab Expert Pro pH electrode, buffer sachet set, solution bottles, and carrying case	LR-35903-63	
Biotech kit: adds InLab Routine Pro pH electrode, buffer sachet set, solution bottles, and carrying case	LR-35903-64	
Fluoride kit: adds perfectION fluoride electrode	LR-35903-65	

[LR-17106-20](#) NIST-traceable calibration with data for pH meters

METTLER TOLEDO SevenCompact™ S220 Benchtop pH/Ion Meter

Increase your efficiency with one-touch operation

NEW

- A single key press toggles between pH and ion measurement modes
- Preprogrammed with the most common ion selective electrode types for convenience
- ISM® pH and ion-selective electrodes ensure data integrity



Get increased efficiency with just a touch—one key press begins the measurement, waits for stability, stores the stable reading with GLP stamp, and can automatically transfer the data to USB flash drive (not included). The user-friendly interface allows you to quickly and easily set up parameters, toggle between screens and functions, and change electrodes to keep pace with a busy lab.

Available as meter only or choose a convenient kit configured for your application. **Standard Kit** includes an InLab® Expert Pro-ISM PEEK-body combination electrode for general-purpose use; kit is also available with a uMix™ magnetic stirrer that is controlled and powered by the meter. Select the **Bio Kit** with InLab Routine Pro-ISM glass-body chemical-resistant combination electrode, **Universal Kit** with InLab Versatile Pro polysulfone-body combination electrode designed for field work, or **Micro Kit** with InLab Ultra-Micro glass-body electrode for volumes down to 15 µL.

Meter includes: uPlace™ adjustable electrode holder, protective cover, power cord, and test certificate supplied by the manufacturer. **All kits add:** electrode plus two buffer sachets for pH 4.01, 7.00, 9.21, and 10.00.

Specifications

Range	pH	-2 to 20†
	mV	±2000
	Ion	0 to 10,000 ppm
	Temperature	-30 to 130°C†
Resolution	pH	0.001/0.01/0.1
	mV	0.1/1
	Ion	± last significant digit
	Temperature	0.1°C
Accuracy	pH	±0.002
	mV	±0.2
	Ion	±0.5%
	Temperature	±0.1°C
Temperature compensation	Automatic: -5 to 130°C; Manual: -30 to 130°C	
Calibration	Up to 5	
Buffer recognition	Automatic; 8 predefined and 1 user-defined groups	
Data logging	1000 measurements	
Output	USB, RS-232	
Power	115/230 VAC, 50/60 Hz	

†Actual measurement range depends on the electrode used.

Description	Catalog number	Price
Meter only	LR-41000-29	
Standard kit	LR-41000-30	
Standard kit with stirrer	LR-41000-34	
Bio kit	LR-41000-31	
Universal kit	LR-41000-32	
Micro kit	LR-41000-33	



Horiba® Multiparameter Meters

The only meter you need—measure up to 11 parameters simultaneously

- Auto-calibration feature simplifies calibration of pH, dissolved oxygen, conductivity, turbidity, and depth
- Rugged housing is both waterproof and shock resistant
- Store up to 10,000 readings with USB connectivity for export of data to a PC
- Backlit LCD for use in dark and low-light conditions

Meters are designed for one-handed operation. Probes are attached via a quick-connect connector. Auto-calibration feature provides hassle-free meter setup. Polarographic DO sensor features improved stability, fast response, and easy maintenance.

Auto-hold function freezes average data values providing more time to verify or transcribe data. Up to 10,000 data sets can be stored. Transfer to a PC via a built-in USB connection. Units of measure are user selectable.

Model U-51 can measure pH, ORP, conductivity, TDS, salinity, dissolved oxygen, seawater specific gravity, and temperature.

Model U-52 adds turbidity measurement.

Model U-53 adds water depth and features a more robust turbidity sensor.

Models U-52G and U-53G feature built-in GPS—ideal for environmental surveys.

What's included: one probe, one 500-mL bottle of pH 4.0 buffer solution, one 250-mL bottle of KCl solution, DO sensor installation set, cleaning brush, calibration cup, batteries, shoulder strap, and carrying case.



99600-20



Durable probe for robust measurements

Specifications



Temperature compensation: automatic -5 to 55°C
Memory: 10,000 data sets

Output: USB
Power: four C batteries (included)

Model	U-51	U-52	U-52G	U-53	U-53G
Range	pH	0 to 14	0 to 14	0 to 14	0 to 14
	mV	-2000 to 2000 mV	-2000 to 2000 mV	-2000 to 2000 mV	-2000 to 2000 mV
	Conductivity	0 to 100 mS/cm	0 to 100 mS/cm	0 to 100 mS/cm	0 to 100 mS/cm
	TDS	0 to 100 g/L	0 to 100 g/L	0 to 100 g/L	0 to 100 g/L
	Salinity	0 to 70 ppt	0 to 70 ppt	0 to 70 ppt	0 to 70 ppt
	Dissolved oxygen	0 to 50.0 mg/L	0 to 50.0 mg/L	0 to 50.0 mg/L	0 to 50.0 mg/L
	Turbidity	—	0 to 800 NTU	0 to 1000 NTU	0 to 1000 NTU
	Seawater specific gravity	0 to 50 σt	0 to 50 σt	0 to 50 σt	0 to 50 σt
	Water depth	—	—	0 to 30 m	0 to 30 m
	Temperature	-5 to 55°C	-5 to 55°C	-5 to 55°C	-5 to 55°C
	Resolution	pH	0.01	0.01	0.01
mV		1 mV	1 mV	1 mV	1 mV
Conductivity		0.1% of range	0.1% of range	0.1% of range	0.1% of range
TDS		0.1% FS	0.1% FS	0.1% FS	0.1% FS
Salinity		0.1 ppt	0.1 ppt	0.1 ppt	0.1 ppt
Dissolved oxygen		0.01 mg/L	0.01 mg/L	0.01 mg/L	0.01 mg/L
Turbidity		—	0.1 NTU	0.01 NTU	0.01 NTU
Seawater specific gravity		0.1 σt	0.1 σt	0.1 σt	0.1 σt
Water depth		—	—	0.5 m	0.5 m
Temperature		0.01°C	0.01°C	0.01°C	0.01°C
Accuracy		pH	±0.1	±0.1	±0.1
	mV	±15 mV	±15 mV	±15 mV	±15 mV
	Conductivity	±1% FS	±1% FS	±1% FS	±1% FS
	TDS	±5 g/L	±5 g/L	±5 g/L	±5 g/L
	Salinity	±3 ppt	±3 ppt	±3 ppt	±3 ppt
	Dissolved oxygen	±0.2 mg/L from 0 to 20 mg/L; ±0.5 mg/L from 20 to 50 mg/L	±0.2 mg/L from 0 to 20 mg/L; ±0.5 mg/L from 20 to 50 mg/L	±0.2 mg/L from 0 to 20 mg/L; ±0.5 mg/L from 20 to 50 mg/L	±0.2 mg/L from 0 to 20 mg/L; ±0.5 mg/L from 20 to 50 mg/L
	Turbidity	—	±5% of reading or ±1 NTU	±3% of reading or ±0.1 NTU	±3% of reading or ±0.1 NTU
	Seawater specific gravity	±5 σt	±5 σt	±5 σt	±5 σt
	Water depth	—	—	±0.3 m	±0.3 m
	Temperature	±0.3°C	±0.3°C	±0.3°C	±0.3°C

Model	Cable length	Catalog number	Price
U-51	6 ft (2 m)	LR-99600-20	
	33 ft (10 m)	LR-99600-21	
U-52	6 ft (2 m)	LR-99600-22	
	33 ft (10 m)	LR-99600-23	
	100 ft (30 m)	LR-99600-24	
U-52G	6 ft (2 m)	LR-99600-25	
	33 ft (10 m)	LR-99600-26	
	100 ft (30 m)	LR-99600-27	
U-53	6 ft (2 m)	LR-99600-28	
	33 ft (10 m)	LR-99600-29	
	100 ft (30 m)	LR-99600-30	
U-53G	6 ft (2 m)	LR-99600-31	
	33 ft (10 m)	LR-99600-32	
	100 ft (30 m)	LR-99600-33	

[LR-98693-08](#) Replacement reference sensor

[LR-99590-50](#) Replacement pH electrode

[LR-99590-54](#) Replacement liquid junction for pH electrode

[LR-99600-34](#) Replacement ToupH sensor; reinforced response glass for greater durability

[LR-99600-35](#) Replacement ORP sensor

[LR-99600-36](#) Replacement DO sensor

[LR-99600-40](#) USB cable/software

[LR-99600-41](#) Repl. DO membrane caps. Pack of 3

[LR-17106-20](#) NIST-traceable calibration for pH meter

[LR-17090-30](#) NIST-traceable calibration for conductivity meter

[LR-17106-04](#) NIST-traceable calibration for DO meter

Oakton® Benchtop pH 700 and Ion 700 Meters

No more lost data—store and recall up to 100 data sets

- Takes up less bench space—40% smaller than comparable models
- Super-large duty-line display is easy to read
- Simple calibrations with 5-point automatic pH buffer recognition for USA and NIST buffers
- More accurate measurements with up to 5-point calibration for ion concentration on Ion 700 model
- Versatile—use with any pH, ORP, or ISE electrodes with BNC connector

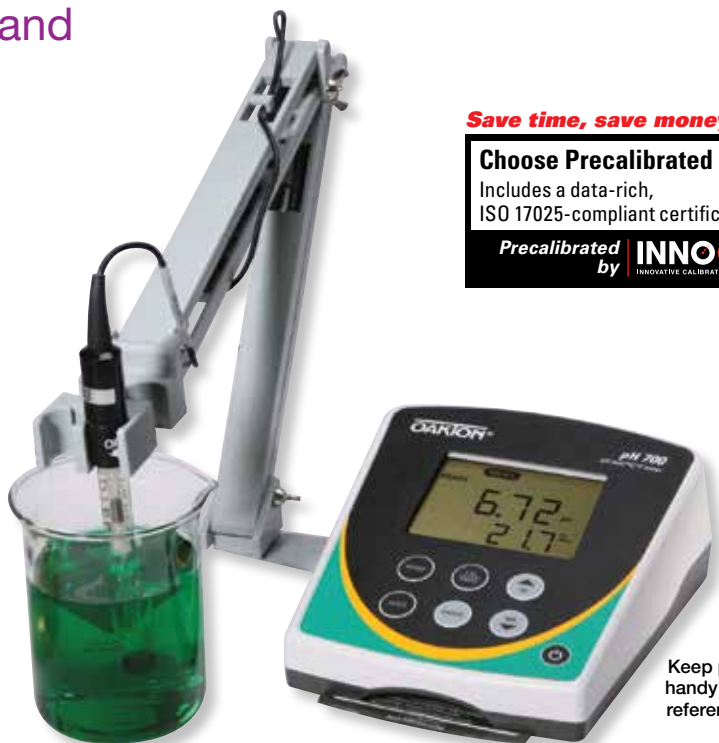
pH 700 meter measures pH, mV, relative mV, and temperature. Ion 700 meter adds ion concentration measurement and reads directly in ppm for easy use. Automatic temperature compensation (ATC) maintains reading accuracy even with fluctuating temperatures.

Meters feature Auto-Hold, selectable °F or °C measurement, and easy recall of electrode slope or offset.

Save time, save money!

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Includes a data-rich,
ISO 17025-compliant certificate!

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INNOVATIVE CALIBRATION SOLUTIONS



Keep procedures handy with quick-reference pull out

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For our complete selection of pH/ion meters, go to ColeParmer.com/PHMeters

OAKTON

ISO 9001:2008
CERTIFIED SUPPLIER

CE Meter only

Specifications

Model		pH 700	Ion 700
Range	pH	-2.00 to 16.00	-2.00 to 16.00
	mV/rel mV	±2000	±2000
	ISE	—	0.01 to 2000 ppm
	Temperature	32 to 100°F (0.0 to 100.0°C)	32 to 100°F (0.0 to 100.0°C)
Resolution	pH	0.01 pH	0.01 pH
	mV/rel mV	0.1 within ±199.9 mV, 1 beyond ±199.9 mV	0.1 within ±199.9 mV, 1 beyond ±199.9 mV
	ISE	—	0.01 to 2000 ppm
	Temperature	0.1°F or °C	0.1°F or °C
Accuracy	pH	±0.01 pH	±0.01 pH
	mV/rel mV	±0.2 within ±199.9 mV, ±2 beyond 199.9 mV	±0.2 within ±199.9 mV, ±2 beyond 199.9 mV
	ISE	—	±0.5% of reading (monovalent); ±1% of reading (divalent)
	Temperature	±0.9°F (±0.5°C)	±0.9°F (±0.5°C)
Calibration	pH	Up to 5 points with autobuffer recognition	Up to 5 points with autobuffer recognition
	mV	Up to ±150 mV offset adjustment	Up to ±150 mV offset adjustment
	ISE	—	From 2 to 5 consecutive points (0.1, 1.0, 10.0, 100.0, 1000 ppm)
Temperature compensation		Automatic or manual from 32 to 100°F (0 to 100°C)	Automatic or manual from 32 to 100°F (0 to 100°C)
Buffer recognition		USA or NIST buffer sets	USA or NIST buffer sets
Data logging		100 data sets	100 data sets
Power		100/240 VAC, 50/60 Hz	100/240 VAC, 50/60 Hz

Model	Description	Meter		Precalibrated meter	
		Catalog number	Price	Catalog number	Price
pH 700	Meter only	LR-35419-00		LR-35419-01	
pH 700	Meter with "all-in-one" pH/ATC electrode	LR-35419-03		LR-35419-05	
Ion 700		LR-35419-23		LR-35419-27	
pH 700		LR-35419-10		LR-35419-11	
Ion 700	Meter with double-junction pH electrode, ATC probe, and removable electrode holder	LR-35419-20		LR-35419-24	
pH 700		LR-35419-12		LR-35419-15	
Ion 700	Meter with removable electrode holder	LR-35419-22		LR-35419-26	

[LR-59001-65](#) Combination pH electrode; single junction, gel-filled, epoxy body

[LR-59001-70](#) Combination pH electrode; double junction, gel-filled, epoxy body

[LR-35811-71](#) "All-in-one" combination pH electrode; single junction, gel-filled, epoxy body

[LR-35805-04](#) Replacement combination pH electrode; double junction, refillable, glass body

[LR-35613-13](#) Replacement ATC probe, SS

[LR-35420-54](#) Replacement electrode arm

[LR-17106-20](#) NIST-traceable calibration with data for pH/ion meter



Oakton® Benchtop PC 700 and PC 2700 Meters

Get all the readings you need in one compact unit

- Economical PC 700 for basic laboratory use
- Advanced PC 2700 for research grade use with ion capability

PC 700 Meter features pH auto-buffer recognition for both USA and NIST buffer sets, automatic or manual temperature compensation, and selectable temperature units. Previous calibration points, electrode slope and offset, and conductivity/TDS cell constants are stored in memory for quick and easy retrieval. Store up to 100 data sets in the meter's memory for retrieval later.

PC 2700 Meter meets GLP requirements—meter stamps all calibration and stored data with time/date. Nonvolatile memory stores up to 500 data sets to simplify documenting large volumes of pH, mV, ISE, conductivity, TDS, salinity, or resistivity measurements. Data is easily exported to a computer via RS-232 port. Order RS-232 and optional RS-232-to-USB adapter separately below.

Meter only includes: universal 110/240 VAC power supply and electrode stand.

Meter with probes adds: combination pH electrode 35805-04 and conductivity/temperature probe 35608-74 (PC 700) or 35412-10 (PC 2700).



Specifications

Conductivity cell constant: fixed at K = 1.0 cm⁻¹

Conductivity-to-TDS factor: adjustable from 0.4 to 1.0

Model		PC 700	PC 2700
Range	pH	-2.00 to 16.00	-2.000 to 20.000
	mV/Rel mV	±2000	±2000.0
	ISE	—	0.001 to 19999 ppm
	Conductivity	0.0 µS to 200 mS	0.050 µS to 500.0 mS
	TDS	0.00 ppm to 100.0 ppt @ 0.5 factor (200.0 ppt @ 1.0 factor)	0.050 to 500.0 ppt
	Salinity	—	0.0 to 80.0 ppt
	Resistivity	—	2.000 Ω to 20.0 MΩ
	Temperature	32.0 to 212°F (0.0 to 100.0°C)	32.0 to 212°F (0.0 to 100.0°C)
Resolution	pH	0.01 pH	0.001, 0.01, 0.1 pH
	mV/Rel mV	0.1 within ±199.9 mV, 1 beyond ±199.9 mV	0.1 mV
	ISE	—	2 or 3 digits
	Conductivity	0.01, 0.1, 1 µS; 0.01, 0.1 mS	0.01, 0.1 µS; 0.001, 0.01, 0.1 mS
	TDS	0.01, 0.1, 1 ppm; 0.01 0.1 ppt	0.01, 0.1 ppm; 0.001, 0.01, 0.1 ppt
	Salinity	—	0.1 ppt
	Resistivity	—	0.01 mΩ, 0.001, 0.01 kΩ, 0.01, 0.1 Ω
	Temperature	0.1°F or °C	0.1°F or °C
Accuracy	pH	±0.01 pH	±0.002 pH
	mV/Rel mV	±0.2 within ±199.9 mV, ±2 beyond 199.9 mV	±0.2 mV
	ISE	—	0.5% full scale (monovalent), 1% full scale (divalent)
	Conductivity	±1% full-scale	±1% full-scale
	TDS	±1% full-scale	±1% full-scale
	Salinity	—	±1% full-scale
	Resistivity	—	±1% full-scale
	Temperature	±0.9°F (±0.5°C)	±0.5°F (±0.3°C)
Calibration	pH	Up to 5 points (USA or NIST buffer sets)	Up to 6 (USA, NIST, DIN, or custom buffer sets)
	ISE	—	Up to 8 points
	Conductivity/TDS	5 points (one point per range)	5 points (one point per range)
Temperature compensation	Automatic or manual	Automatic or manual	
Data logging	100 data sets	500 data sets	
Output	—	RS-232	
Power	110/240 VAC universal adapter	110/240 VAC universal adapter	

Model	Description	Meters		Precalibrated meters	
		Catalog number	Price	Catalog number	Price
PC 700	Meter only	LR-35413-20		LR-35413-21	
	Meter with pH and conductivity/temperature probes	LR-35413-00		LR-35413-01	
PC 2700	Meter only	LR-35414-20		LR-35414-21	
	Meter with pH and conductivity/temperature probes	LR-35414-00		LR-35414-01	

Accessories

- [LR-35420-01](#) RS-232 cable for 2700-series meter
- [LR-35630-53](#) USB cable for 2700-series meter
- [LR-17106-20](#) NIST-traceable calibration with data for pH meters
- [LR-17090-30](#) NIST-traceable calibration with data for conductivity meters

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INNOVATIVE CALIBRATION SOLUTIONS



Thermo Scientific™ Orion™ Star™ A-Series Benchtop pH and pH/Ion Meters

Don't second-guess readings—stable readings locked in with Auto-Read™ function

- Star A111 basic meter is perfect for simple, accurate pH measurements
- Star A211 and A214 meters provide advanced data security and data logging

Star A111 pH Meter is a low-cost option that combines simplicity with accuracy—making it great for everyday pH measurements.

Star A211 pH and A214 pH/Ion Meters support a multilanguage interface, improved stability algorithms, expanded data logging, and better data security over the Star meter. Meters use RS-232 or USB for connectivity and include data analysis software.

Meters include: electrode arm with redesigned probe holder and universal power adapter.

Star A111 meter kit adds: Orion Triode™ pH/ATC electrode 05719-14 and 60 mL each of 4, 7, 10 buffers, storage solution, and cleaning solution.

Star A211 and 214 meter kits add: ROSS™ Triode pH/ATC electrode 05718-28; ATC probe; Star stirring probe; and 475 mL each of 4, 7, 10 buffers and storage solution.



Meter only

Model	A111 pH meter only	A111 pH meter kit	A211 pH meter only	A211 pH meter kit	A214 pH/ion meter only	A214 pH/ion meter kit
Catalog number	LR-58825-02	LR-58825-04	LR-58825-22	LR-58825-24	LR-58825-26	LR-58825-28
Parameters	pH/mV/temperature		pH/mV/temperature		pH/mV/ion/temperature	
Range	–2.00 to 16.00		–2.000 to 20.000		–2.000 to 20.001	
	±1600.0 mV; ±1999.9 rel mV		±2000.0 mV		±2000.0 mV	
	—		—		0 to 19999	
	23 to 221°F (–5 to 105°C)		23 to 221°F (–5 to 105°C)		23 to 221°F (–5 to 105°C)	
Resolution	0.1, 0.01		0.1, 0.01, 0.001		0.1, 0.01, 0.001	
	0.1		0.1		0.1	
	—		—		3 significant digits	
	0.1		0.1		0.1	
Accuracy	±0.01		±0.002		±0.002	
	±0.2 or 0.05% of reading		±0.2 or 0.05% of reading		±0.2 or 0.05% of reading	
	—		—		±0.2 mV or 0.05% of reading	
	±0.1		±0.1		±0.1	
Temperature compensation	Automatic or manual		Automatic or manual		Automatic or manual	
Calibration points	Up to 3		Up to 5		Up to 5	
Buffer recognition	USA, NIST, and DIN		USA, NIST, and DIN		USA, NIST, and DIN	
Data logging	50 points		2000 points with time/date stamp		2000 points with time/date stamp	
Output	—		RS-232, USB		RS-232, USB	
Power	100 to 240 VAC (power adapter included) or four AA batteries (not included)		100 to 240 VAC (power adapter included) or four AA batteries (not included)		100 to 240 VAC (power adapter included) or four AA batteries (not included)	
Price						

Accessories

[LR-58825-50](#) Electrode arm

[LR-58825-51](#) Base for electrode arm

[LR-58822-03](#) Universal AC power adapter

[LR-05719-14](#) Orion Triode pH/ATC electrode; refillable, epoxy body

[LR-05718-28](#) Ross Triode pH/ATC electrode

[LR-55350-68](#) pH buffer kit. Includes 473 mL each of 4, 7, 10 buffers and storage solution, and 60 mL of cleaning solution

[LR-09376-01](#) Batteries, AA. Pack of 4

[LR-17106-20](#) NIST-traceable calibration with data for pH meter



Cole-Parmer® P200 Series Benchtop pH and pH/Conductivity Meters

Versatile—an option available for every application

- Choose a pH electrode depending on your needs—either a combination 3-in-1 electrode with ATC or a Tris-compatible electrode
- Flexible-arm electrode holder lets you perform other tasks while waiting for readings to stabilize
- Improve reading stability and accuracy with integrated stirrer in test bench (-S models only)
- pH/conductivity meters ("PC" models) display both pH and conductivity simultaneously

This P200 series of benchtop meters provides accurate, reliable results with the benefit of convenient accessories to make your lab run smoothly. Large color TFT display is easily visible, and features a stability icon to alert you when your readings are ready to be recorded and an electrode health icon indicating when you need to refill or replace your electrode. Meters also feature graphic and multi-language text operating instructions.

Test bench features a magnetic stirrer (0 to 3000 rpm) and flexible-arm electrode holder, with dedicated spaces for calibration standards or sample cups and a stir bar. The intelligent stirrer has memory for repeatable results and can be equipped with the meter or used separately.



NEW

59250-05

Cole-Parmer®

You'll find pH buffers on pages 14–15.



Model	P200		P200S	PC200		PC200S
Catalog number	LR-59250-00	LR-59250-05	LR-59250-20	LR-59250-10	LR-59250-15	LR-59250-25
Description	Meter with 3-in-1 pH electrode	Meter with 3-in-1 pH electrode and holder	Meter with Tris-compatible pH electrode, temperature probe, and test bench	Meter with 3-in-1 pH electrode and conductivity cell	Meter with 3-in-1 pH electrode, conductivity cell, and holder	Meter with Tris-compatible pH electrode, temperature probe, and test bench
Parameters	pH/mV/temperature			pH/mV/conductivity/TDS/temperature		
Range	pH	0 to 14.00		0 to 14.00		
	mV	±2000		±2000		
	Conductivity	—		0 to 19.99, 20.0 to 199.9, 200 to 1999 µS; 2.00 to 19.99, 20.0 to 200.0 mS		
	TDS	—		0.0 mg/L to 100.0 g/L		
	Temperature	32 to 212°F (0 to 100°C)		32 to 212°F (0 to 100°C)		
Resolution	pH	0.01/0.1		0.01/0.1		
	mV	0.1/1		0.1/1		
	Conductivity	—		0.01, 0.1 (µS or mS)		
	TDS	—		0.1		
	Temperature	0.1°F or C		0.1°F or C		
Accuracy	pH	±0.01		±0.01		
	mV	±0.01% full-scale		±0.01% full-scale		
	Conductivity	—		±1% full-scale		
	TDS	—		±1% full-scale		
	Temperature	±0.36°F (0.2°C)		±0.36°F (0.2°C)		
Temperature compensation	32 to 212°F (0 to 100°C), automatic or manual			32 to 212°F (0 to 100°C), automatic or manual		
Calibration points	pH	1 to 3		1 to 3		
	Conductivity	—		1 to 4		
Buffer recognition	pH	USA, NIST, user defined		USA, NIST, user defined		
	Conductivity	—		84, 1413 µS; 12.88, 111.8 mS; one user defined		
Stirrer speed	—	—	0 to 3000 rpm	—	—	0 to 3000 rpm
Power	120 VAC, 60 Hz			120 VAC, 60 Hz		
Price						

Accessories

[LR-59250-97](#) Replacement Tris-compatible pH electrode for P200S and PC200S

[LR-59200-06](#) Replacement 3-in-1 pH/temp electrode for P200 and PC200

[LR-59250-98](#) Replacement flexible-arm electrode holder

[LR-59250-99](#) Replacement combination test bench with stirrer



Oakton® pH Buffer Solutions

Keep your readings accurate with these quality buffers

- Standardized against NIST-traceable pH references for meters with 0.01 resolution



Save by ordering larger sizes or by the case!

pH	60-mL bottle		500-mL bottle			1-L bottle		4-L bottle				
	Catalog number	Price/pk of 5	Catalog number	Price/ea	Catalog number	Price/cs of 12	Catalog number	Price/ea	Catalog number	Price/ea	Catalog number	Price/cs of 4
1.68	LR-00653-07		LR-00654-01		—	—	—	—	—	—	—	—
4.01	LR-00653-08		LR-00654-00		LR-05942-21		LR-05942-22		LR-05942-24		LR-05942-25	
6.86	LR-00653-11		LR-00654-03		—	—	—	—	—	—	—	—
7.00	LR-00653-09		LR-00654-04		LR-05942-41		LR-05942-42		LR-05942-44		LR-05942-45	
9.18	LR-00653-12		LR-00654-07		—	—	—	—	—	—	—	—
10.01	LR-00653-10		LR-00654-08		LR-05942-61		LR-05942-62		LR-05942-64		LR-05942-65	
12.46	LR-00653-13		LR-00654-12		—	—	—	—	—	—	—	—

Oakton® pH Buffer and Solution Packs

Maintain accuracy and your budget

- Save money by purchasing buffer pack—includes 500 mL bottle of pH 4, 7, and 10 NIST-traceable buffers
- Keep electrodes clean and stored correctly—purchase solution pack which adds 500-mL bottles of cleaning and storage solutions



Description	Qty/pk	Catalog number	Price/pk
pH buffer pack	3 bottles	LR-05942-10	
pH solution pack	5 bottles	LR-05942-15	

Oakton® High-Accuracy pH Buffers

Trust your buffers—high accuracy

- For meters with 0.001 resolution
- Standardized against NIST-certified pH references



pH	One 500-mL bottle		Case of 12 bottles	
	Catalog number	Price/ea	Catalog number	Price/cs
4.000	LR-05942-29		LR-05942-21	
7.000	LR-05942-49		LR-05942-41	
10.000	LR-05942-69		LR-05942-61	

Oakton® pH Buffer Pouches

Keep your accuracy even on the go!

- Single-use pouch—just tear, dip, calibrate
- Standardized to NIST-traceable pH references
- Sold in pack of 20 pouches



pH	Catalog number	Price/pk of 20
4.01	LR-35653-01	
7.00	LR-35653-02	
10.00	LR-35653-03	
Rinse solution	LR-35653-00	

[LR-35653-04](#) Buffer pouch assortment pack; contains five pouches each of pH 4, 7, and 10 buffers and rinse solution

Oakton® pH Indicator Strips

Easy-to-distinguish colors at every pH interval

- Just dip and read with color comparator chart
- Strips measure 2¾" (7 cm) long
- Each vial contains 100 strips



pH range	pH interval	Catalog number	Price
0 to 14	1.0	LR-35850-02	
5 to 9	0.5	LR-35850-04	
0 to 6	0.5	LR-35850-06	

Oakton® Electrode Cleaning and Storage Solutions

Clean electrodes make clean measurements

- Easily remove grease, protein, and other deposits with cleaning solution
- Make electrode last longer—store in our storage solution
- Choose 500-mL bottle or case of 24 500-mL bottles



Solution type	Catalog number	Price/ea	Catalog number	Price/cs
Cleaning	LR-00653-06		—	—
Storage	LR-00653-04		LR-35655-04	

Cole-Parmer® Extended-Life pH Standard Solution Buffers

Don't waste your buffer solutions—up to 5-year shelf life

- Achieve a shelf life of up to 5 years unopened in special envelope, or 1 year after opening
- NIST-traceable calibration report from an ISO Guide 34 and ISO 17025 accredited laboratory included with each 17-oz (500-mL) bottle



pH	Catalog number	Price
4.01	LR-00651-20	
7.00	LR-00651-22	
10.00	LR-00651-24	

Oakton® Reference Fill Solutions

Effortless refilling!

- Choose your solution: 3.8 KCl with AgCl for Ag/AgCl electrodes or 4 KCl for calomel
- Sold in packs of two 125-mL bottles



Description	Catalog number	Price/pk
3.8 KCl with AgCl	LR-05992-47	
4 KCl	LR-05992-48	

Thermo Scientific™ Orion™ ORP Standards

No hazardous chemicals or organics

- No more mixing—stable and ready to use
- Use as relative mV standard and calibrate offset of sample
- Redox potential values are 215 mV for Ag/AgCl reference electrodes and 420 mV for standard hydrogen reference electrodes



Description/packaging	Catalog number	Price
One-pint (475-mL) bottle	LR-05730-55	
Five 2-oz (60-mL) bottles	LR-05730-57	

Trust your Measurements... with the Traceable® name

The Traceable® brand is synonymous with reliability and accuracy—every Traceable product goes through an intense vetting process and comes with NIST-traceable certification from an ISO 17034 Reference Material Producer with A2LA accreditation (1750.02). When you see the Traceable name on the product, you can be confident in your measurements.



Oakton® Traceable® One-Shot™ pH Buffer Solutions

- Eliminate cross-contamination with convenient, single-use vials
- Include NIST-traceable calibration report stating accuracy at 25°C to ±0.010 pH
- Pack contains six 100-mL vials—choose clear or colored solutions

NEW



pH	Clear pH buffer solutions		Colored pH buffer solutions		
	Catalog number	Price/pk	Color	Catalog number	Price/pk
4.005	LR-00655-30		Red	LR-98767-77	
7.000	LR-00655-32		Yellow	LR-98767-78	
7.416	LR-00655-36		—	—	—
10.012	LR-00655-34		Blue	LR-98767-79	

Oakton® Traceable® pH Buffers, NIST-Traceable Reference Materials

- Calibrated by 17034 and ISO 17025 accredited laboratory—includes NIST-traceable certificate
- 100% compatible with all makes of pH meters and all accreditation analysis requirements
- Easy calibrations—include instructions and temperature compensation chart

NEW



pH	500-mL bottle		1-L bottle		4-L bottle	
	Cat. no.	Price	Cat. no.	Price	Cat. no.	Price
Colorless buffers						
4.005	LR-00651-00		LR-00651-30		LR-00651-70	
7.000	LR-00651-02		LR-00651-32		LR-00651-72	
10.012	LR-00651-04		LR-00651-34		LR-00651-74	
Color-coded buffers						
4.005 (red)	LR-00651-06		LR-00651-36		LR-00651-76	
7.000 (yellow)	LR-00651-08		LR-00651-38		LR-00651-78	
10.012 (blue)	LR-00651-10		LR-00651-40		LR-00651-80	

Cole-Parmer® Epoxy-Body Combination pH and ORP Electrodes

Get fast, stable readings



- Impact resistant—epoxy-body housing for added strength
- Ideal for your general-purpose applications in the lab or field
- Compatible with most brands of pH meter

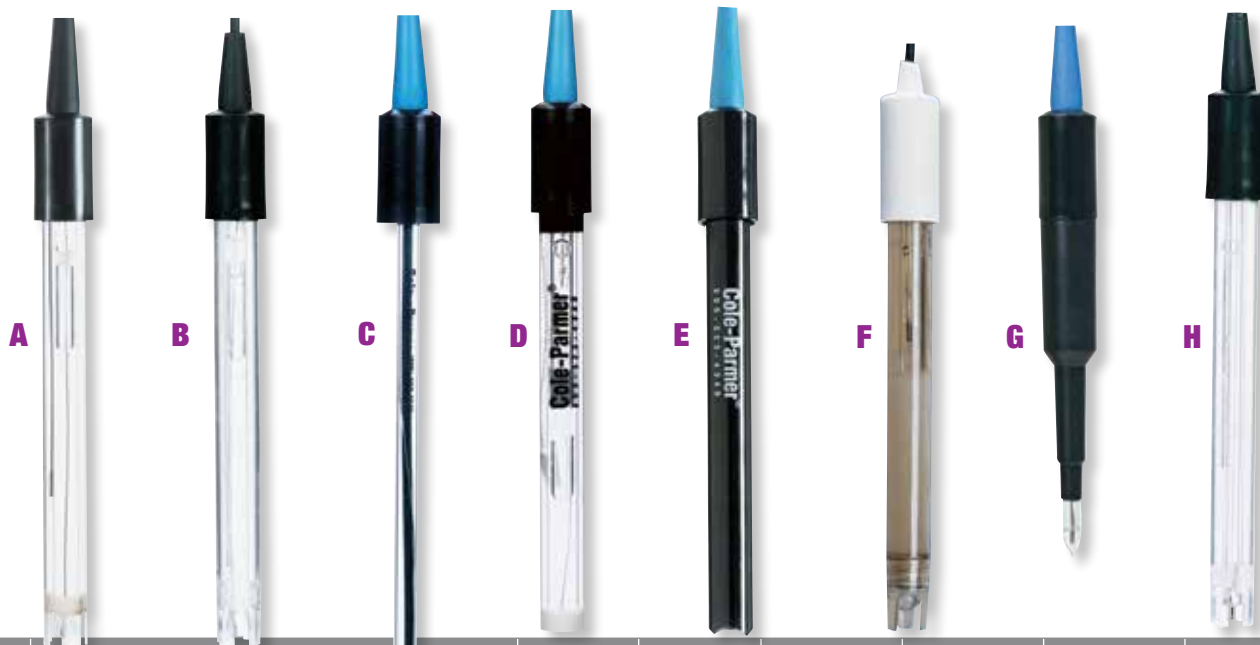
These electrodes are ideal for prolonged pH or ORP readings. Electrodes with sealed, gel-filled design require virtually no maintenance. Electrodes with PTFE reference-junction offer extended electrode life. All listed electrodes have Ag/AgCl reference cells.

What's included: 3.3-ft (1-m) cable with BNC connector.

See How to...



Maintain it!
ColeParmer.com/PHmaintain



Key	Description	Reference junction	Type	Maximum temperature	Length x dia (mm)	Catalog number	Price
General-purpose pH electrodes							
A	General purpose	Single	Sealed	176°F (80°C)	127 x 12	LR-59001-65	
	For dirty samples	Double					
B	General purpose, refillable	Single	Refillable†	176°F (80°C)	148 x 12	LR-05992-30	
	For dirty samples, refillable	Double					
C	Extra-long neck for test tube sampling	Single	Sealed	176°F (80°C)	220 x 6	LR-05990-45	
D	Flat tip for surface or low-volume sampling	Single	Sealed	176°F (80°C)	127 x 12	LR-05990-65	
PTFE reference-junction pH electrodes (clog resistant)							
E	General purpose	Single	Sealed	212°F (100°C)	110 x 12	LR-05992-00	
	For dirty samples	Double					
Special-purpose pH electrodes							
F	Coiled-cable for dirty samples	Double	Sealed	176°F (80°C)	140 x 12	LR-05993-28	
G	Spear-tip for dirty samples				110 x 10	LR-59002-24	
ORP electrodes							
A	General purpose	Single	Sealed	176°F (80°C)	127 x 12	LR-59001-75	
	For dirty samples	Double					
H	General purpose, refillable	Single	Refillable††	176°F (80°C)	155 x 12	LR-05990-55	

†Use fill solution 05992-48 ††Use fill solution 05992-47

[LR-05992-48](#) Reference fill solution, 4 M KCl. Two 125-mL bottles

[LR-05992-47](#) Reference fill solution, 3.8 M KCl with AgCl. Two 125-mL bottles

[LR-05983-25](#) Adapter, BNC to US standard plug meter

Oakton® Flexible Electrode Holder

Keep electrodes in position

- Holds up to four standard-size electrodes and one ATC probe.
- Weighted base pivots 360° for added convenience

Description	Catalog number	Price
Electrode holder	LR-35617-50	



Cole-Parmer® Glass-Body Combination pH and ORP Electrodes

Faster response and increased stability across 0 to 14 pH range

- More durable—dome bulb for better protection from breakage
- Withstand higher temperatures and chemical attack
- Get more stability in low-ionic strength solutions
- Resistant to Na⁺ ion interferences
- Compatible with most brands of pH meters

Available as refillable or sealed design for single, double, and annular Ag/AgCl junctions. Single-junction is ideal for clean samples; double junction is compatible with sulfates, Tris, and proteins; and annular junction is ideal for dirty samples.

What's included: 3.3-ft (1-m) cable and BNC connector.



Key	Description	Reference junction	Type	Maximum temperature	Length x dia (mm)	Catalog number	Price
General-purpose pH electrodes							
A	General-purpose, laboratory	Single	Refillable	212°F (100°C)	154 x 12	LR-05991-22	
	General-purpose for TRIS, sulfates, proteins	Double			154 x 12	LR-59001-34	
B	Rugged, low maintenance	Single	Sealed	212°F (100°C)	123 x 9.5	LR-05991-81	
	Rugged for TRIS, sulfates, proteins	Double			124 x 9.5	LR-59001-36	
C	General-purpose, thin neck	Single	Refillable†	212°F (100°C)	154 x 8	LR-05991-42	
D	Long neck for small test tubes				210 x 6	LR-05991-61	
E	Long neck for large test tubes				210 x 8	LR-05991-51	
F	Extra-long neck for flasks and bottles				326 x 8	LR-05990-40	
Special-purpose pH electrodes							
G	High temperature, KNO ₃ gel	Double	Sealed	248°F (120°C)	130 x 12	LR-05998-30	
H	Spear tip for piercing semisolids and foods	Single	Sealed	212°F (100°C)	159 x 8	LR-05998-20	
I	Soil electrode, eliminates "suspension effect"	Annular	Refillable†	212°F (100°C)	145 x 12	LR-05992-62	
J	Flat-tip for surface or low volume sampling	Double	Refillable†	212°F (100°C)	130 x 12	LR-05991-44	
ORP electrodes							
A	General purpose	Single	Sealed	212°F (100°C)	110 x 12	LR-05991-08	
	For dirty samples	Double				LR-05991-18	

†Use fill solution 05992-47.

Accessories

[LR-05992-47](#) Reference fill solution for refillable electrodes, 3.8 M KCl with AgCl. Two 125-mL bottles

[LR-05983-25](#) Adapter, BNC to US standard plug meter

Cole-Parmer® High-Performance Combination pH Electrodes

Get high-accuracy pH electrodes for every application

- Be more accurate with these 5-point calibration pH electrodes
- Achieve superior reproducibility and stability in aqueous samples

Cole-Parmer high-performance electrodes are available in a full range of materials, junctions, and sizes to suit your application requirements.

What's included: 3.3-ft (1-m) cable with a BNC connector.



Questions?

Trust our **expert** Application Specialists to help you find the right product.

Bob, 7 years of experience

Call: 1-800-363-5900 E-mail: info@coleparmer.ca



ISO9001:2008
CERTIFIED SUPPLIER

Key	Description	Body	Reference junction	Type	Maximum temperature	Length x dia (mm)	Catalog number	Price
Combination pH electrodes								
A	General-purpose laboratory	Glass	Single	Refillable	230°F (110°C)	110 x 12	LR-55510-06	
B	Thin neck for tubes	Glass	Single	Refillable	230°F (110°C)	110 x 6	LR-55510-08	
C	General-purpose laboratory	Epoxy	Single	Refillable	176°F (80°C)	110 x 12	LR-55510-16	
D	Flat tip for surface or low volume	Epoxy	Double	Refillable	176°F (80°C)	110 x 12	LR-55510-18	
E	General-purpose laboratory	Epoxy	Single	Sealed	176°F (80°C)	110 x 12	LR-55510-20	
F	Thin neck for small vessels	Epoxy	Single	Sealed	176°F (80°C)	110 x 6	LR-55510-22	
G	For paper pulp testing	Epoxy	Double	Sealed	176°F (80°C)	110 x 12	LR-55510-24	
Fast-response combination pH electrodes								
H	General-purpose laboratory	Glass	Double	Refillable	230°F (110°C)	110 x 12	LR-55510-26	
I	Thin neck for tubes	Glass	Double	Refillable	230°F (110°C)	110 x 6	LR-55510-28	
J	Rugged bulb	Epoxy	Double	Sealed	176°F (80°C)	110 x 12	LR-55510-30	
Rugged combination pH electrodes								
K	Rugged bulb	Glass	Single	Refillable	176°F (80°C)	110 x 12	LR-55510-36	
	Rugged bulb	Glass	Double	Refillable	230°F (110°C)	110 x 12	LR-55510-38	

Accessories

[LR-05992-47](#) Reference fill solution for single-junction refillable electrodes, 3.8 M KCl with AgCl. Two 125-mL bottles

[LR-05992-48](#) Reference fill solution for double-junction refillable electrodes, 4 M KCl. Two 125-mL bottles



Thermo Scientific™ Sure-Flow™ pH Electrodes

No more clogging

- Get the most stable, drift-free measurements with free-flowing liquid junction
- Simple cleaning—just press cap to flush junction, release cap to take more measurements

Both styles of combination pH electrodes have a nonclogging, easy-to-clean Sure-Flow junction—ideal for viscous and dirty samples. Electrodes read pH from 0 to 14. Maximum temperature is 212°F (100°C).

Choose **Orion™ Sure-Flow electrodes** for high accuracy, even in viscous and dirty samples. Choose **ROSS™ Sure-Flow electrodes** for speed, accuracy, and stability even in rapidly changing and challenging environments.

What's included: 3.3-ft (1-m) cable with BNC connector and 50 mL of KCl filling solution.



ISO9001:2008
CERTIFIED SUPPLIER

Key	Description	Reference type	Length x dia (mm)	Catalog number	Price
A	Orion, glass body	Ag/AgCl	120 x 12	LR-05718-55	
B	Orion, epoxy body			LR-05718-57	
C	ROSS, glass body	ROSS	120 x 12	LR-05718-51	
D	ROSS, epoxy body			LR-05718-53	

Accessories

[LR-05730-42](#) Reference fill solution for Orion SureFlow electrodes; 4 M KCl with AgCl. Five 60-mL bottles

[LR-05730-52](#) Reference fill solution for ROSS SureFlow electrodes; 3 M KCl. Five 60-mL bottles

[LR-05730-60](#) ROSS pH storage solution. One 475-mL bottle



Flushable Sure-Flow junction prevents clogging.

Thermo Scientific™ Orion™ ROSS™ Triode™ pH Electrodes

Be more accurate with automatic temperature compensation (ATC)

- Best temperature response of any pH electrode available
- Built-in temperature for use with Thermo Scientific Orion meters
- No waiting—stable readings to 0.01 pH in less than 30 seconds

Measure both pH and temperature in one convenient 12-mm electrode. Mercury-free, double-junction reference is compatible with samples containing Tris, sulfides, and proteins. Glass-body electrode is available as a refillable junction. Epoxy-body electrodes are available in long-lasting refillable and low-maintenance sealed (gel-filled) options.

What's included: 3.3-ft (1-m) cable, BNC pH connector, and a MiniDIN ATC connector for use with Orion Star Series™ pH meters.

ISO9001:2008
CERTIFIED SUPPLIER

Key	Description	ATC connector	Catalog number	Price
A	Glass body, refillable	MiniDIN for Star Series pH meters	LR-05718-28	
B	Epoxy body, refillable	MiniDIN for Star Series pH meters	LR-05718-34	
C	Epoxy body, gel-filled	MiniDIN for Star Series pH meters	LR-05718-44	

Accessories

[LR-05730-52](#) Filling solution for all ROSS and ROSS Ultra electrodes, 3 M KCl. Case of five 60-mL bottles



Cole-Parmer® Combination Ion-Selective Electrodes and Solutions

Save money and frustration—
cost effective and easy to use

– Easily fit into small spaces—no additional reference electrode is needed

Electrodes are double-junction combination ion-selective electrodes and are convenient to use in places where two electrodes won't fit. Use with a meter that has a resolution of 0.1 mV for the most accurate results; a meter with direct readings in ppm is preferred. For monitoring ions not listed below or for more electrode application information, call our Application Specialists.

Economy Epoxy Electrodes have a durable epoxy body and are well-suited for portable field applications. Outer reference chamber is silver-free and resists contamination. These electrodes are refillable.

Laboratory Glass Electrodes are double-junction in design, with a glass body that provides high-quality measurements for your laboratory applications. Improved glass seal enhances performance and reliability. Sealed inner junctions and refillable outer junctions accommodate special reference fill solutions—ideal for low-concentration measurements.

What's included: a 15-mL bottle of reference solution, a reference filling pipette, and a 3.3-ft (1-m) cable and BNC connector. Solid-state electrodes also have twelve polishing strips.

“Fast and stable.”



Epoxy solid-state chloride electrode 27504-08

Glass solid-state fluoride electrode 27502-19

Epoxy glass membrane sodium electrode 27504-30



Ion-selective electrode	Type	Concentration range	Temperature/pH range†	Interferences‡	Economy epoxy electrodes		Laboratory glass electrodes	
					Cat. no.	Price	Cat. no.	Price
Ammonia (NH ₃)	See page 21 for ordering information							
Ammonium (NH ₄ ⁺)	PVC membrane	5 x 10 ⁻⁶ to 1.0 M (0.1 to 18,000 ppm)	0 to 50°C/4 to 10	K ⁺	LR-27504-00		LR-27502-03	
Bromide (Br ⁻)	Solid-state	5 x 10 ⁻⁶ to 1.0 M (0.4 to 79,900 ppm)	0 to 80°C/2 to 14	S ⁻² , I ⁻ , CN ⁻ ; high Cl ⁻ and NH ₃ levels	LR-27504-02		LR-27502-05	
Cadmium (Cd ⁺²)	Solid-state	10 ⁻⁷ to 10 ⁻¹ M (0.01 to 11,200 ppm)	0 to 80°C/2 to 12	Ag ⁺ , Hg ⁺² , Cu ⁺² ; high Pb ⁺² and Fe ⁺² levels	LR-27504-04		LR-27502-07	
Calcium (Ca ⁺²)	PVC membrane	5 x 10 ⁻⁶ to 1.0 M (0.2 to 40,000 ppm)	0 to 50°C/3 to 10	Pb ⁺² , Hg ⁺² , Cu ⁺² , Ni ⁺² , Fe ⁺² , Mg ⁺² , Zn ⁺² , Ba ⁺² , K ⁺² , K ⁺ , Na ⁺	LR-27504-06		LR-27502-09	
Chloride (Cl ⁻)	Solid-state	5 x 10 ⁻⁵ to 1.0 M (1.8 to 35,500 ppm)	0 to 80°C/2 to 12	S ⁻² , I ⁻ , CN ⁻ , Br ⁻ , OH ⁻ , NH ₃ , S ₂ O ₃ ⁻²	LR-27504-08		LR-27502-13	
Copper (Cu ⁺²)	Solid-state	10 ⁻⁸ to 10 ⁻¹ M (0.0006 to 6350 ppm)	0 to 80°C/2 to 12	Ag ⁺ , Hg ⁺² , high Cl ⁻ , Br ⁻ , Fe ⁺² , and Cd ⁺² levels	LR-27504-10		LR-27502-15	
Cyanide (CN ⁻)	Solid-state	5 x 10 ⁻⁶ to 10 ⁻² M (0.1 to 260 ppm)	0 to 80°C/11 to 13	S ⁻² , I ⁻ , Br ⁻ , Cl ⁻	LR-27504-12		LR-27502-17	
Fluoride (F ⁻)	Solid-state	10 ⁻⁶ to saturated (0.02 to saturated)	0 to 80°C/5 to 8	OH ⁻	LR-27504-14		LR-27502-19	
Iodide (I ⁻)	Solid-state	5 x 10 ⁻⁸ to 1.0 M (0.006 to 127,000 ppm)	0 to 80°C/0 to 14	S ⁻² , CN ⁻ , Br ⁻ , Cl ⁻ , NH ₃ , S ₂ O ₃ ⁻²	LR-27504-18		LR-27502-23	
Lead (Pb ⁺²)	Solid-state	10 ⁻⁶ to 10 ⁻¹ M (0.2 to 20,700 ppm)	0 to 80°C/3 to 8	Ag ⁺² , Hg ⁺² , Cu ⁺² , high Cd ⁺² and Fe ⁺² levels	LR-27504-20		LR-27502-25	
Nitrate (NO ₃ ⁻)	PVC membrane	7 x 10 ⁻⁶ to 1.0 M (0.5 to 62,000 ppm)	0 to 50°C/2.5 to 11	ClO ₄ ⁻ , I ⁻ , CN ⁻ , BF ₄ ⁻	LR-27504-22		LR-27502-31	
Perchlorate (ClO ₄ ⁻)	PVC membrane	7 x 10 ⁻⁶ to 1.0 M (0.7 to 98,000 ppm)	0 to 50°C/2.5 to 11	NO ₃ ⁻ , NO ₂ ⁻ , CN ⁻ , ClO ₃ ⁻ , I ⁻	LR-27504-24		LR-27502-35	
Potassium (K ⁺)	PVC membrane	10 ⁻⁶ to 1.0 M (0.04 to 39,000 ppm)	0 to 50°C/2 to 12	Cs ⁺ , NH ₄ ⁺ , Tl ⁺ , H ⁺ , Ag ⁺ , Li ⁺ , Na ⁺ , Tris ⁺	LR-27504-26		LR-27502-39	
Silver/Sulfide (Ag ⁺ /S ⁻²)	Solid-state	10 ⁻⁷ to 1.0 M (Ag ⁺ , S ⁻²) (0.01 to 107,900 ppm Ag ⁺ ; 0.003 to 32,100 ppm S ⁻²)	0 to 80°C/2 to 12	Hg ⁺²	LR-27504-28		LR-27502-41	
Sodium (Na ⁺)	Glass membrane	10 ⁻⁶ M to saturated (0.02 ppm to saturated)	0 to 80°C/5 to 12	H ⁺ , K ⁺ , Li ⁺ , Ag ⁺ , NH ₄ ⁺ , Rb ⁺ , Cs ⁺ , Tl ⁺	LR-27504-30		LR-27502-43	
Surfactant (X ⁺ /X ⁻)	PVC membrane	10 ⁻⁵ to 5 x 10 ⁻² M (1.0 to 12,000 ppm)	2 to 12	Similar types of surfactants	LR-27504-32		LR-27502-45	
Water hardness (Ca ⁺² /Mg ⁺²)	PVC membrane	10 ⁻⁵ to 1.0 M (0.4 to 40,000 ppm as Ca ⁺²)	0 to 50°C/5 to 10	Cu ⁺² , Zn ⁺² , Ni ⁺² , Fe ⁺²	LR-27504-34		LR-27502-49	

†Optimal pH range for direct measurement.

‡These ions are listed in order of decreasing concentrations of interference.



Cole-Parmer® Ammonia Ion-Selective Electrodes

Combines reference electrode and half-cell

- Fast and accurate readings in less than 30 seconds
- Save money with easily changeable membranes
- Measure concentrations to 17,000 ppm

Single-junction ammonia electrodes feature durable, epoxy bodies. The electrode with loose membranes is for users who prefer that style of installation. The electrode with pre-membraned caps makes electrode membrane replacement easier. Use electrodes with almost any existing meter.

What's included: 3.3-ft (1-m) cable and BNC connector, 15 mL of electrolyte, replacement membrane, and filling pipette. Order standards, ionic strength adjustors, and fill solution separately below.



Solution Kits sold separately below include all of the solutions needed for accurate measurements. Each kit includes one reference filling pipette, one 60-mL bottle of reference fill solution, one 475-mL bottle of 1000 ppm standard solution, and one 475-mL bottle of ionic strength adjustor (except models 27502-69 and 27502-91, which come in a one-gallon bottle).

Replacement ionic strength adjustors come in 475-mL bottles (except model 27503-58, which comes in a one-gallon bottle).



Solution kit 27502-63 and ISA bottle 27503-51

Ion	Standards and fill solution kits			Replacement ionic strength adjustors†		
	Catalog number	Formulations for fill/standard solutions	Price	Catalog number	Solution formulation	Price
NH ₃	See adjacent ad for ordering information					
NH ₄ ⁺	LR-27502-53	0.1 M NaCl/ 1000 ppm as N		LR-27503-53	5 M NaCl	
Br ⁻	LR-27502-55	1 M KNO ₃ / 1000 ppm as Br ⁻		LR-27503-51	5 M NaNO ₃	
Cd ⁺	LR-27502-57	1 M KNO ₃ ‡		LR-27503-51	5 M NaNO ₃	
Ca ⁺²	LR-27502-59	4 M KCl/ 1000 ppm as Ca ⁺²		LR-27503-52	4 M KCl	
Cl ⁻	LR-27502-63	1 M KNO ₃ / 1000 ppm as Cl ⁻		LR-27503-51	5 M NaNO ₃	
Cu ⁺²	LR-27502-65	1 M KNO ₃ / 1000 ppm as Cu ⁺²		LR-27503-51	5 M NaNO ₃	
CN ⁻	—	—	—	—	—	—
F ⁻	LR-27502-69	4 M KCl/ 1000 ppm as F ⁻		LR-27503-58	TiSAB I	
I ⁻	LR-27502-73	1 M KNO ₃ / 1000 ppm as I ⁻		LR-27503-51	5 M NaNO ₃	
Pb ⁺²	—	—	—	LR-27503-56	5 M NaClO ₄	
NO ₃ ⁻	LR-27502-79	0.1 M (NH ₄) ₂ SO ₄ / 1000 ppm as NO ₃ ⁻		LR-27503-60	2 M (NH ₄) ₂ SO ₄	
ClO ₄ ⁻	LR-27502-85	0.1 M (NH ₄) ₂ SO ₄ / 1000 ppm as ClO ₄ ⁻		LR-27503-60	2 M (NH ₄) ₂ SO ₄	
K ⁺	LR-27502-89	0.1 M NaCl/ 1000 ppm as K ⁺		LR-27503-53	5 M NaCl	
Ag ⁺ / S ⁻²	LR-27502-91	1 M KNO ₃ / 1000 ppm as Ag ⁺		LR-27503-51	5 M NaNO ₃	
Na ⁺	LR-27502-93	0.1 M NH ₄ Cl/ 1000 ppm as Na ⁺		LR-27503-54	4 M NH ₄ Cl with 4 M NH ₄ OH	
X ⁺ /X ⁻	LR-27502-95	4 M KCl/ 0.05 M Hyamine® and 0.01 M SLS††		—	—	—
Ca ⁺² / Mg ⁺²	LR-27502-99	4 M KCl/ 1000 ppm as Ca ⁺²		LR-27503-52	4 M KCl	

†A 475-mL bottle of ionic strength adjustor is supplied with kit.
‡Customer-formulated standard solution required. ††None required.



“Excellent performance.”



27512-00 with membrane cap

Type	Concentration range	Temp/ pH range [†]	Interferences	Catalog number	Price
Electrode with loose membranes					
Gas sensing	5 x 10 ⁻⁷ to 1.0 M (0.01 to 17,000 ppm)	0 to 50°C/ above 11	Volatile amines	LR-27502-00	
Electrode with pre-membraned cap					
Gas sensing	5 x 10 ⁻⁷ to 1.0 M (0.01 to 17,000 ppm)	0 to 50°C/ above 11	Volatile amines	LR-27512-00	

†Optimal pH range for direct measurement

Accessories

- [LR-27503-00 Ammonia standard](#), 0.1 M NH₄Cl, 475-mL bottle
- [LR-27503-93 Ammonia standard](#), 1000 ppm ammonia as nitrogen, 475-mL bottle
- [LR-27503-94 Ammonia standard](#), 100 ppm ammonia as nitrogen, 475-mL bottle
- [LR-05730-51 Ionic strength adjustor](#), NaOH and EDTA, 475-mL bottle
- [LR-27503-71 Ammonia fill solution](#), 0.1 M NH₄Cl, 125-mL bottle
- [LR-27503-95 Replacement membranes](#). Ten membrane tapes, one O-ring, and tweezers
- [LR-27512-95 Replacement membrane caps](#) for 27512-00. Pack of 3

Thermo Scientific™ Orion™ ROSS™ and ROSS Ultra™ pH Electrodes

Don't worry about drift—drift is less than 0.002 pH per day

- Get fast, accurate, and stable pH readings
- Ideal for food, pharmaceuticals, or biological samples

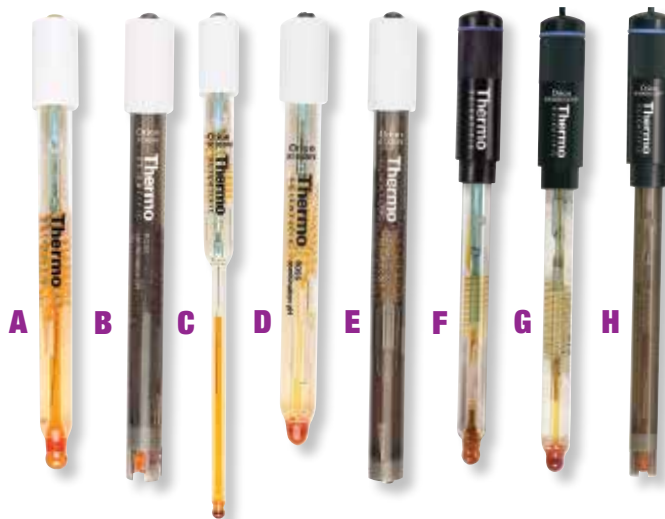
These pH electrodes offer a great mercury-free alternative to calomel electrodes—excellent for use in Tris buffer. The double-junction design protects the inner reference solution and prolongs the life of the electrode. Readings stabilize to 0.01 pH in less than 30 seconds—even with a 50°C temperature change. Electrodes read pH from 0 to 14. Maximum temperature is 212°F (100°C).

ROSS pH Electrodes utilize a platinum wire with 3 M KCl to prevent sample contamination with silver and mercury ions. All ROSS pH electrodes have BNC connector.

What's included: 3.3-ft (1-m) cable and BNC connector, and 60 mL of 3 M KCl filling solution.

ROSS Ultra pH Electrodes use a nonmetallic reference system featuring instantaneous liquid-liquid equilibration for contamination-free sampling, greater stability, and more accurate results. Maintains 0.01 pH precision over long periods of time. Backed by 2-year replacement warranty.

What's included: 3.3-ft (1-m) cable and the exclusive Star™ Series waterproof BNC connector (compatible with any pH meter that accepts BNC input), and 60 mL of 3 M KCl filling solution.



ISO9001:2008
CERTIFIED SUPPLIER



Applications	Description	Length x dia (mm)	ROSS pH electrodes			ROSS Ultra pH electrodes		
			Key	Catalog number	Price	Key	Catalog number	Price
General-purpose, Tris buffers, nonaqueous solutions, and DI water	Glass body	120 x 12	A	LR-05718-02		F	LR-05718-70	
For rugged general-purpose use, Tris buffers, nonaqueous solutions, and DI water	Epoxy body	120 x 12	B	LR-05718-07		G	LR-05718-77	
Small sample size or samples in small-diameter vessels	Glass body	165 (total); 95 x 6	C	LR-05718-16		—	—	—
Rugged general-purpose and field use, nonaqueous solutions, and DI water	Glass body with rugged bulb	120 x 12	D	LR-05718-27		H	LR-05718-73	
Soft, moist surfaces of solids or semisolids such as agar plates	Epoxy body, flat surface	120 x 12	E	LR-05718-32		—	—	—

Accessories

[LR-05730-52](#) Filling solution for all ROSS and ROSS Ultra electrodes, 3 M KCl. Case of five 60-mL bottles

[LR-05730-60](#) ROSS pH electrode storage solution, 475-mL bottle

Thermo Scientific™ PerpHect™ ROSS™ pH Microelectrode

Easily measure small samples with ROSS precision

- Utilizes ROSS sensor technology for optimal temperature response and stability
- Fits into very small vessels—sensing tip diameter is only 3 mm for samples as small as 15 µL
- No breaking—PTFE sleeve protects electrode

This refillable microelectrode features Orion's renowned ROSS technology for fast, accurate, and stable pH readings. Response time is 0.01 pH units in 30 seconds while drift is less than 0.002 pH units per day. Double-junction system makes this microelectrode compatible with Tris buffers and samples containing proteins and enzymes. Non-mercury electrode is a great alternative to calomel-based microelectrodes.

What's included: 3.3-ft (1-m) cable, BNC connector, and 50 mL of filling solution.

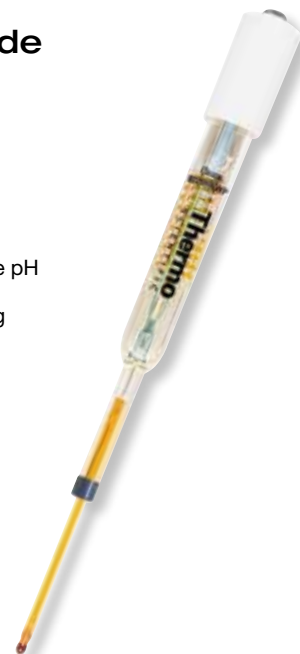
ISO9001:2008
CERTIFIED SUPPLIER

Applications	Description	pH range	Temperature range	Length x dia (mm)	Catalog number	Price
Microtubes, microwell plates, small volumes	ROSS pH microelectrode	0 to 14	32 to 212°F (0 to 100°C)	155 x 3	LR-05718-21	

Accessories

[LR-05730-52](#) Filling solution for all ROSS electrodes, 3 M KCl. Case of five 60-mL bottles

[LR-05730-60](#) ROSS pH storage solution. One 475-mL bottle





Oakton® Waterproof EcoTestr™ Conductivity Pocket Testers

Designed to be durable and easy to use

- View measurements clearly on large, dual-line LCD
- IP67-rated housing is waterproof, dustproof, and floats in water
- Leakproof cap with fill line functions as a sample/calibration and hydrating cup
- Secure—attach a lanyard to prevent losing or dropping in the field

NEW



OAKTON®



Model	EC1	TDS1	Salt1	
Catalog number	LR-35634-06	LR-35634-08	LR-35634-12	
Range	Conductivity	0.1 to 200.0 µS/cm, 0 to 2000 µS/cm, 0.00 to 20.00 mS/cm	—	
	TDS	—	0.0 to 100.0 ppm, 0 to 1000 ppm, 0.00 to 10.00 ppt	
	Salinity	—	—	0.00 to 10.00 ppt
	Temperature	32.0 to 122.0°F (0.0 to 50.0°C)		
Accuracy	Conductivity	±1% full-scale ±1 digit	—	
	TDS	—	±1% full-scale	
	Salinity	—	—	±1% full-scale
	Temperature	±0.9°F (0.5°C)	±0.9°F (0.5°C)	±0.9°F (0.5°C)
Temp. compensation	Automatic, 32 to 122°F (0 to 50°C)			
Calibration	1 or 2 points			
Power	Four AAA batteries (included), 400 hours of continuous use			
Price				

Oakton® Waterproof EcoTestr™ CTS Pocket Meter

Better results—easier and faster

- Conductivity, TDS, and salinity combined into one meter
- Large dual-line display shows parameter and temperature readings simultaneously
- Easier, more intuitive interface and indicators for battery life, readiness, and calibration
- Use redesigned cap as sample cup and as a stabilizing base to stand the meter upright
- Convenient—attach a lanyard to prevent losing or dropping in the field

NEW



“Easy to use.”



OAKTON®



Model	EcoTestr (CTS) Con/TDS/Salinity	
Catalog number	LR-35462-11	
Range	Conductivity	0.00 to 20.00 mS/cm
	TDS	0.00 to 20.00 ppt (with TDS factor 1.0)
	Salinity	0.0 to 10.0 ppt
	Temperature	32.0 to 122.0°F (0.0 to 50.0°C)
Resolution	Conductivity	10 µS, 0.1 mS
	TDS	10 ppm, 0.1 ppt
	Salinity	0.1 ppt
	Temperature	0.1°F (0.1°C)
Accuracy	Conductivity	±2% full-scale ±1 LSD
	TDS	±2% full-scale ±1 LSD
	Salinity	±2% full-scale ±1 LSD
	Temperature	±0.9°F (0.5°C) + 1 LSD
Temperature compensation	Automatic	
Calibration	Single point	
Power	Four 1.5 V miniature batteries (included)	
Price		

Oakton® Waterproof CTSTestr™ 5 Pocket Tester

Save money by replacing sensor, not tester!

- Replaceable sensor lets you use the tester body over and over again
- Two-color backlight indicates operating mode—blue for measurement, green for calibration
- Rugged IP67-rated housing is waterproof, dustproof, and floats in water when sensor cap is on
- Leakproof cap with fill line functions as a sample/calibration and hydrating cup

NEW



OAKTON®



Model	CTS5	
Catalog number	LR-35634-42	
Range	Conductivity	0.1 to 200.0 µS/cm, 0 to 2000 µS/cm, 0.00 to 20.00 mS/cm
	TDS	0.0 to 100.0 ppm, 0 to 1000 ppm, 0.00 to 10.00 ppt
	Salinity	0.00 to 10.00 ppt
	Temperature	32.0 to 122.0°F (0.0 to 50.0°C)
Accuracy	Conductivity	±1% full-scale
	TDS	±1% full-scale
	Salinity	±1% full-scale
	Temperature	±0.9°F (±0.5°C)
Temp. compensation	Automatic, 32 to 122°F (0 to 50°C)	
Calibration	1 to 3 points, automatic recognition of standards	
Power	Four AAA batteries (included)	
Price		

Oakton® CTSTestr™ 50 Pocket Testers

Get benchtop accuracy in the field

- Measure conductivity, TDS, and salinity with ±1% FS accuracy
- Save money—replaceable sensor lets you use tester body over and over again
- Set up and calibrate quickly with easy-to-navigate interface
- Selectable TDS factor adds versatility
- Leakproof, stabilizing cap—use to calibrate, stand upright, and store sensor
- Waterproof IP67 rated and factory calibrated

NEW



OAKTON®



Model	CTSTestr 50P (pin-style sensor)	CTSTestr 50C (cup-style sensor)
Catalog number	LR-35634-55	LR-35634-65
Range	Conductivity	0.0 to 200.0 µS, 200 to 2000 µS; 2.00 to 20.00 mS
	TDS	0.0 to 100.0 ppm, 100 to 1000 ppm; 0.10 to 10.00 ppt (TDS factor 0.5)
	Salinity	0.00 to 10.00 ppt
	Temperature	32 to 140°F (0 to 60°C)
Accuracy	±1% full-scale (conductivity, TDS, and salinity)	
Calibration	Up to 3 points (conductivity and TDS); 1 point (salinity)	
TDS factor	0.40 to 1.00 (selectable)	
Temp. compensation	Automatic	
Power	Four AAA 1.5 V batteries (included)	
Price		



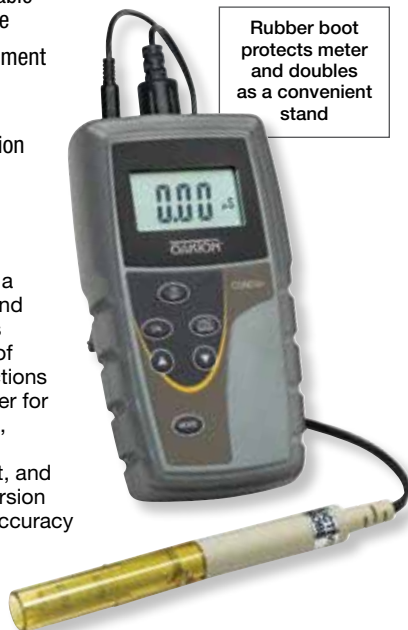
Oakton® CON 6+ and TDS 6+ Meter Kits

Easy, push-button calibration

- High accuracy at an affordable price, $\pm 1\%$ across full scale
- Five auto-ranging measurement modes—up to 200.0 mS (200.0 ppt)
- Get more accurate calibration for all five ranges
- Get temperature readings at the touch of a button

Additional features include a convenient Hold function and auto-off function that shuts meter off after 20 minutes of nonuse. Programming functions allow customization of meter for temperature compensation, temperature coefficient, normalization, cell constant, and conductivity-to-TDS conversion factor (TDS 6+) for better accuracy in varying applications.

What's included: protective rubber boot with stand, conductivity/TDS/temperature probe (K = 1.0), calibration solutions, sample bottles, rinse bottle, hard plastic carrying case, and four AAA batteries.



Rubber boot protects meter and doubles as a convenient stand

Save time, save money!

Choose Precalibrated

Includes a data-rich, ISO 17025-compliant certificate!

Precalibrated by **INNOCAL**
INNOVATIVE CALIBRATION SOLUTIONS

OAKTON®

ISO9001:2008
CERTIFIED SUPPLIER



Meter only

Description	CON 6+ kit	Precalibrated CON 6+ kit	TDS 6+ kit	Precalibrated TDS 6+ kit
Catalog number	LR-35604-04	LR-35604-05	LR-35604-24	LR-35604-25
Range	Conductivity	0 to 20.00, 0 to 200.0, 0 to 2000 μ S; 0 to 20.00, 0 to 200.0 mS	—	—
	TDS	—	0 to 10.00, 10 to 100.0, 100 to 1000 ppm; 1.00 to 10.00, 10.0 to 100.0, up to 200.0 ppt†	—
	Temperature	-10.0 to 110.0°C	-10.0 to 110.0°C	—
Accuracy	Conductivity	$\pm 1\%$ full-scale	—	—
	Temperature	$\pm 0.5^\circ$ C	$\pm 0.5^\circ$ C	—
Temp. compensation	Automatic or manual from 0.0 to 50.0°C			
Cell constant (K)	Selectable, 0.1, 1, and 10			
Conductivity-to-TDS conversion factor	—		0.4 to 1.00 adjustable	
Calibration points	5 maximum, one per range			
Power	Four AAA batteries (included)			
Price				

†With K = 10 probe

Accessories

[LR-35606-53](#) Conductivity probe, K = 0.1

[LR-35606-55](#) Replacement conductivity probe, K = 1.0

[LR-35606-57](#) Conductivity probe, K = 10

[LR-09376-00](#) Replacement batteries, AAA. Pk of 12

[LR-17090-30](#) NIST-traceable calibration with data for conductivity meters

Cole-Parmer® C100 Conductivity/TDS/Salinity Meter

Achieve basic, accurate readings affordably

- Convenient autoranging of conductivity with temperature measurements
- Four conductivity measurement ranges between 0 and 200 mS
- IP57 waterproof rating
- Protective rubber boot with convenient fold-out stand

Easily measure conductivity, TDS, and salinity mode with temperature readout. Calibrate meter up to four points; one point for each of the four measurement ranges. Automatic or manual temperature compensation.

What's included: conductivity cell (K = 1.0), protective rubber boot with stand, and batteries.



Cole-Parmer®



Model	C100	
Catalog number	LR-59200-08	
Range	Conductivity	0 to 200 mS
	TDS	0 to 100 g/L
	Salinity	0 to 100 ppt
	Temperature	32 to 212°F (0 to 100°C)
Resolution	Conductivity	0.1/1 μ S; 0.01/0.1 mS
	TDS	0.1/1
	Salinity	0.1/1
	Temperature	0.1
Accuracy	Conductivity	$\pm 1.0\% \pm 1$ digit
	TDS	$\pm 1.0\% \pm 1$ digit
	Salinity	$\pm 1.0\% \pm 1$ digit
	Temperature	$\pm 0.5^\circ$ C ± 1 digit
Temperature compensation	Automatic 0 to 80°C or manual	
Power	Three AA batteries (included)	
Price		

Accessories

[LR-59200-09](#) Replacement conductivity probe, K = 1

[LR-59200-11](#) Conductivity probe, K = 0.1

[LR-59200-13](#) Conductivity probe, K = 10

[LR-09376-01](#) Replacement batteries, AA. Pack of 4

[LR-17090-30](#) NIST-traceable calibration with data for conductivity meters

Find even more online! Go to ColeParmer.com to search more than 100,000 products.



Oakton® Waterproof CON 150 Meter

Get more for your money

- Best value for an IP67-rated waterproof meter
- Know the status of your probe—intuitive, user-friendly icon displays cell constant
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Recall more data with expanded data logging for up to 150 data sets
- Use as a benchtop meter—built-in stand and wall-mount option
- Versatile power supply—battery or AC



Rugged, waterproof housing is ideal for use in any environment. View more data simultaneously with large, three-line LCD providing conductivity or TDS measurement with temperature. Get faster calibration with auto-ranging and auto-cal functions for one calibration point per measurement range. Select a probe with a 0.1, 1.0, or 10 cell constant and automatic temperature compensation (ATC).

Meter features include adjustable conductivity-to-TDS factor, selectable temperature coefficient, ready (stability) indicator, smart averaging, hold function, calibration alarm (visible), battery life indicator, and probe status.

Meter includes: conductivity cell (K = 1.0), Grip-Clip holder, and two AA batteries.

Kit adds: two calibration standards and hard carrying case.



Meter only

Description	CON 150 meter with probe	CON 150 meter kit
Catalog number	LR-35607-32	LR-35607-90
Precalibrated cat. no.	LR-35607-34	LR-35607-91
Range	Conductivity	0 to 200 mS
	TDS	0 to 200 ppt
Resolution	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)
	Conductivity	0.01 µS to 0.1 mS
	TDS	0.01 ppm to 0.1 ppt
Accuracy	Temperature	0.1°F/°C
	Conductivity	±1% full-scale
	TDS	±1% full-scale
Calibration	Temperature	±0.9°F (±0.5°C)
	Conductivity	Auto/manual; 1 point/range
	TDS	Auto/manual; 1 point/range
Temperature compensation	Conductivity	Offset 0.1 increments
	Temperature	Automatic or manual from -10 to 110°C
Conductivity-to-TDS factor	0.4 to 1.0	
Data logging	Stores up to 150 data sets	
Power	Two AA batteries (included); universal power adapter (optional)	
Price		
Precalibrated price		

LR-35608-55 Conductivity cell, K = 0.1

LR-35608-50 Replacement conductivity cell, K = 1.0

LR-35608-51 Conductivity cell, K = 10

LR-35614-50 Replacement Grip-Clip holder easily attaches probe to side of container for hands-free measurement

LR-35614-51 Hard carrying case

LR-35420-72 Optional power adapter, 110/220 VAC

LR-09376-01 Replacement batteries, AA. Pack of 4

LR-17090-30 NIST-traceable calibration with data for conductivity meter

MYRON L Analog Conductivity, Resistivity, TDS, and Multiparameter Meters

No maintenance required

- Maintenance-free, built-in electrodes do not require replatinizing
- Don't worry about fluctuations in temperature with automatic temperature compensation

Analyze your samples on-site with these portable meters. Optional conductivity range extender expands range by a factor of 10. Minimum sample volume is 25 mL.



Description	Conductivity meters			Conductivity/resistivity meter	Total dissolved solid meters		pH/conductivity meter
	LR-01489-10	LR-01489-20	LR-01489-35	LR-01489-30	LR-01489-15	LR-01489-25	LR-01489-62
Range	Conductivity	0 to 5000 µS	0 to 10 µS, 0 to 100 µS, 0 to 1000 µS, 0 to 10,000 µS	0 to 0.5 µS, 0 to 5 µS, 0 to 50 µS, 0 to 500 µS, 0 to 5000 µS	—	—	0 to 10,000 µS
	Resistivity	—	—	2 to 30 MΩ	—	—	—
	TDS	—	—	—	—	0 to 5000 ppm	0 to 500 ppm, 0 to 5000 ppm
	pH	—	—	—	—	—	—
Temperature compensation	Automatic from 50 to 160°F (10 to 71°C)	Automatic from 50 to 160°F (10 to 71°C)	Automatic from 50 to 160°F (10 to 71°C)	Automatic from 32 to 120°F (0 to 49°C)	Automatic from 50 to 160°F (10 to 71°C)	Automatic from 50 to 160°F (10 to 71°C)	Automatic from 50 to 160°F (10 to 71°C)
Power	One 9 V battery (included)		Two 9 V batteries (included)		One 9 V battery (included)		Two 9 V batteries (included)
Price							

Accessories

LR-01489-50 Range extender increases conductivity range by 10x (for example, 0 to 50,000 µS for model 01489-10)

LR-01489-48 Hard carrying case

LR-01489-51 Calibration kit for model 01489-62

LR-01489-63 Replacement pH sensor for model 01489-62

Oakton® Waterproof CON 450 Meter

Easy to read in any environment

- Use it in any environment with backlit display and rugged design
- Know the status of your probe—intuitive, user-friendly icon displays cell constant
- Get quick and easy electrode attachment to a beaker or container with Grip-Clip™ holder
- Download and analyze up to 500 data sets with USB or RS-232 output
- Use as a benchtop meter as well—built-in stand and wall-mount option
- Versatile power supply—battery or AC

Waterproof, IP67-rated meter is ideal for even the harshest environments. View the main measurement simultaneously with temperature on backlit display. Get faster calibration with auto-cal function, which permits one calibration point per measurement range. Select a probe with a 0.1, 1.0, or 10 cell constant and automatic temperature compensation (ATC). Get more accuracy even in fluctuating temperatures with ATC.

Meter features include adjustable conductivity-to-TDS factor, selectable temperature coefficient, ready (stability) indicator, smart averaging, user-selectable °F/°C units, hold function, calibration alarm, battery life-indicator, and electrode status.

Meter includes: conductivity cell (model 35608-50, K = 1.0), Grip-Clip holder, and batteries.

Kit adds: calibration standards and hard carrying case.



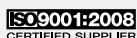
Easy one-button data logging



Built-in meter stand for steady benchtop use.



Convenient kit saves you money!



Description		CON 450 meter with probe	CON 450 meter kit
Catalog number		LR-35608-32	LR-35608-80
Precalibrated catalog number		LR-35608-34	LR-35608-81
Range	Conductivity	0 to 200 mS	
	TDS	0 to 200 ppt	
	Salinity	0 to 50 ppt	
	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)	
Resolution	Conductivity	0.01 µS to 0.1 mS	
	TDS	0.01 ppm to 0.1 ppt	
	Salinity	0.01	
	Temperature	0.1°F/°C	
Accuracy	Conductivity	±1% full-scale	
	TDS	±1% full-scale	
	Salinity	±1% full-scale	
	Temperature	±0.9°F (±0.5°C)	
Calibration	Conductivity	Auto/manual; 1 point/range	
	TDS	Auto/manual; 1 point/range	
	Salinity	Auto/manual; 1 point/range	
	Temperature	±5.0° offset	
Temperature compensation		Automatic or manual from -10 to 110°C	
Data logging		Stores up to 500 data sets	
Output		USB or RS-232	
Power		Two AA batteries (included); 500 hours (without backlight); AC adapter (optional)	
Price			
Precalibrated price			

Accessories

[LR-35608-55](#) Conductivity cell, K = 0.1

[LR-35608-50](#) Replacement conductivity cell, K = 1.0

[LR-35608-51](#) Conductivity cell, K = 10

[LR-35614-50](#) Replacement Grip-Clip electrode holder

[LR-35614-51](#) Hard carrying case

[LR-35630-53](#) Data cable for USB connectivity

[LR-35420-01](#) Data cable for RS-232 connectivity

[LR-35420-72](#) Optional AC adapter, 110/220 VAC

[LR-09376-01](#) Replacement batteries, AA. Pack of 4



MYRON L 4PII and 6Psi Waterproof Multiparameter Meters

Don't lose your data

- Store and recall up to 100 measurements with time/date stamp in nonvolatile memory
- Waterproof housing is submersible to 3 ft (0.9 m)
- Get accurate readings to 9999 µS/ppm
- Just add sample, push button, and read—it's that easy
- Automatic ranging function
- Download and analyze data via bluDock™ accessory



Factory-calibrated meters have conductivity-to-TDS conversion curves for NaCl, 442, and KCl standards stored in memory. You can also calibrate using your own calibration values. Automatic temperature compensation with adjustable temperature coefficients up to 9.99%/°C provides accurate and precise measurements.



Description	4PII	6Psi	
Catalog number	LR-19401-12	LR-19401-22	
Range	Conductivity	0 to 9.99, 10 to 99.99, 100 to 999.9, 1000 to 9999 µS; 10.00 to 200 mS (autoranging)	
	TDS	0 to 9.99, 10 to 99.99, 100 to 999.9, 1000 to 9999 ppm; 10.00 to 200 ppt	
	Resistivity	10 to 100, 100 to 1000 kΩ; 1 to 30 MΩ	
	pH	—	0 to 14.00 pH
	ORP	—	±999 mV
	Chlorine	—	0.20 to 9.99 ppm
	Temperature	32 to 160°F (0 to 71°C)	
Resolution	Conductivity	0.01, 0.1, 1 µS; 0.01 mS	
	TDS	0.01, 0.1, 1 ppm; 0.01 ppt	
	Resistivity	0.01, 0.1 kΩ; 0.01 MΩ	
	pH	—	0.01 pH unit
	ORP	—	1 mV
	Chlorine	—	0.01
	Temperature	0.1°F (0.1°C)	
Accuracy	Conductivity	±1% of reading	
	TDS	±1% of reading	
	Resistivity	±1% of reading	
	pH	—	±0.01 pH
	ORP	—	±1 mV
	Chlorine	—	±2.5% of reading
	Temperature	±0.2°F (±0.1°C)	
Temperature compensation	Automatic from 0 to 71°C; adjustable from 0 to 9.99% per °C		
Power/battery life	One 9 V battery (included)/>100 hours (5000 readings)		
Price			

Accessories

[LR-19401-32 bluDock accessory package](#). Includes bluDock, software, and dongle

[LR-19401-50 Replacement pH/ORP sensor](#), for 6Psi meter, model 19401-22

[LR-19401-60 Soft protective case](#), blue nylon with belt clip

[LR-19401-70 Hard protective case](#), contains calibration solutions

[LR-17090-30 NIST-traceable calibration](#) for conductivity meters

Thermo Scientific™ Orion™ Star™ A-Series CON and pH/CON Meters

No need to toggle screens

- More data on one screen: temperature, electrode status, mode, calibration, and more
- Know when reading is complete with Auto-Read™ function
- Perfect for field testing—feature a durable, waterproof IP67-rated housing



Star A122 Conductivity Meter is ideal for everyday conductivity, TDS, and temperature measurements. **Star A222 Conductivity and A325 pH/Conductivity Meters** support a multilanguage interface, improved stability algorithms, extended data logging, and improved data security over the Star meters. Meters use RS-232 or USB for connectivity and include data analysis software. GLP-related features include extensive data sets with time-and-date stamp and electrode verification. Meet all US Pharmacopoeia (USP) requirements.

Meters include: four AA batteries.

Meter kits include: conductivity cell, 1413 µS conductivity standard (five 60-mL bottles), rinse solution (10 pouches), protective armor with electrode holder, and hard carrying case. **Star A325 kit also includes:** ROSS™ Triode pH/ATC electrode, pH buffers (4, 7, 10) and storage solution (10 pouches).



Description	A122 CON meter	A222 CON meter	A325 pH/CON meter
Meter catalog number	LR-19704-45	LR-19704-16	LR-58825-68
Meter kit catalog number	LR-19704-47	LR-19704-18	LR-58825-70
Range	pH	—	-2.000 to 20.000
	mV	—	±2000.0 mV
	Conductivity	0.1 µS to 200 mS	0.01 µS to 3000 mS
	TDS	1 to 19,999 ppm	0 to 200 ppt
	Salinity	—	0.01 to 80.0 ppt NaCl
	Resistivity	—	2 Ω to 100 MΩ
	Temperature	23 to 221°F (-5 to 105°C)	
Resolution	pH	—	0.1, 0.01, 0.001
	mV	—	0.1
	Conductivity	0.01 µS	0.001 µS
	TDS	4 significant digits	4 significant digits
	Salinity	—	0.01
	Resistivity	—	2 Ω
	Temperature	0.1	0.1
Accuracy	pH	—	±0.002
	mV	—	±0.2 or 0.05% of reading
	Conductivity	±0.5% of reading ± 1 digit	
	TDS	±0.5% of reading ± 1 digit	
	Salinity	—	±0.1
	Resistivity	—	0.5% of reading ± 1 digit
	Temperature	±0.1	±0.1
Temperature compensation	Automatic or manual		
Calibration points	1	Up to 5	
Data logging	50 sets	2000 sets with time-and-date stamp	
Output	—	RS-232, USB	
Power	Four AA batteries (included) or optional AC adapter		
Meter price			
Meter kit price			

[LR-58825-52 Hard carrying case](#)

[LR-58825-53 Protective meter armor](#) with electrode holder

[LR-58822-03 Universal AC power adapter](#)

[LR-19704-70 Orion DuraProbe conductivity probe](#), K = 0.475

[LR-05718-34 ROSS Triode pH/ATC electrode](#)

[LR-55350-68 pH buffer kit](#). Includes 473 mL each of 4, 7, 10 buffers and storage solution, and 60 mL of cleaning solution

Oakton® Benchtop CON 700 and 2700 Meters

Don't waste your valuable bench space

- Space-saving design takes up less bench space
- No more squinting—large display allows for reading across the room
- Get the best resolution—autoranging feature reads 0 to 200.0 mS across five ranges
- More accurate—adjustable temperature coefficient, selectable cell constant, and automatic temperature compensation
- Store up to 500 readings for later retrieval

Oakton CON 2700 meter has advanced features for GLP-compliant readings—all calibration and stored data are stamped with time/date. Advanced setup options let you customize the meter to your needs. Informative display shows measurements together with temperature, electrode status, calibration points, time, and date all at once! Programmable functions include data logging intervals, limit alarms, and password protection. Data is easily exported to a computer via RS-232 port (order cable and adapter separately below).

What's included: conductivity/temperature probe 35608-74 (CON 700) or 35412-10 (CON 2700), electrode stand, and universal 100/240 VAC power supply.



Features water-resistant keypad and pull-out reference guide.

Save time, save money!

Choose Precalibrated

Includes a data-rich, ISO 17025-compliant certificate!

Precalibrated by INNOCAL®
INNOVATIVE CALIBRATION SOLUTIONS

ISO9001:2008 CERTIFIED SUPPLIER CE Meter only

OAKTON®

Description	CON 700 meter	Precalibrated CON 700 meter	CON 2700 meter	Precalibrated CON 2700 meter
Catalog number	LR-35411-00	LR-35411-01	LR-35412-00	LR-35412-01
Range	Conductivity	0.0 to 20.00, 0 to 200.0, 0 to 2000 µS; 0 to 20.00, 0 to 200.0 mS	0.0 to 20.00, 0 to 200.0, 0 to 2000 µS; 0 to 20.00, 0 to 500.0 mS	0.050 to 500.0 ppt
	TDS	0.00 to 100.0 ppt	0.00 to 100.0 ppt	0.050 to 500.0 ppt
	Salinity	—	—	0.0 to 80.0 ppt
	Resistivity	—	—	2.000 Ω to 20.0 MΩ
	Temperature	32.0 to 212°F (0.0 to 100.0°C)	32.0 to 212°F (0.0 to 100.0°C)	32.0 to 212°F (0.0 to 100.0°C)
Resolution	Conductivity	0.01, 0.1, 1 µS; 0.01, 0.1 mS	0.01, 0.1 µS; 0.001, 0.01, 0.1 mS	0.01, 0.1 ppm; 0.001, 0.01, 0.1 ppt
	TDS	0.01, 0.1, 1 ppm; 0.01, 0.1 ppt	0.01, 0.1 ppm; 0.001, 0.01, 0.1 ppt	0.01, 0.1 ppm; 0.001, 0.01, 0.1 ppt
	Salinity	—	—	0.01 MΩ, 0.001, 0.01 kΩ, 0.01, 0.1 Ω
	Resistivity	—	—	0.01 MΩ, 0.001, 0.01 kΩ, 0.01, 0.1 Ω
	Temperature	0.1°F or °C	0.1°F or °C	0.1°F or °C
Accuracy	Conductivity	±1% full-scale	±1% full-scale	±1% full-scale
	TDS	±1% full-scale	±1% full-scale	±1% full-scale
	Salinity	—	—	±1% full-scale
	Resistivity	—	—	±1% full-scale
	Temperature	±0.9°F (±0.5°C)	±0.9°F (±0.5°C)	±0.5°F (±0.3°C)
Temperature compensation	Automatic or manual, adjustable from 0.0 to 10% per °F/°C	Automatic or manual, adjustable from 0.0 to 10% per °F/°C	Automatic or manual, adjustable from 0.0 to 10% per °F/°C	Automatic or manual, adjustable from 0.0 to 10% per °F/°C
Cell constant (K)	Select from K = 0.1, 1.0, or 10	Select from K = 0.1, 1.0, or 10	0.010 to 10.000	0.010 to 10.000
Conductivity-to-TDS factor	Adjustable from 0.4 to 1.0	Adjustable from 0.4 to 1.0	Adjustable from 0.4 to 1.0	Adjustable from 0.4 to 1.0
Data logging	100 data sets	100 data sets	500 data sets	500 data sets
Output	—	—	RS-232	RS-232
Power	100/240 VAC with universal adapter (included)	100/240 VAC with universal adapter (included)	100/240 VAC with universal adapter (included)	100/240 VAC with universal adapter (included)
Price				

2-cell vs 4-cell conductivity probes

Most conductivity meters use either 2-cell or 4-cell conductivity probes. 2-cell probes feature electrode surfaces made of platinum, titanium, gold-plated nickel, or graphite, and are good for general applications. 4-cell electrodes use a reference voltage to compensate for any polarization or fouling of the electrode plates. The reference voltage ensures measurements indicate actual conductivity independent of electrode condition, resulting in higher accuracy.

Conductivity Probes

Cell constant (K)	Body/electrode	Catalog number	Price
2-cell conductivity probes for CON 700 or CON 2700 meters			
0.1	Epoxy/platinum	LR-35608-72	
1.0	Ultem®/stainless steel	LR-35608-74	
1.0	Glass/platinum	LR-35608-76	
10	Epoxy/platinum	LR-35608-78	
4-cell conductivity probes for CON 2700 meter only			
0.1	Epoxy/platinum	LR-35608-90	
1.0	Epoxy/graphite	LR-35412-10	
1.0	Glass/platinum	LR-35608-92	
10	Epoxy/platinum	LR-35608-94	

Accessories

[LR-35420-01](#) RS-232 cable for 2700 series meters

[LR-35630-53](#) USB cable for 2700 series meters

[LR-17090-30](#) NIST-traceable calibration with data for conductivity meters



Oakton® Calibration Solutions

Save money while calibrating

- KCl, NaCl, and 442 conversions printed right on the bottle
- Temperature corrections at hand—printed right on the bottle



Conductivity (µS)	Conductivity-to-TDS calibration values			Catalog number	Price
	ppm KCl	ppm NaCl	ppm 442		
23	11.6	10.7	14.74	LR-00653-23	
84	40.38	38.04	50.5	LR-00653-16	
447	226	215	300	LR-00653-47	
1413	745	702	1000	LR-00653-18	
1500	757	737	1050	LR-00653-15	
2070	1045	1041	1500	LR-00653-27	
2764	1382	1414	2062	LR-00653-20	
8974	5101	4487	7608	LR-00653-89	
12,880	7447	7230	11,367	LR-00606-10	
15,000	8759	8532	13,455	LR-00653-50	
80,000	52,168	48,384	79,688	LR-00653-32	

Conductivity Calibration Pouches

Calibrate on the go!

- Single-use pouches for easy calibrations
- Quick-reference conversion table printed on each pack



Conductivity (µS)	Conductivity-to-TDS calibration values			Catalog number	Price/pk of 20
	ppm KCl	ppm NaCl	ppm 442		
10	4.8	4.7	7.0	LR-35653-09	
447	226	216	300	LR-35653-10	
1413	745	702	1000	LR-35653-11	
2764	1382	1414	2062	LR-35653-12	
15,000	8759	8532	13,445	LR-35653-13	
Rinse solution	—	—	—	LR-35653-00	

Cole-Parmer® Extended-Life Conductivity Standards

Extend shelf life to 5 years!

- Sealed, metal-lined storage envelope eliminates transpiration—store standards up to 5 years before opening
- Open sealed envelope to begin the 1-year shelf life—bottle and Certificate of Analysis have a convenient marking area to write the new expiration date
- NIST-traceable calibration report from an ISO Guide 34 and ISO 17025 accredited laboratory included with each 17-oz (500-mL) bottle



Conductivity (µS)	Resistivity (MΩ)	Conductivity-to-TDS calibration values (ppm KCl)	Catalog number	Price
2	0.5	0.3	LR-00651-41	
10	0.1	4.4	LR-00651-42	
100	0.01	51	LR-00651-43	
147	0.007	73	LR-00651-44	
1000	0.001	524	LR-00651-45	
1413	0.00071	745	LR-00651-46	
10,000	0.0001	5695	LR-00651-47	
100,000	0.00001	65,611	LR-00651-48	

Oakton® Traceable® Conductivity Solutions, NIST-Traceable Reference Materials

Trust your standards—high accuracy

- Up to ±0.25% accuracy verified by an ISO Guide 34 and ISO 17025 accredited lab



A. Batch-Tested Bottles, 500 mL

- Easy calibration with included instructions and temperature compensation chart
- Includes NIST-traceable certificate and batch testing information

B. Individually Tested Bottles, 500 mL

- Each bottle individually calibrated—NIST-traceable certificate included with serial number and testing information
- Easy calibration with step-by-step instructions and included temperature compensation chart

C. One-Shot® Vials, pack of six-100 mL vials

- Fresh solution each time you calibrate—single-use vials eliminate contamination
- Grab it and go—convenient for field use; calibrate right in vial
- Includes NIST-traceable calibration report and temperature compensation chart



Conductivity (µS)	Resistivity (MΩ)	TDS (ppm)	Catalog number	Price
A. Batch tested, one 500-mL bottle				
1	1	0.66	LR-00652-20	
5	0.2	3.3	LR-00652-22	
10	0.1	6.6	LR-00652-24	
100	0.01	66	LR-00652-26	
1000	0.001	666	LR-00652-28	
1413	0.00071	933	LR-00652-30	
10,000	0.0001	6666	LR-00652-32	
100,000	0.00001	66,666	LR-00652-34	
150,000	0.0000066	100,000	LR-00652-53	
200,000	0.000005	133,333	LR-00652-55	
B. Individually tested, one 500-mL bottle				
1	1	0.66	LR-00652-40	
5	0.2	3.3	LR-00652-42	
10	0.1	6.6	LR-00652-44	
100	0.01	66	LR-00652-46	
1000	0.001	666	LR-00652-48	
1413	0.00071	933	LR-00652-50	
10,000	0.0001	6666	LR-00652-52	
100,000	0.00001	66,666	LR-00652-54	
150,000	0.0000066	100,000	LR-00652-56	
200,000	0.000005	133,333	LR-00652-58	
C. One-Shot®, pack of six 100-mL vials				
5	0.2	3.3	LR-00652-60	
10	0.1	6.6	LR-00652-62	
100	0.01	66	LR-00652-64	
1000	0.001	666	LR-00652-66	
1413	0.00071	933	LR-00652-68	
10,000	0.0001	6666	LR-00652-70	
100,000	0.00001	66,666	LR-00652-72	
150,000	0.0000066	100,000	LR-00652-76	
200,000	0.000005	133,333	LR-00652-78	
Assortment†	—	—	LR-00652-74	

†Assortment has one 100-mL vial each of 10, 100, 1000, 1413, 10,000, and 100,000 µS.

Environmental Express® Single-Use Glucose-Glutamic Acid Vials

Eliminate pipetting and dilutions

- No more worrying about sample contamination
- Ready-to-use dilutions—each vial contains the APHA specified concentration
- Easy to use—simply shake the vial thoroughly, remove the seal and cap, pour contents, and rinse emptied vial at least two times with BOD water



ENVIRONMENTAL EXPRESS®

Description	Catalog number	Qty/pk	Price/pk
GGA for 300-mL BOD bottles, 6-mL vial	LR-53200-11	24	
GGA for 60-mL BOD bottles, 1.2-mL ampule	LR-53200-13	24	

Environmental Express® COD Reagent Vials

Save money while getting accurate readings



ENVIRONMENTAL EXPRESS®

- No need to modify your instrument or method
- Don't sacrifice quality—laboratory tested and verified
- Easy to use—add sample, heat, and read sample

These reagent vials are available in both EPA-compliant and mercury-free versions for low-, standard-, and ultra-high-range analysis. Glass vials are 16 mm x 100 mm to work with your existing COD reactor and spectrophotometer. Simply add 2 mL of your sample, heat in your reactor, and read.

What's included: Certificate of Analysis and SDS.

Range mg/L (ppm)	Contains mercury†	EPA approved	Comparable Hach number	Catalog number	Price/pk of 100
Low-range COD reagent vials – 10 MDL					
0 to 150	Yes	Yes	21258-15/25	LR-35200-02	
0 to 150	No	No	25650-15/25	LR-35200-08	
Standard-range COD reagent vials – 30 MDL					
0 to 1500	Yes	Yes	21259-15/25	LR-35200-03	
0 to 1500	No	No	25651-15/25	LR-35200-09	
Ultra-high-range COD reagent vials – 300 MDL					
0 to 15,000	Yes	No	24159-15/25	LR-35200-04	
0 to 15,000	No	No	—	LR-35200-10	

†Some COD reagent vials contain acid, mercury, and silver and must be disposed of properly.

Oakton® DO 6+ Dissolved Oxygen Meter

High accuracy without a high price

- No warm-up time required
- No need to hold meter—protective rubber boot is also a stand
- Low-maintenance, galvanic probe
- Choose display—ppm or mg/L

Six simple buttons for freezing measurements, toggling between units and temperature results, setup, calibration, and automatic barometric and salinity compensation. View electrode slope, zero offset, and millivolt values for electrode diagnostics.

Meter includes: electrolyte solution, membrane cap, protective rubber boot/stand, and four AAA batteries.

Kit adds: two membrane caps, solution bottles, rinse bottle, and hard plastic carrying case.



Protective boot also functions as a stand.

OAKTON®

ISO9001:2008
CERTIFIED SUPPLIER

CE Meter only

Specifications

Mode	mg/L (ppm)	% O ₂ saturation	Temperature (°C)
Range	0.00 to 20.00	0.0 to 200.0	0.0 to 50.0
Resolution	0.01	0.1	0.1
Accuracy	±1.5% full-scale	±1.5% full-scale	±0.5

Temperature compensation:
automatic from 0 to 50°C

Salinity compensation:
Manual input,
automatic correction
Range: 0.0 to 50.0 ppt
Resolution: 0.1 ppt

Barometric pressure compensation:
Manual input, automatic correction
Range: 500 to 1499 mm Hg
Resolution: 1 mm Hg

Memory: none
Power: four AAA batteries (included)

Description	Catalog number	Price
DO 6+ meter only	LR-35643-10	
DO 6+ meter with probe 35642-50	LR-35643-12	
DO 6+ meter kit	LR-35643-14	

Accessories

- [LR-35642-50](#) Replacement DO probe with 3-ft (0.9-m) cable
- [LR-35642-52](#) DO probe with 10-ft (3-m) cable
- [LR-35642-54](#) DO probe with 30-ft (9-m) cable
- [LR-35642-55](#) Replacement DO probe maintenance kit includes one membrane cap and 10 mL of electrolyte solution
- [LR-09376-00](#) Replacement batteries; AAA. Pack of 12



Oakton® Waterproof DO and PD 450 Meters

Eliminate maintenance time and costs

- Rugged, waterproof and dustproof with an IP67 rating for use in any environment
- No costly, tiresome membranes or solutions with optical RDO technology
- More accurate readings with barometric pressure and salinity correction
- Download and analyze data easily with USB and RS-232 output for up to 500 data sets
- Take it with you—500 hours battery life or optional universal power adapter



PD 450 meter kit



Get fast response times and long-term stability with minimal maintenance with optical measurement technology. Ensure measurement accuracy with automatic temperature compensation (ATC), barometric pressure compensation, and salinity correction. View % saturation or mg/L (ppm) simultaneously with temperature on the large LCD screen. Waterproof, IP67-rated housing is ideal for the even the harshest environments.

Additional features include ready (stability) indicator, smart averaging, hold function, calibration alarm, and battery-life indicator. Order optional cables for USB and RS-232 connectivity.

Meter only includes: two AA batteries.

DO 450 dissolved oxygen meter kit adds: RDO probe (35640-53), sensor cap (35640-51), RDO weight (35640-59), RDO calibration chamber (35640-58), sample bottles, and hard carrying case.

PD 450 pH/dissolved oxygen meter kit adds: items in DO 450 meter kit plus pH probe (59002-75) and pH calibration solutions.



Description	DO 450 meter only	DO 450 meter kit	PD 450 meter only	PD 450 meter kit
Catalog number	LR-35640-32	LR-35640-90	LR-35632-32	LR-35632-80
Range	pH	—	—	-2.00 to 16.00 pH
	mV	—	—	±2000 mV
	Dissolved oxygen (ppm)	0 to 20 ppm	0 to 20 ppm	0 to 20 ppm
	Dissolved oxygen (% saturation)	0 to 200%	0 to 200%	0 to 200%
	Temperature	-17.0 to 230.0°F (-10.0 to 110.0°C)	-17.0 to 230.0°F (-10.0 to 110.0°C)	-17.0 to 230.0°F (-10.0 to 110.0°C)
Resolution	pH	—	—	0.01 pH
	mV	—	—	0.1 (>199.9 mV); 1 mV (beyond)
	Dissolved oxygen (ppm)	0.1 ppm	0.1 ppm	0.1
	Dissolved oxygen (% saturation)	0.10%	0.10%	0.1
	Temperature	0.1°C/°F	0.1°C/°F	0.1°C
Accuracy	pH	—	—	±0.01 pH
	mV	—	—	±0.2 (>199.9 mV); ±2 mV (beyond)
	Dissolved oxygen (ppm)	±2%	±2%	±2%
	Dissolved oxygen (% saturation)	±2%	±2%	±2%
	Temperature	±0.9°F (±0.5°C)	±0.9°F (±0.5°C)	±0.5°C
Barometric pressure compensation	Manual	Manual	Manual	Manual
Salinity correction	Manual; 0 to 45	Manual; 0 to 45	Manual; 0 to 45	Manual; 0 to 45
Temperature compensation	Automatic or manual from -10 to 110°C	Automatic or manual from -10 to 110°C	Automatic or manual from -10 to 110°C	Automatic or manual from -10 to 110°C
Memory	Stores up to 500 data sets	Stores up to 500 data sets	Stores up to 500 data sets	Stores up to 500 data sets
Output	USB or RS-232	USB or RS-232	USB or RS-232	USB or RS-232
Power	Two AA batteries (included), >500 hours continuous use; or optional universal power adapter	Two AA batteries (included), >500 hours continuous use; or optional universal power adapter	Two AA batteries (included); or optional universal power adapter	Two AA batteries (included); or optional universal power adapter
Price				

Accessories

- [LR-35640-51](#) Replacement RDO sensor cap
- [LR-35640-53](#) Replacement RDO probe, 10-ft (3-m) cable
- [LR-35640-55](#) RDO probe, 20-ft (6-m) cable
- [LR-35640-57](#) RDO probe, 50-ft (15-m) cable
- [LR-35640-58](#) RDO calibration chamber
- [LR-35640-59](#) RDO weight, screw thread to attach to probe
- [LR-59002-75](#) "All-in-One" pH electrode with built-in ATC. Single-junction; epoxy body; BNC connector

- [LR-35618-05](#) ATC probe. Use with any standard pH electrode for temperature compensation
- [LR-35630-53](#) Data cable for USB connectivity
- [LR-35420-01](#) Data cable for RS-232 connectivity
- [LR-35420-72](#) Universal power adapter, 110/220 VAC
- [LR-09376-01](#) Replacement batteries, AA. Pack of 4
- [LR-17106-20](#) NIST-traceable calibration with data for pH meter

Oakton® DO 700 and DO 2700 Benchtop Dissolved Oxygen Meters

Don't waste valuable bench space

- Space-saving design takes up less bench space
- No more squinting—large display allows for reading across the room
- Store up to 500 readings for later retrieval

Oakton DO 700 meter measures dissolved oxygen in mg/L, ppm, or % saturation with simultaneous temperature display in °F or °C. Large LCD features annunciators to aid in meter use and troubleshooting.

Oakton DO 2700 meter offers a more advanced user interface and measurement capabilities than the 700-series meter. Meter meets GLP requirements—all calibration and measurement data is stored with a time/date stamp. Bundled self-stirring probe and bidirectional RS-232 for BOD and other advanced dissolved oxygen applications. Built-in barometer automatically corrects for atmospheric pressure changes. Oversized graphic LCD with backlight allows readings under all conditions.

DO 700 includes: dissolved oxygen probe 35642-50, built-in electrode stand, and 100/240 VAC power adapter.

DO 2700 includes: self-stirring dissolved oxygen/BOD probe 35420-82, six membrane caps and electrolyte, and 100/240 VAC power adapter.



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Description		DO 700 meter	Precalibrated DO 700 meter	DO 2700 meter	Precalibrated DO 2700 meter
Catalog number		LR-35415-00	LR-35415-01	LR-35416-00	LR-35416-01
Range	Dissolved oxygen	0 to 30 mg/L		0 to 19.99 mg/L; 50.0 mg/L	
	% saturation	0 to 199.9%; 300%		0 to 600.0%	
	Temperature	32 to 122°F (0 to 50°C)		32 to 122°F (0 to 50°C)	
Resolution	Dissolved oxygen	0.01		0.01, 0.1	
	% saturation	0.1%		0.1%	
	Temperature	0.1°F (0.1°C)		0.1°F (0.1°C)	
Accuracy	Dissolved oxygen	±0.5% full scale		±0.5% full scale	
	% saturation	±0.5% full scale		±0.5% full scale	
	Temperature	±0.9°F (±0.5°C)		±0.5°F (±0.3°C)	
Temperature compensation		Manual or automatic from 32 to 122°F (0 to 50°C)		Manual or automatic from 32 to 122°F (0 to 50°C)	
Salinity compensation		Manual input, automatic correction from 0 to 50 ppt		Manual input, automatic correction from 0 to 50.0 ppt	
Data logging		100 data sets		500 data sets	
Output		—		RS-232	
Power		100/240 VAC universal adapter (included)		100/240 VAC universal adapter (included)	
Price					

Accessories

[LR-35642-50](#) Replacement DO probe with 3-ft (0.9-m) cable for DO 700 meter

[LR-35642-55](#) DO probe maintenance kit for 35642-50 includes one membrane cap and 10 mL of electrolyte solution

[LR-35820-64](#) In-line fitting for DO 700 probe 35642-50

[LR-35420-82](#) Replacement self-stirring DO/BOD probe with 3-ft (0.9-m) cable for DO 2700 meter

[LR-53109-55](#) DO probe maintenance kit for 35420-82 includes six membrane caps and 30 mL of electrolyte solution

[LR-35420-01](#) RS-232 cable for 2700-series meter

[LR-35630-53](#) USB cable for 2700-series meter

Oakton® Zero Oxygen Solutions

Maximize your meter accuracy

- Ensure accuracy—tested using Winkler method for better results
- Manufactured according to the APHA and ASTM formulation with high-purity, oxygen-free water

OAKTON®

Description	Size	Catalog number	Price
Oakton zero oxygen solution	500 mL bottle	LR-00653-00	
Zero oxygen sachets	Pack of 10	LR-53024-53	



Environmental Express® 300-mL Glass BOD Bottle with Stopper

Improved shoulder design removes entrapped air

- Flared mouth design prevents air from entering sample during incubation
- Displace excess sample with conical extension on stopper
- Conforms to ASTM E438, Type I, Class B, borosilicate glass
- Unnumbered; with glass pennyhead stopper



These bottles are designed for sampling and for incubation of aqueous samples for biochemical oxygen demand (BOD) analysis for reference Method 5210-B: 5-Day BOD Test (*Standard Methods for Examination of Water and Wastewater*).

ENVIRONMENTAL EXPRESS®

Capacity	Stopper type	Catalog number	Qty/cs	Price/cs
300 mL	Glass pennyhead	LR-53200-19	24	

Wheaton BOD Bottles with stopper

Easily identify samples

- Clear glass BOD bottles come with glass stoppers and a white write-on marking space



53200-18

Capacity mL (oz)	Stopper type	Number sequence	Catalog number	Qty/cs	Price/cs
60 (2)	Glass pennyhead	Unnumbered	LR-53200-18	36	
300 (10)	Glass robotic	Unnumbered	LR-03660-15	24	
300 (10)	Glass robotic	1-24	LR-03660-16	24	
		25-48	LR-03660-17		
		49-72	LR-03660-18		
		73-96	LR-03660-19		

Environmental Express® Disposable BOD Bottles

Reduce contamination and increase test accuracy

- No precleaning required!
- Laboratory tested and US EPA approved
- Packed in plastic-lined boxes to eliminate dust and residue



These PET bottles offer a specially formulated carbon coating that prevents oxygen from diffusing into or out of your sample, unlike ordinary plastic bottles. The unique amorphous carbon inner wall is just 1000 angstroms thick, but it provides a superior barrier resulting in uniform blanks, precise standard recoveries, and quality test data. Accept glass or acrylic stoppers.

ENVIRONMENTAL EXPRESS®

Capacity	Numbered	Catalog number	Qty/pk	Price/pk
300 mL	Individually	LR-53200-02	100	

[LR-53200-12](#) BOD bottle stopper, acrylic robotic-style. Pk of 25

[LR-53200-14](#) BOD overcap prevents evaporation. Pk of 50

BOD Bottle Transfer and Storage Racks

Won't corrode

- Plastic coated for added durability
- Safely transport bottles with ease
- Save space by stacking racks



53200-22

Description	Capacity	Dimensions (W x H x D)	Catalog number	Price
BOD bottle transfer racks	20 x 60-mL bottles	13" x 6" x 10"	LR-53200-21	
	12 x 300-mL bottles	13" x 8" x 10"	LR-53200-22	
BOD bottle storage rack, autoclavable	12 x 300-mL bottles	12½" x 7¼" x 9¼"	LR-53200-23	

BOD Accessories

Acrylic Robotic-Style Bottle Stopper

fits standard 60- and 300-mL glass BOD bottles, and disposable BOD bottles above.

BOD Overcap is required by Standard Methods to prevent sample evaporation. Designed for disposable bottles above, the polyethylene overcap fits snugly against the rim and shoulder of the bottle.

A Bug's-Eye-View of the BOD Test

helps remove the mystery from BOD testing and provides a better understanding of Standard Methods 5210B. Troubleshooting guide focuses on common problems, suggests causes, and recommends potential corrective actions. Includes 54 pages and supplementary compact disk.



Description	Catalog number	Price
Acrylic bottle stopper, robotic style	LR-53200-12	pk of 25
BOD overcap	LR-53200-14	pk of 50
<i>A Bug's-Eye-View of the BOD Test</i>	LR-53200-28	

YSI® Professional Series DO Meters

Configurable to your needs

- Combine meter, probes, and cable lengths to meet your needs
- Handheld meters offer menu-driven software for added convenience
- Read your measurements easily in any light with backlit graphic display and keypad

The YSI Professional series provides plug-and-play capabilities to give you a meter with as much functionality as needed. Don't buy unnecessary accessories, simply build your own system by ordering the meter, probe(s), and cables(s) you need.

Easy-to-use meters feature graphic display with detailed messages and instructions that translate to less time reading manuals. Display and keypad are backlit, making them ideal for low-light situations. Rugged rubber over-molded case protects meters during use. Meters are IP67 rated and waterproof, even without the battery lid.

These DO meters accept either classic polarographic or "instant-on" galvanic DO sensors with screw-on membrane caps for ease of maintenance. These meters also feature selectable two-point DO calibration and automatic barometric compensation for greater accuracy.



REQUIRED System Components

- 1) Meter
- 2) Probe(s)
- 3) Cable(s)



Pro2030 meter

ISO 9001:2008
CERTIFIED SUPPLIER

IP 67

Meter only

1. YSI Professional Series Meters

Model	Pro20	Pro1020	Pro2030
Catalog number	LR-59352-04	LR-59352-10	LR-59352-14
Parameters	DO/Temperature	pH/DO/Temperature	Conductivity/DO/Temperature
Range	Dissolved oxygen	0 to 50 mg/L	0 to 200 mS
	Barometric pressure	Automatic correction, 500 to 800 mm Hg	
	pH	0 to 14.00 pH	0 to 70 ppt
	mV	±1999 mV	—
	Conductivity	—	—
	TDS	—	—
	Salinity	Manual input, automatic correction	—
Accuracy	Temperature	–5 to 55°C	—
	Dissolved oxygen	±2% of reading or ±0.2 mg/L, whichever is greater (6% above 20 mg/L)	
	Barometric pressure	±3 mm Hg within 15°C from calibration point	
	pH	±0.2 pH	—
	mV	±20 mV	—
	Conductivity	—	±0.5% of reading or ±0.001 mS/cm, whichever is greater
	TDS	—	±1% of reading
Temperature compensation	Salinity	—	±1% of reading or ±0.1 ppt, whichever is greater
	Temperature	±0.2	—
	Temperature compensation	Automatic, –5 to 55°C	
Display	Four-line backlit, graphic LCD		
Power	Two C batteries (included)		
Dimensions (L x W x H)	8½" x 3¼" x 2¼" (21.6 x 8.3 x 5.7 cm)		
Price			

2. DO Probes for Professional Series

Description	Catalog number	Price
Galvanic DO	LR-59352-32	
Polarographic DO	LR-59352-34	
BOD probe	LR-59352-35	
pH probe	LR-59352-20	
ORP probe	LR-59352-22	

Accessories

[LR-99852-80](#) DO membrane kit; polyethylene, 1.25 mil. Pack of 6

[LR-05519-61](#) DO membrane kit; PTFE, 1.0 mil. Pack of 6

3. Cables for YSI Professional Series

All cables include a temperature probe. Cables for Pro2030 meters also include a conductivity probe.

Compatible with meter	Pro20		Pro1020		Pro2030	
	Catalog number	Price	Catalog number	Price	Catalog number	Price
3 ft (1 m)	LR-59352-43		LR-59352-63		LR-59352-79	
13 ft (4 m)	LR-59352-44		LR-59352-64		LR-59352-80	
33 ft (10 m)	LR-59352-46		LR-59352-66		LR-59352-82	

Note: Additional cable lengths available at ColeParmer.com.



Cole-Parmer® Waterproof Turbidity Meter

Achieve more accurate readings across entire range

- Sealed optical system with infrared light for higher accuracy
- Meets performance criteria as specified by ISO 7027 (DIN EN 27027) method
- Get full-range accuracy with 4-point push-button calibration
- Autoranging from 0 to 1000 nephelometric turbidity units (NTU)
- Waterproof and dustproof with IP67-rated housing that floats

The Cole-Parmer turbidity meter is easy to calibrate—meter automatically prompts you to the next calibration standard. Large custom LCD displays reading and units of measure. Other features include diagnostic error messages and auto off.

What's included: primary standards, cuvettes, hard carrying case, and four AA batteries.



Specifications

Range: 0 to 1000 NTU	Sample volume: 10 mL
Resolution: 0.01, 0.1, 1 NTU	Response time: <6 seconds
Accuracy: ±2% of reading from 0 to 500 NTU; ±3% of reading from 500 to 1000 NTU	Data logging capabilities: none
Light source: infrared LED	Output: none

Description	Power	Catalog number	Price
Waterproof turbidity meter	Four AA batteries (included)	LR-59200-70	

Accessories

[LR-35635-52 Replacement calibration set.](#) Includes 4 x 60 mL bottles of 0.02, 20, 100 and 800 NTU standards

[LR-35653-55 Cuvettes.](#) Pack of 3

[LR-09376-01 Replacement batteries, AA.](#) Pack of 4

Wait! There's More...

For turbidity standard solutions, see page 36.

Oakton® T-100 Waterproof Turbidity Meter

Waterproof and dustproof housing floats!

- Meets performance criteria as specified by ISO 7027 (DIN EN 27027) method
- Compliant with ASTM D6855-03 (EPA recognized)
- Easy, four-point, push-button calibration for full-range accuracy
- Auto-ranging from 0 to 1000 nephelometric turbidity units

What's included: four 60-mL primary standards with vials (0.02, 20.0, 100, and 800 NTU), three empty cuvettes with lightshield caps, silicone oil, lint-free cloth, batteries, and hard carrying case.



Meter comes in hard carrying case



Specifications

Range: 0 to 19.99; 20.0 to 99.9; 100 to 1000 NTU	Sample volume: 10 mL
Resolution: 0.01, 0.1, 1	Sample cell size: 25 mm dia x 50 mm H
Accuracy: ±2% of reading from 0 to 500 NTU; ±3% of reading 500 to 1000 NTU	Response time: less than 6 seconds
Light source: infrared LED	Data logging capabilities: none
	Output: none

Description	Power	Catalog number	Price
Oakton T-100 waterproof turbidity meter	Four AAA batteries (included)	LR-35635-00	

Accessories

[LR-35635-52 Replacement calibration set.](#) Includes one each of primary calibration cuvettes filled with 0.02, 20.0, 100, and 800 NTU standard

[LR-35653-55 Cuvettes.](#) Pack of 3

[LR-09376-00 Replacement batteries; 1.5 V, AAA.](#) Pack of 12

Hach® 2100Q Portable Turbidity Meter

Simple calibrations

- Meets or exceeds design and performance criteria as specified in US EPA method 180.1
- Eliminate guesswork or duplicate runs with the innovative Rapidly Settling Turbidity™ (RST)—allows for accurate and repeatable measurement of rapidly settling samples
- Customizable power and connectivity options for added versatility



This portable turbidity meter features a unique optical system that compensates for potential interferences. Intuitive user interface prompts you during calibration and verification for hassle-free setup.

Additional meter features include 23 preprogrammed menu languages, time-and-date stamped readings, and closed cap control eliminating stray light interference.

What's included: StabCal™ primary calibration standards in sealed vials (20, 100, 800 NTU), six sample cells, 10 NTU primary verification standard, silicone oil, oiling cloth, batteries, and carrying case.



Specifications

Range: 0 to 1000 NTU	Sample volume: 10 mL
Resolution: 0.01 NTU on lowest range	Sample cell size: 60 mm H x 25 mm dia
Accuracy: ±2% of reading	Response time: mode dependent
Light source: tungsten filament lamp	Data logging capabilities: 500 points
Photodetector: silicon photodiode	Output: optional USB

Description	Power	Catalog number	Price
2100Q portable turbidity meter	Four AA batteries (included) or 100 to 230 VAC, 50/60 Hz (with optional power module)	LR-99511-10	

Accessories

- [LR-99511-20](#) Replacement StabCal calibration standards. Includes one sealed vial each of 20, 100, 800 NTU
- [LR-99511-21](#) Replacement 10 NTU verification standard
- [LR-99512-75](#) Replacement silicone oil, 15 mL
- [LR-99511-55](#) Replacement sample cells. Pack of 6
- [LR-99512-68](#) Degassing kit

Turbidity Standard Solutions

Calibrate to ensure accuracy

Primary Standard Solutions can be used to calibrate nephelometers or turbidimeters. EPA-approved polymeric standards outlast Formazin standards. Suspended polymeric particles virtually never settle or clump. Solutions are guaranteed to maintain NTU values within ±1% for one year. Available in one-liter bottles.

NTU value	Catalog number	Price
0	LR-08391-19	
0.2	LR-08391-08	
0.5	LR-08391-09	
1.0	LR-08391-03	
10.0	LR-08391-04	
40.0	LR-08391-05	



Hach StabCal® Turbidity Standard Solutions offer a guaranteed stability of at least one year. Standards are referenced in US EPA-accepted Hach method 8195 and meet NPDES and NPDWR† compliance reporting requirements. Available in 500-mL bottles.

NTU value	Catalog number	Price
<0.1	LR-99512-54	
20	LR-99512-56	
200	LR-99512-58	
800	LR-99512-60	
1000	LR-99512-62	

†NPDES=National Pollutant Discharge Elimination System, NPDWR=National Primary Drinking Water Regulations



ProCal Primary Turbidity Standards are formulated to provide instrument-specific accuracy with a safe, nontoxic formulation—offering improvements in stability over polymer and formazin alternatives. US EPA-approved to meet NPDES and NPDWR† compliance reporting requirements. Two-year shelf life.



NTU value(s)	Volume	Cat. number	Price
For Hach 1720 process turbidimeter			
0.0, 20	Four 1-L bottles of each (8 total)	LR-99900-33	
0.0	One 1-L bottle	LR-99900-34	
1.0	One 1-L bottle	LR-99900-35	
20	One 1-L bottle	LR-99900-36	
For Hach 2100N laboratory turbidimeter			
0.0, 20, 200, 1000, 4000	One 500-mL bottle of each (5 total)	LR-99900-37	
0.0	One 500-mL bottle	LR-99900-38	
20	One 500-mL bottle	LR-99900-39	
200	One 500-mL bottle	LR-99900-40	
1000	One 500-mL bottle	LR-99900-41	
For Hach 2100P portable turbidimeter			
0.0, 20, 100, 800	One 500-mL bottle of each (4 total)	LR-99900-42	
0.0	One 500-mL bottle	LR-99900-43	
20	One 500-mL bottle	LR-99900-44	
100	One 500-mL bottle	LR-99900-45	
800	One 500-mL bottle	LR-99900-46	
For Hach 2100Q portable turbidimeter			
0.0, 20, 100, 800	One 500-mL bottle of each (4 total)	LR-99900-47	
0.0	One 500-mL bottle	LR-99900-48	
20	One 500-mL bottle	LR-99900-49	
100	One 500-mL bottle	LR-99900-50	

Hach® TL23 Series Benchtop Turbidimeters

Simplify testing in demanding industrial and wastewater applications

NEW

- Identifies stable readings to ensure accurate analysis
- Displays measurements more clearly on large, color touch screen
- Locks in measurements and logs up to 2000 data points
- Easily exports data via a USB port

The TL23 series benchtop turbidimeters simplify the measurement of high range turbidity applications with an easy-to-use color touch screen and intuitive user interface. Features include self-diagnostics for quality assurance, single-point calibration for measurements under 40 NTU/FNU, and sample identification for traceability. Stable readings and accurate analysis are ensured by capturing turbidity reading once the turbidimeter detects sample stability—no need for repeat measurements.

What's included: US EPA filter assembly, six 1" sample cells (30 mL) with caps, Gelex® secondary turbidity standardization kit, StablCal® calibration kit, silicone oil, oiling cloth, power supply, power cord, and dust cover.



99512-20



Specifications

Sample volume: 30 mL
Sample cell size: 25 mm dia
Response time: 14 seconds
Display: 7" (17.8 mm) color touch screen

Data logging capabilities:
2000 points
Output: USB



99512-22



99512-23



99512-24

Regulatory compliance	Range	Resolution	Accuracy	Units of measure	Light source	Power	Catalog number	Price
EPA method 180.1	0 to 4000 NTU	0.001 NTU/EBC	±2% of reading plus 0.01 NTU from 0 to 1000 NTU, ±5% of reading from 1000 to 4000 NTU	NTU, EBC	Tungsten lamp, 460 nm	100 to 240 VAC, 50/60 Hz	LR-99512-25	
	0 to 10,000 NTU		±2% of reading plus 0.01 NTU from 0 to 1000 NTU, ±5% of reading from 1000 to 4000 NTU, ±10% of reading from 4000 to 10,000 NTU	NTU, EBC, absorbance, % transmittance, and mg/L			LR-99512-30	
ISO 7027	0 to 1000 NTU	0.001 NTU/EBC	±2% of reading plus 0.01 FNU/NTU from 0 to 1000 FNU/NTU	FNU, NTU	LED, 860 nm	100 to 240 VAC, 50/60 Hz	LR-99512-20	
	0 to 10,000 NTU		±2% of reading plus 0.01 NTU from 0 to 1000 NTU, ±5% of reading from 1000 to 4000 NTU, ±10% of reading from 4000 to 10,000 NTU	FNU, FAU, NTU, EBC, absorbance, % transmittance, and mg/L			LR-99512-35	

Accessories

[LR-99512-21](#) StablCal turbidity standards calibration kit, 0 to 4000 NTU; 5 x 100-mL bottles

[LR-99512-22](#) Gelex secondary turbidity standard kit, 0 to 4000 NTU

[LR-99512-23](#) Replacement filter assembly for EPA models

[LR-99512-24](#) Replacement lamp kit for EPA models



More options available

Contact our **expert** Technical Sales Team to find one just right for your requirements.

1-800-343-4340 sales@coleparmer.com ColeParmer.com

Katie, 6 years of experience

LaMotte® Handheld Turbidity Meters

Get higher accuracy and a wider range

- Advanced microprocessor offers high-accuracy readings
- Available with either EPA- or ISO-compliant optical systems
- Battery operated for field and on-site testing convenience

These compact portable meters are equipped with a unique optics configuration to read low turbidity levels down to 0.05 NTU and high levels up to 4000 NTU. Large, menu-driven LCD features five measuring units, seven user-selectable languages, data logging capabilities to 500 points, and USB interface for downloading data to your computer.

What's included: 60 mL each of 0, 1, and 10 NTU standards; plastic sample bottle; four glass sample vials; USB cable and wall plug; and waterproof plastic carrying case.



Specifications

Range: 0 to 4000 NTU	Photodetector: silicon photodiode
Resolution: 0.01 NTU/FNU from 0.00 to 10.99, 0.1 NTU/FNU from 11.0 to 109.9, 1 NTU/FNU from 110 to 4000	Sample volume: 10 mL
Accuracy: ±2% from 0 to 100 NTU; ±3% from 100 to 4000 NTU	Sample cell size: 25 mm dia, flat-bottom tube
Light source US EPA model 05563-22: tungsten lamp ISO model 05563-24: 860 nm LED	Response time: <2 sec
	Data logging capabilities: 500 points
	Output: USB

Turbidity Standards, 60-mL bottle

Value	Catalog number	Price
Standards for EPA-compliant turbidimeter		
0 NTU	LR-05565-25	
1 NTU	LR-05563-31	
10 NTU	LR-05563-33	
100 NTU	LR-05563-35	
Standards for ISO-compliant turbidimeter		
0 NTU	LR-05565-25	
1 NTU	LR-05563-51	
10 NTU	LR-05563-53	
100 NTU	LR-05563-55	

Description	Power	Catalog number	Price
Portable turbidity meter, US EPA 180.1 compliant	Rechargeable lithium battery	LR-05563-22	
Portable turbidity meter, ISO 7027 compliant	(included) and wall plug	LR-05563-24	

[LR-05563-66](#) Sample vials, glass.
Pack of 6

Velp Flocculator Jar Testers

Save money and chemicals by testing on a smaller scale

- ASTM D203S compliant method
- Choose from portable or laboratory models, with four or six positions

Jar testers are designed to test the efficiency of flocculation or precipitation reagents on a small scale. Stirring rod shafts can individually be stopped and height can be adjusted while the system is operating. Choose from portable or laboratory testers.

Portable Jar Tester is ideal for performing on-site jar tests. The space-saving design has four stirring positions situated around a central lamp, making it easier to observe the flocculation process. Set stirring speed mechanically to 20, 40, 50, 100 or 120 rpm, and set time for 1 to 30 minutes. This portable tester requires 1-L beakers (order separately, 34512-11, pack of 6).

Laboratory Jar Testers are available with four or six positions. The JTL model has a single motor driving all positions at a consistent speed from 10 to 300 rpm; timer can be set from 1 to 999 minutes or 0 to 99 hours. The FC model offers individual speed control—nine settings from 10 to 200 rpm—at each position. Both feature an illuminated back panel for enhanced visibility. These lab units require standard 2-L beakers (order separately, 34512-13, pack of 4).

What's included: stainless steel stirring rods and universal AC adapter.



Model	Portable (FP)	Laboratory (JTL)		Laboratory with individual speed control (FC)	
Catalog number	LR-99561-05	LR-99561-13	LR-99561-15	LR-99561-17	LR-99561-19
Number of positions	4	4	6	4	6
Stirring control	20, 40, 50, 100, 120 rpm	10 to 300 rpm (variable)		10, 15, 30, 45, 60, 90, 120, 150, 200 rpm	
Timer control	1 to 30 min	1 to 999 min; 1 to 99 hrs; or continuous		Continuous	
Beaker size	1 L	2 L		2 L	
Power	100/240 VAC, 50/60 Hz	100/240 VAC, 50/60 Hz		100/240 VAC, 50/60 Hz	
Price					

Accessories

- [LR-34512-11](#) PYREX® glass beakers; 1000 mL, for portable unit. Pack of 6
- [LR-34512-13](#) PYREX® glass beakers; 2000 mL, for laboratory units. Pack of 4

Cole-Parmer® Disposable Bailers

Easy tie-off, greater water flow, and improved sink rate

- Individually weighted and sealed bailers are cleaned and rinsed with deionized water before packaging



Polyethylene bailers are opaque; PVC and FEP bailers are clear.

All bailers have metal inserts for faster sink rate

These disposable bailers feature tapered ends and low-sag cord cleat to reduce hang-ups and snags. The angled nozzle ensures positive check-valve control. Choose from virgin polyethylene construction for strength and durability, virgin PVC for strength and economy of polyethylene with transparent features of FEP, or virgin FEP construction for high-purity applications. Double check-valve bailers allow you to sample from specific depth (point-source sampling).



Length in. (cm)	Outside diameter in. (cm)	Number of check valves	Qty/cs	Catalog number	Price/cs*
Polyethylene (PE) bailers					
12 (30.5)	1.6 (4.06)	One	24	LR-99157-00	
		Two		LR-99157-01	
36 (91.4)	0.5 (1.27)	One	24	LR-99157-20	
		Two		LR-99157-21	
36 (91.4)	0.75 (1.91)	One	24	LR-99157-30	
		Two		LR-99157-32	
36 (91.4)	1.6 (4.06)	One	24	LR-99157-02	
		Two		LR-99157-03	
48 (121.9)	1.6 (4.06)	One	24	LR-99157-04	
		Two		LR-99157-05	
PVC bailers					
12 (30.5)	1.6 (4.06)	One	24	LR-99157-40	
36 (91.4)				LR-99157-42	
48 (121.9)				LR-99157-44	
FEP bailers					
36 (91.4)	0.5 (1.27)	One	12	LR-99157-23	
		Two		LR-99157-24	
36 (91.4)	1.6 (4.06)	One	12	LR-99157-12	
		Two		LR-99157-13	

*Discounts: Save 10% on 5-9 cases and 15% on 10+ cases, in any assortment.

Slow Emptying Devices

Reduces flow from bailer, minimizing agitation for VOC analysis.

Use for bailers	Catalog number	Price**
99157-00, -01, -02, -03, -04, -05, -40, -42, -44	LR-99157-06	
99157-12, -13	LR-99157-16	
99157-20, -21	LR-99157-22	
99157-23, -24	LR-99157-25	

**Discounts: Save 10% on 5-9 emptying devices and 15% on 10+ emptying devices.

QuickFilter® Groundwater Filter

Disposable 0.45-µm filter cartridge with polyether-sulfone membrane. Filter has bailer interface tube for direct connection to bottom of bailer. Gravity forces water through the filter into your sample container.



[LR-99157-50](#) QuickFilter groundwater filter

Swing Samplers

Easy collection from any angle

- Easily collect samples from horizontally flowing streams

Use swing sampler to obtain liquids, powders, or even small solids. Includes one 960-mL bottle and fits almost any other laboratory sample bottles.



Length	Catalog number	Price
6 to 12 ft (1.8 to 3.7 m)	LR-99155-30	
8 to 24 ft (2.4 to 7.3 m)	LR-99155-32	

[LR-99155-34](#) Small snapper, 500-mL bottles

[LR-99155-36](#) Large snapper, 1000-mL bottles

Sludge Judge® Sludge Samplers

No more straining

- Add middle sections to take samples from any distance
- Order a complete system or customize to your needs
- Just dip and sample—ball valve opens when lowered into sample
- Know sample volume with easy-read 1-ft increment markings

Basic Sludge Judge and Sludge Judge Ultra versions have 3/4" (1.9 cm) diameter pipe sections and hold approximately 3 oz (89 mL) of fluid per foot. Sludge Judge II version has 1 1/4" (3.2 cm) diameter pipe sections doubling the overall capacity of the sampler. Sludge Judge Ultra additionally features an ultraviolet stabilizer which reduces material degradation from UV light.



Description	Length	Catalog number	Price
Sludge Judge sampler, 3/4" (1.9 cm) diameter			
Sludge Judge; top, middle, bottom sections	3 x 5 ft (1.5 m)	LR-05465-70	
Replacement bottom section with valve	5 ft (1.5 m)	LR-05465-72	
Replacement middle section/extension section	5 ft (1.5 m)	LR-05465-74	
Replacement top section with nylon rope	5 ft (1.5 m)	LR-05465-76	
Sludge Judge II sampler, 1 1/4" (3.2 cm) diameter			
Sludge Judge II; top, middle, bottom sections	3 x 5 ft (1.5 m)	LR-05465-30	
Replacement bottom section with valve	5 ft (1.5 m)	LR-05465-31	
Replacement middle section/extension section	5 ft (1.5 m)	LR-05465-32	
Replacement top section with nylon rope	5 ft (1.5 m)	LR-05465-33	
Sludge Judge Ultra sampler, 3/4" (1.9 cm) diameter, UV resistant			
Sludge Judge Ultra; top, middle, bottom sections	3 x 5 ft (1.5 m)	LR-05465-40	
Replacement bottom section with valve	5 ft (1.5 m)	LR-05465-41	
Replacement middle section/extension section	5 ft (1.5 m)	LR-05465-42	
Replacement top section with nylon rope	5 ft (1.5 m)	LR-05465-43	

[LR-05465-77](#) Canvas carrying case

[LR-05465-78](#) Cleaning brush

Raven CORETAKER® Sampler Will not break!

- Lifetime "no-breakage" guarantee
- Nonthreaded couplers using the Slip-Loc quick-connect/disconnect design
- Floats for easy retrieval
- Ideal for direct measurement of sludge blanket thickness

Rigid 8-ft lengths of clear, 1¼" (3.2 cm) dia polycarbonate tubing will not turn cloudy from sunlight or become brittle in cold weather.

Slip-Loc quick-disconnect coupler and twin double O-ring seals to ensure a liquid-tight connection. Sampler features a check valve for sample release; soft-foam, floating lanyard, and numbered yellow 1-ft (0.3-m) markers.



Length	Catalog number	Price
16 ft (4.9 m)	LR-05465-60	
24 ft (7.3 m)	LR-05465-62	

Dippas® Sampling Dipper/Container Systems Eliminate cross-contamination

- Take and send sample in same container
- Easy to use: take sample, snap off handle, and seal container
- Individually wrapped and sterilized



Capacity mL (oz)	Handle length	Container material/color	Cap included	Qty/pk	Catalog number	Price/pk
30 (1)	8" (20.3 cm)	Clear PS	PE screw cap	50	LR-06282-70	
		Blue PS			LR-06282-72	
100 (3)	15" (38.1 cm)	Clear PS	Metal screw cap	100	LR-06282-75	
		Blue PS			LR-06282-77	
250 (8)	13" (33.0 cm)	Clear PS	Metal screw cap	50	LR-06282-79	
		Blue PS			LR-06282-81	

Wait!

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WHIRL-PAK® Water Sampling Bags Keep samples safe—easy-seal bags hold liquids

- Quick and easy sealing—flip bag around wire/tape and bend to seal
- No more poking—puncture-proof tabs keep wire intact even after extensive use
- Keep track of samples with write-on strip



Sodium Thiosulfate Bags are EPA approved for potable water collection; contain a nontoxic, nonnutritive 10-mg active ingredient tablet of sodium thiosulfate to neutralize the chlorine at the point of collection.

Stand-Up Sodium Thiosulfate Bags add a special gusset at the bottom which allows it to stand up completely by itself when full. No rack or holder is needed to keep it upright.

Sodium Thiosulfate Bag for Wastewater meets National Environmental Laboratory Accreditation Conference (NELAC) standard for sampling wastewater treated with 15 mg/L of chlorine; contains 30 mg of nontoxic, nonnutritive sodium thiosulfate.

Buy More...Save More!
20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases



Capacity oz (mL)	Size (W x L)	Thickness (mil)	Qty/pk	Catalog number	Price/pk
Sodium thiosulfate bags for potable water sampling					
4 (118)	3" x 7½" (7.6 x 19 cm)	2.25	100	LR-06499-90	
18 (532)	4½" x 9" (11.4 x 22.8 cm)	2.5	100	LR-06499-95	
Stand-up sodium thiosulfate bags for potable water sampling					
4 (118)	3" x 7½" (7.6 x 19 cm)	2.25	100	LR-06499-77	
18 (532)	4½" x 9" (11.4 x 22.8 cm)	2.5	100	LR-06499-97	
Sodium thiosulfate bag for wastewater sampling					
4 (118)	3" x 7½" (7.6 x 19 cm)	2.25	100	LR-06499-86	

Scienceware® Dippers with Replaceable Cup

Easily pour from either side

- Long handles for easy sampling

Lightweight, yet sturdy, dippers feature a polypropylene (PP) cup that screws onto the handle. High-density polyethylene (HDPE) handles are ribbed for a sure grip; end has hook for hanging.



Screw-on cups let you easily take multiple samples.



Buy More...Save More!
20% off on 120+ 15% off on 30 to 119 10% off on 6 to 29 packs or cases

Capacity mL (oz)	Dipper dia	Handle length	Qty/pk	Catalog number	Price/pk
Dippers with replaceable cup					
500 (16)	3⅞" (9.8 cm)	36" (0.9 m)	1	LR-06282-00	
		72" (1.8 m)		LR-06282-05	
Extra/replacement screw-on PP cup					
500 (16)	3⅞" (9.8 cm)	—	1	LR-06282-50	



Masterflex® E/S® Portable Sampling Pumps

E/S Portable Sampling Drive

- Flow rate: 4.2 to 1100 mL/min; depends on tubing size
- Sample depths down to 26 ft (7.9 m)*. Simple to use in wells, sewers, or lakes. Reversible flow and prime/purge function
- Variable-speed portable sampling drive operates on internal battery, your 12 V car battery, or from an AC outlet



Portable sampling drive shown with Easy-Load® pump head (sold separately).

Accepts three pump head types: Standard, Easy-Load®, and PTFE-tubing (pump heads sold separately).

E/S Composite Sampler

- Program to meet EPA requirements—sample size and time, delayed start, remote contact closure, momentary and maintained sampling
- Flow rate is 435 to 1650 mL/min depending on tubing size, lift height
- Includes Masterflex Easy-Load pump head, 9-liter HDPE carboy, 12 VDC rechargeable battery, 115/230 VAC power converter and 25 ft (7.6 m) of L/S® 24 peroxide-cured silicone tubing
- Rechargeable battery for field applications



Composite sampler

MASTERFLEX®

Power supplies are:



rpm	Nominal voltage	IP rating	Dimensions (L x W x H)	Power† VAC (50/60 Hz)	Catalog number	Price
E/S portable sampling drive						
70 to 400	12 VDC or AC line	IP54	11" x 10" x 16" (28 x 25.4 x 40.6 cm)	12 VDC on 115	LR-07571-00	
				12 VDC on 230	LR-07571-05	
E/S composite sampler						
600	12 VDC or AC line	IP56	11" x 13½" x 17½" (28 x 34 x 44 cm)	12 VDC on 115/230	LR-07580-00	

*Maximum sampling depth can be achieved with L/S® 15 or L/S® 24 Standard pump head.
 †Drives run from 12 VDC internal rechargeable batteries, external 12 VDC source (order automotive adapter separately below), or from VAC line source.

- [LR-07516-12](#) Easy-Load pump head, for use with L/S sizes 15 and 24 tubing
- [LR-07015-20](#) Standard pump head, for use with L/S size 15
- [LR-07024-20](#) Standard pump head, for use with L/S size 24
- [LR-07571-50](#) Automotive power adapter, 25-ft (7.6 m) cable
- [LR-07580-50](#) Carrying strap, optional
- [LR-77390-00](#) PTFE tubing pump head, optional
- [LR-77390-50](#) PTFE tubing set. 2-mm ID, 4-mm OD. Set of 2
- [LR-77390-60](#) PTFE tubing set. 4-mm ID, 6-mm OD. Set of 2

Masterflex High-Performance Precision Pump Tubing

Tubing type	Tubing	Qty/pk	Catalog number	Price/pk
Silicone (peroxide-cured)	L/S 15	25 ft (7.6 m)	LR-96400-15	
	L/S 24		LR-96400-24	
Tygon® E-Lab	L/S 15	50 ft (15.2 m)	LR-06509-15	
	L/S 24		LR-06509-24	
Tygon E-LFL	L/S 15	25 ft (7.6 m)	LR-06440-15	
	L/S 24		LR-06440-24	

Cole-Parmer® Dye Tracers

Know your water flow

- Won't harm the environment—nontoxic and biodegradable
- Easy-to-use color in rapidly diffusing dye identifies dispersion patterns, flow rates, seepage, and more
- Noncarcinogenic fluorescent red dye is ideal for yellowed or heavily algaed water
- For silt-filled water, use fluorescent yellow/green dye
- Use a UV lamp to easily view results where visual detection is difficult with red, yellow/green, or orange dyes
- Brighten murky ponds with blue dye
- Minimum detectable concentration is 1 ppm



Description	Size	Max gallons of water to obtain 1 ppm	Fluorescent red dye		Fluorescent yellow/green dye		Blue dye		Fluorescent orange dye	
			Catalog number	Price	Catalog number	Price	Catalog number	Price	Catalog number	Price
Quick-dissolving tablets	200 tablets	60 (red, ylw/grn) 35 (orange) 20 (blue) all per tablet	LR-00295-16		LR-00295-17		LR-00295-18		LR-00295-19	
Concentrate	Pint	3,125 (red) 12,500 (ylw/grn, blue) 4,000 (orange)	LR-00298-16		LR-00298-17		LR-00298-18		LR-00298-19	
Concentrate	Gallon	25,000 (red) 100,000 (ylw/grn, blue) 32,000 (orange)	LR-00298-06		LR-00298-07		LR-00298-08		LR-00298-09	
Powder	Pound	60,400 (red, orange) 120,000 (ylw/grn, blue)	LR-00298-26		LR-00298-27		LR-00298-28		LR-00298-29	

*Discount: Save 10% when you buy eight 200-tablet bottles.



CHEMets® Colorimetric Test Kits

Take it wherever you go

- Vacuum-sealed reagents and handy comparator chart for quick, visual results

CHEMets colorimetric test kits let you visually compare the color of your sample to standards using a comparator. Just break tip of ampoule in cup (included) filled with sample.



Vacuum pulls sample into ampoule automatically; gently swirl to mix. Handy color comparator (included) provides accurate visual analysis. Vacuum packing keeps reagents active indefinitely (see footnotes).

What's included: reagent vials for 30 tests and carrying case.

Test	Test ranges	Catalog number	Price
Ammonia/nitrogen, Nesslerization†	0 to 1, 1 to 10 ppm	LR-00291-00	
Chlorine, DPD‡, EPA-approved	0 to 1, 1 to 5 ppm	LR-05540-90	
Chlorine, DDPD†	0 to 1.0, 1.0 to 5.0 ppm	LR-05540-42	
Copper, total soluble	0 to 1, 1 to 10 ppm	LR-00290-50	
Detergent††	0 to 3 ppm	LR-05540-00	
Dissolved oxygen (accuracy of ±4%)	0 to 40 ppb	LR-05540-20	
	0 to 100 ppb	LR-05540-25	
	0 to 1 ppm	LR-05540-30	
	1 to 12 ppm	LR-05540-40	
Iron, total soluble	0 to 1, 1 to 10 ppm	LR-00291-40	
Hydrogen peroxide	0 to 1, 1 to 10 ppm	LR-05541-02	
Phenol	0 to 1, 0 to 12 ppm	LR-00290-30	
Phosphate	10 to 150 ppm	LR-00290-52	
Silica	0 to 1 and 1 to 10 ppm	LR-05541-04	
Sulfide, total soluble	0 to 1, 0 to 10 ppm	LR-05540-52	

†Six-month shelf life

‡Measures free and total chlorine

††Anionic surfactants

Hach® Water Quality Test Strips

Results in less than a minute!

- Reduce risk by using as a pre-test validation tool
- No chemical handling or cleanup
- Vial label with color key for easy readings in lab or field



Testing parameter	Testing range	Qty	Catalog number	Price
5-in-1: Free and total chlorine; total hardness; total alkalinity; pH	0 to 10 ppm; 0 to 25 gpg; 0 to 240 ppm; 6.2 to 8.4 pH	50	LR-05546-02	
Alkalinity	0 to 240 ppm	50	LR-05546-04	
Ammonia (nitrogen)	0 to 6 ppm	25	LR-05546-06	
Arsenic (low level)	0 to 500 ppb	100	LR-05546-08	
Arsenic (dual range)	0 to 500 ppb; 0 to 4000 ppb	100	LR-05546-12	
Chloride (low level)	30 to 600 ppm	40	LR-05546-16	
Chloride	300 to 6000 ppm	40	LR-05546-18	
Free and total chlorine	0 to 10 ppm	250†	LR-05546-20	
Free and total chlorine	1 to 10 ppm	50	LR-05546-22	
Free chlorine	0 to 600 ppm	100	LR-05546-24	
Free and total copper	0 to 3 ppm	25	LR-05546-26	
Total hardness, as CaCO ₃	0 to 425 ppm	250†	LR-05546-28	
Total hardness, as CaCO ₃	1 to 425 ppm	50	LR-05546-30	
Total dissolved iron	0 to 5 ppm	25	LR-05546-32	
Nitrate and nitrite	0 to 50 ppm; 0 to 3 ppm	25	LR-05546-36	
pH (midrange)	4 to 9 pH	50	LR-05546-40	
pH (full range)	0 to 14 pH	100	LR-05546-42	
Phosphorous, o-phosphate	0 to 50 ppm	50	LR-05546-44	

†Individually wrapped test strips.

Hach® Pocket Colorimeter™ II Kits

No need to calibrate—just zero and read

- Get quick, accurate results wherever you go
- Store and recall last ten data points and time
- Rugged, IP67-rated waterproof housing is ideal for field testing

Colorimetric readings couldn't be easier—simply zero the instrument with a blank, insert the reacted sample, and read the result.

What's included: meter, reagents, sample cells, carrying case, and four AAA batteries.



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Specifications

Light source: LED
Detector: silicon
Wavelength: fixed ±2 nm

Pathlength: 25 mm
Power: four AAA batteries (included)

Testing parameter	Testing range (ppm)	Catalog number	Price
Aluminum	0.02 to 0.80	LR-99574-30	
Ammonia	0.01 to 0.80	LR-99574-32	
Bromine	0.05 to 10.0	LR-99574-36	
Chlorine, free†	0.02 to 2.00	LR-99574-42	
Chlorine, total†	0.1 to 8.0	LR-99574-44	
Chlorine, free and total†	0.02 to 8.0	LR-99574-46	
Copper†	0.04 to 5.00	LR-99574-58	
Fluoride†	0.1 to 2.0	LR-99574-62	
Iron, ferro†	0.02 to 5.00	LR-99574-66	
Iron, TPTZ	0.01 to 1.70	LR-99574-68	
Manganese, high range†	0.2 to 20.0	LR-99574-72	
Manganese, low range	0.01 to 0.70	LR-99574-74	
Molybdate	0.02 to 12.00	LR-99574-76	
Nitrate	0.4 to 30.0	LR-99574-80	
Ozone	0.01 to 0.75	LR-99574-82	
Phosphate, ortho†	0.02 to 3.00	LR-99574-84	
Silica	1 to 100	LR-99574-90	
Sulfate†	2 to 70	LR-99574-92	

†US EPA accepted method.

[LR-99574-96](#) Speccheck standard for chlorine, DPD

[LR-99574-95](#) Speccheck standard for fluoride

[LR-09376-00](#) Replacement batteries, AAA. Pack of 12



LaMotte® Sanitizer Strength Test Strips

Quickly test your sanitizer strength

- No more waiting for results—simply compare color change to chart to get results
- Keep strips safe in included waterproof vial
- Get a longer shelf life from QAC strips 99535-30 with included desiccant cap



Parameter	Testing range	Qty/vial	Catalog number	Price/vial
QAC	50, 100, 200, and 400 ppm	100	LR-99532-30	
Chlorine	10, 50, 100, and 200 ppm	200	LR-99532-31	
Chlorine, HR	0, 50, 100, 250, 500, and 800 ppm	50	LR-99532-36	
Iodine	12, 25, 50, and 100 ppm	200	LR-99532-32	
Chlorine dioxide	0 to 10 ppm	50	LR-99532-33	
Chlorine dioxide	0 to 500 ppm	50	LR-99532-34	
Peracetic acid	0, 10, 20, 40, 60, 85, and 160 ppm	50	LR-99532-35	

Hach® DR 900 Colorimeter

No need to program—select from 90 methods

- Recall programs quicker with “favorites” list for easier selection
- Intuitive user interface allows quick selection and easy testing—in 22 languages
- Record and analyze up to 500 data sets with easy USB transfer
- Stands up to your environment with rugged, IP67-rated waterproof design



The handheld DR 900 colorimeter allows quick and easy access to the most common water testing methods. Unit features automatic wavelength selection, advanced reagent blank correction, and calibration curve adjustment. Analysis can be performed with user-set or preset reaction times with built-in timer. Large backlit display reads results as concentration, absorbance, or percent transmittance.

What's included: two 25-mL glass vials, two 10-mL plastic vials, COD vial adapter, USB cable, and four AA batteries.



Specifications

Wavelength selection: automatic
Light source: LED
Concentration units: µg/L, mg/L, g/L, ABS, %T
Output: waterproof mini USB port
Data logging capabilities: 500 data sets with time/date stamp
Power: four AA batteries (included)

Range	Wavelengths	Catalog number	Price
0 to 2 A	420, 520, 560, 610 nm	LR-99573-10	

Test Kits

Order as many test kits as needed to complete your water testing protocol. More test kits are available—if you don't see the one you need, call our Application Specialists for availability.

Chemical oxygen demand (COD) test kits require a COD reactor. The manganese III COD test kit 99574-27 is an alternative to “non-green” tests—produces no mercury, chromium, or silver waste! All reagents in kits are packaged as powder pillows.

Description	Range	Tests/kit	Catalog number	Price/kit
Standard test kits				
Aluminum	0 to 0.8	100	LR-99574-03	
Chlorine, free (USEPA)	0 to 2.0	100	LR-99574-04	
Chlorine, total (USEPA)	0 to 2.0	100	LR-99574-05	
Copper, free	0 to 210 ppb	100	LR-99574-06	
Cyanide	0 to 0.24	100	LR-99574-07	
Fluoride, SPADNS	0 to 2.0	25	LR-99574-08	
Iron, total (USEPA)	0 to 3.0	100	LR-99574-09	
Manganese (USEPA)	0 to 20	100	LR-99574-10	
Nitrate, high range	0 to 30	100	LR-99574-11	
Nitrate, low range	0 to 0.50	100	LR-99574-12	
Nitrite, LR (USEPA)	0 to 0.35	100	LR-99574-13	
Nitrogen, total (TNT)	0 to 25	50	LR-99574-14†	
Oxygen, dissolved, high range	0 to 15	25	LR-99574-15	
Ozone, mid range	0 to 0.75	25	LR-99574-16	
Phosphorus (USEPA)	0 to 2.5	100	LR-99574-17	
Phosphorus, total (USEPA)	0 to 3.5	50	LR-99574-18†	
Silica, high range	0 to 75	100	LR-99574-19	
Sulfate (USEPA)	0 to 70	100	LR-99574-21	
Sulfide (USEPA)	0 to 0.7	100	LR-99574-22	
Zinc	0 to 3.0	100	LR-99574-23	
Chemical oxygen demand (COD) test kits				
COD, low range (USEPA)	0 to 150	25	LR-99574-25†	
COD, high range (USEPA)	0 to 1500	25	LR-99574-26†	
COD, manganese III	20 to 1000	25	LR-99574-27†	

†Requires COD reactor sold at left.

Accessories for Colorimeter

- [LR-99573-51](#) HachLink software
- [LR-99573-52](#) Soft-sided nylon case with shoulder strap
- [LR-99573-53](#) Hard-sided case
- [LR-99573-55](#) Replacement COD/TNT tube adapter
- [LR-09376-01](#) Replacement batteries, AA. Pack of 4

Accessories for COD Tests

- [LR-99574-60](#) COD reactor, 120 VAC
- [LR-99574-65](#) COD reactor, 240 VAC
- [LR-99574-52](#) Volumetric pipette, 2-mL
- [LR-99574-53](#) Pipette filler, safety bulb
- [LR-99574-54](#) Test tube rack

Horiba Oil Content Analyzer

Accurate results with the touch of a button



- Easy to use:
 - Extract sample with S-316 solvent
 - Transfer oil/solvent solution to analyzer for measurement
- Accurate measurements to 0.1 ppm
- Maintain accuracy with auto-calibration after initial standard reading
- Get data on LCD or transfer to computer via RS-232 for further analysis

What's included: quartz cell with cap, power cord, B-heavy oil (standard), 2-amp fuse, 10-mL syringe, and 25- μ L syringe.

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Specifications

Display mode	Measurement capability		
	Range	Resolution	Repeatability
Full scale	0 to 9.9	0.1	± 0.4
	10 to 99.9	0.1	± 0.2
	100 to 200	1	± 4
0 to 200 mg/L	0 to 9.99	0.01	—
	10 to 99.9	0.1	—
	100 to 1000	1	—
0 to 1000 mg/kg	0 to 1000	0.001	$\pm 1\%$ full-scale

Model	OCMA-550
Catalog number	LR-82900-05
Cell	Quartz, 200 mm path length
Detector	Pyroelectric sensor
Solvent	S-316, approx. 6.7 mL/test
Output	RS-232 and centronics printer port
Power	100 to 240 VAC, 50/60 Hz
Price	

Accessories

- [LR-82900-10](#) Solvent extractant S-316, 1.5 kg
- [LR-82900-20](#) Solvent reclaimer SR-300

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product specs
you need!

Hach® DR 1900 Portable Visible Spectrophotometer

Make sure your drinking water is safe

- Wavelength range of 340 to 800 nm includes most water testing methods
- Select from pre-programmed water quality methods or user-customizable methods
- Transfer data easily—connect and download up to 500 GLP compliant data sets via USB
- Operates on four AA batteries for field use



The Hach and Hach/Lange preprogrammed and user-customizable water quality methods offer absorbance, % transmittance, and concentration measurements. Select from user programs, favorites, single wavelength, multiple wavelength, and time course modes.

A wide range of sample cells are available (not included): 10 x 10 mm, 1-in rectangular, 13-mm, 16-mm, 1-in round, 1 cm/10 mL, and flow-thru cell.

What's included: four sample cell adapters, 10 mL matching pair of sample cells, sample-light cover, dust cover, and four AA batteries.

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Description	DR1900 vis spectrophotometer
Catalog number	LR-99573-20
Beam type	Single beam
Bandwidth	5 nm
Wavelength range	340 to 800 nm
Wavelength resolution	± 1 nm
Wavelength repeatability	± 0.1 nm
Wavelength accuracy	± 2 nm
Photometric ranges	Absorbance
	Concentration
Drift	0.002 A/hr (after warm-up)
Stray light	<0.5% T at 340 with NaNO ₂
Source lamp	Xenon flash
Detector	Silicon photodiode
Output	USB mini (optional adapter necessary)
Power	Four AA batteries (included)
Price	

Accessories

- [LR-99573-66](#) USB cable adapter (USB Mini plug to USB female connector)
- [LR-09376-01](#) Replacement batteries, AA. Pack of 4

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Cole-Parmer® Visible Spectrophotometers

Get precise results

- Save time and reduce errors with auto-zeroing
- Maintain calibration and prevent damage with end-of-range stop on adjustment knob
- No manual adjustments—built-in filters automatically switch to accommodate wavelength setting



What's included: twelve 10-mm diameter test tubes cuvettes, cuvette adapter, dust cover, and 7-ft (2.1-m) cord with a US standard plug.



Bandwidth	20 nm	10 nm
Catalog number	LR-83055-10	LR-83055-20
Wavelength range	335 to 1000 nm	
Wavelength accuracy	±2 nm	
Photometric ranges	Transmittance	0 to 125% T
	Absorbance	0 to 2 A
	Concentration	0 to 1.95 A
Output	USB	RS-232 / USB
Power (50/60 Hz)	115/230 VAC switchable	
Price		

[LR-83055-21 PC application software](#) for model 83055-20. Standard Curve, Abs. %T/Conc., and Abs. vs. Time; for Windows® 95, 98, and XP. Includes serial cable 83055-24

[LR-83055-24 RS-232 cable](#) for model 83055-20. Female 9-pin to female 9-pin

[LR-83055-22 Printer cable](#) for model 83055-20. Male 25-pin to female 9-pin

Cole-Parmer® UV/Visible Spectrophotometers

Store and recall 200 test methods



- Leverage software for DNA/RNA/protein and kinetics analysis
- Be more productive with included four-position cuvette holder
- Responds precisely to transmittance changes for better results
- Optional Peltier temperature controller and/or sipper system for total utility
- Create standard curves and get wavelength scanning feature with optional software

What's included: a 7-ft (2.1-m) detachable cord, dust cover, two-position 10-mm cuvette holder, four glass cuvettes, and two quartz cuvettes.



Power (VAC, Hz)	115, 60	230, 50
Catalog number	LR-83059-10	LR-83059-15
Bandwidth	4 nm	
Wavelength range	200 to 1000 nm	
Wavelength accuracy	± 2 nm	
Photometric ranges	Transmittance	0 to 125% T
	Absorbance	-0.1 to 2.5 A
	Concentration	0 to 1999 C
Memory capability	Up to 200 standard curves	
Output	RS-232/USB	
Price		

[LR-83057-65 Software, graphics.](#) Standard curve, Abs. %T/Conc., Abs. vs time; for Windows® XP

[LR-83057-66 Temperature control system;](#) 115 VAC, 15 to 40°C. With external controller and Peltier 10 mm cell holder

[LR-83057-68 Sipper system,](#) 115 VAC. With external controller unit and peristaltic pump; requires flow cell and tubing

[LR-83057-70 Temperature control/sipper system,](#) 115 VAC. Combines 83057-66 and 83057-68; requires flow cell and tubing

[LR-83057-78 Flow cell,](#) glass (visible spectra)

[LR-83057-79 Flow cell,](#) quartz (UV spectra)

[LR-83057-64 Two-position long cuvette holder,](#) 100 mm max

Disposable Cuvettes

No more washing cuvettes!

Use these economical, single-use cuvettes to obtain consistent spectrophotometric data. Use polystyrene cuvettes for visible spectral analysis; polymethacrylate cuvettes are preferred for UV range testing. Pathlength: 10 mm.

Type	Capacity (mL)	No. of clear sides	Dimensions W x H x D (mm)	Polystyrene		Methacrylate	
				Catalog number	Price/pk of 500*	Catalog number	Price/pk of 500*
Standard	4.5	2	12.5 x 45 x 12.5	LR-06343-10		LR-06343-15	
Semi-micro	1.5			LR-06343-20		LR-06343-70	
Fluorometry	4.5	4	12.5 x 45 x 12.5	LR-06343-60		LR-06343-80	

*Discounts: Save 10% on 2-9 pks, 15% on 10-39 pks, and 20% on 40+ pks.

[LR-06343-31 Cuvette caps,](#) LDPE. Case of 1000

[LR-06343-35 Cuvette stirring spatulas,](#) PS. Case of 1000



Jenway® 72 Series and Genova Bio Scanning Spectrophotometers

Scan entire wavelength range in as little as 6 seconds

NEW

- Color touch screen and user-friendly interface make setup and navigation easy
- Multiple measurement modes for broad application compatibility
- Save quantitation curves to USB memory stick—no need to recreate for each measurement
- Two USB ports for data storage and printer connectivity
- Flexible and versatile—compatible with a wide range of interchangeable cell holders

The multi-element detector on the scanning spectrophotometers measures the entire wavelength range at once, reducing wait times. Plus, each dataset contains readings from the complete spectrum, making the data readily available for future analysis. The detector's orientation shields the array from stray light, allowing you to perform measurements with the lid open, quickly exchange samples, and decreases user errors in results.

Large 4" display allows full spectrum scans, quantitation curves and kinetics runs to be viewed easily. The touch-screen capability lets you zoom in and out and select spectral analysis points—all by simply tapping the screen. Measurement modes include photometrics, concentration, optical density (OD at 600 nm), quantitation, spectrum scanning, and kinetics.

Compact design with small footprint takes up less space on your benchtop. The large sample chamber permits easy access for loading samples. The USB port on the rear connects with a printer (order separately), while the USB on the front accepts flash drives for data storage, quantitation curve uploads, and firmware updates.

Genova Bio, a dedicated life science UV/Vis spectrophotometer, is preprogrammed with methods for measuring nucleic acid concentrations, protein assays, and optical density of bacterial cell cultures such as *E. coli* and yeast cells. Compatible with ultra-micro, semi-micro, micro, and macro cuvettes.

What's included: standard 10 x 10 mm cuvette holder for models 83056-01 and -02, micro-cuvette holder for model 83056-04, USB memory stick, and power adapter with three plugs (US, EU, and UK).



Built-in cuvette rack keeps your benchtop clutter-free.

Jenway®



Large chamber allows easy access for loading and unloading samples, plus it accommodates the optional heated cuvette and adjustable pathlength holders.



Model	7200 (Vis)	7205 (UV/Vis)	Genova Bio (UV/Vis)
Catalog number	LR-83056-01	LR-83056-02	LR-83056-04
Minimum sample size	0.7 µL†	0.7 µL†	0.7 µL†
Maximum sample size	4 mL	4 mL	4 mL‡
Bandwidth (spectral)	7 nm	5 nm	3 nm
Pathlength	10 mm	10 mm	10 mm
Wavelength	Range	335 to 800 nm	198 to 800 nm
	Accuracy	±2 nm	±2 nm
	Repeatability	±2 nm	±2 nm
Photometrics	Transmittance	0 to 199.9%	
	Absorbance	-0.300 to 2.500 A	
	Accuracy	±0.01 A at 1.0 A and 546 nm	
	Stability (A)	±0.005 A/h at 0.04 A and 546 nm	
	Noise	±0.002 A at 0.04 A and ±0.02 A at 2.0 A and 546 nm	
	Stray light at 340 nm, %T	<1% T according to ANSI/ASTM E387-72	
Beam height	15 mm		
Source lamp	Tungsten halogen lamp	Xenon lamp	
Scan time	6 seconds		
Memory	Dependent on attached mass storage device		
Outputs	(2) USB		
Power (VAC, Hz)	100 to 240, 50 to 60		
Price			

†The 0.7 µL sample volume requires TrayCell accessory 83070-29 sold separately.

‡Model 83056-04 comes fitted with the micro-cuvette holder; would require cuvette holder 83070-41 for a 4-mL sample size.

Accessories

[LR-83070-41](#) Single cuvette holder, 10 x 10 mm

[LR-83056-06](#) Micro-cuvette holder for cuvettes with 8.5 mm beam height

[LR-83056-82](#) Micro-cuvette holder with reduced aperture, for cuvettes with 15 mm beam height

[LR-83056-77](#) Heated cuvette holder for 10 x 10 mm cuvettes, 32 to 42°C

[LR-83056-80](#) Adjustable pathlength cuvette holder, 10 to 100 mm

[LR-83070-43](#) Test tube holder; accepts 10 mm square cuvettes and 16- and 24-mm diameter test tubes

[LR-83070-29](#) TrayCell accessory for ultra-micro sample volumes, supplied with caps for 1 and 0.2 mL

[LR-83056-79](#) External printer with battery and power adapter with three plugs (US, EU, and UK)

[LR-99959-81](#) Print paper. One roll

[LR-99610-33](#) Plastic cuvettes, visible only; 10 mm path, 3 mL. Pack of 100

[LR-06343-73](#) Plastic cuvettes, UV/Vis; 10 mm path, 3 mL. Pack of 100

[LR-83070-38](#) Plastic micro-cuvettes, UV/Vis; 70 µL to 1.5 mL. Pack of 100

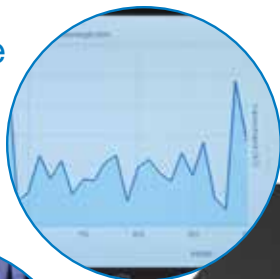
Find even more online!
Go to ColeParmer.com to see full product details.

Jenway® 74-Series Spectrophotometers

Day In, Day Out Spectroscopy Just Got Easier!

Intuitive Touchscreen Interface

Large, 7" HD color display makes navigation easy. The touchscreen is fast and responsive, even with gloves.



Versatile Sample Chamber

Large, domed lid provides easy access, even for tall multi-cell chambers or tubes.



Memory & USB Ports

10 GB onboard storage lets you store methods and results, with easy-access USB ports to transfer data or connect a printer.

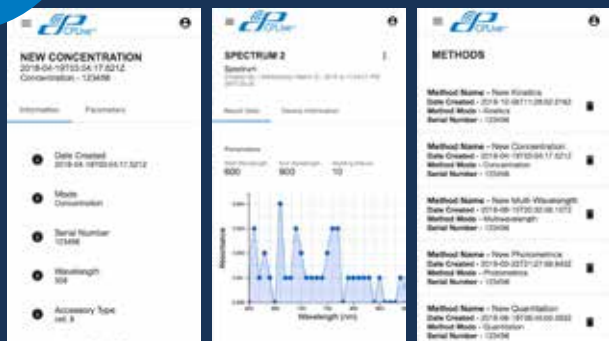


CPLive™ Connectivity

Keep your data secure and easily accessible with CPLive connectivity—results are automatically uploaded and stored in the cloud.

Transfer and store all your spectrophotometry protocols and results to one place, and effortlessly share with colleagues. Simultaneously manage multiple devices through your free CPLive account, via tablet or computer. Or, use the CPLive app on your smartphone.

Learn more at ColeParmer.com/CPLive



Description	7410 Visible wavelength	7415 UV/visible wavelength	7415 Nano UV/visible wavelength
Catalog number	LR-83056-21	LR-83056-22	LR-83056-23
Min sample size	3 mL	3 mL	0.5 µL (at 0.2 mm), 1.0 µL (at 0.5 mm)
Bandwidth	5 nm		5 nm
Wavelength range	320 to 1000 nm		198 to 1000 nm
Wavelength accuracy	±2 nm		±2 nm
Wavelength reproducibility	±0.5 nm		±0.5 nm
Photometric range		0 to 199.9%, -0.300 to 2.500 A	
Photometric accuracy		±1%T, ±0.01 Abs at 1.000 Absorbance	
Source lamp	Tungsten halogen lamp		Xenon lamp
Price			

Specifications

- Quantitation range:** -300 to 9999
- Kinetics measurement time:** 2 to 9999 seconds
- Spectrum scan interval:** Selectable 1, 2, 5, or 10 nm
- Output:** USB Type A x 2, USB Type B x 1, Ethernet (RJ45) connection
- Internal memory:** 10GB for results and methods
- Power:** 100 to 240 VAC, 50/60 Hz

Mettler Toledo EasyPlus™ Titrator Systems

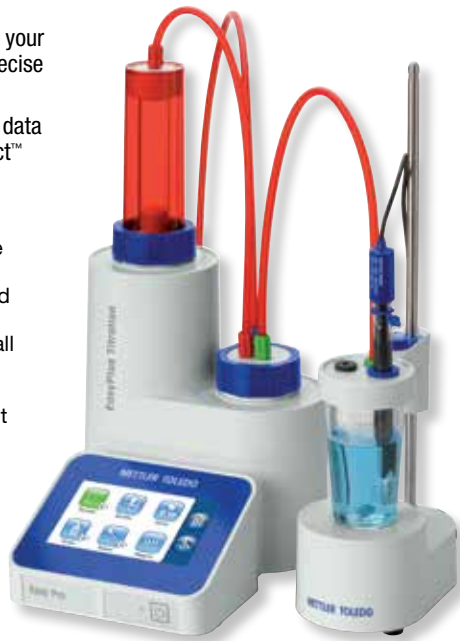
No more manual titrations

- Easy operation via Apps-based user interface
- Ensure the accuracy of your measurements with precise burettes and sensors
- Download and analyze data with optional EasyDirect™ software

Everything you need in one affordable package for acid/base, acidity, precipitation, redox, and Karl Fischer volumetric titrations. Although small in size, these quality titrators provide highly accurate and consistent results.

Operation is simple and intuitive thanks to the smartphone-based Apps-driven user interface; use it to control all major functions. Easily perform basic titrations and receive automatic results from predefined formulas. Setup and tutorial with navigation is available in 14 languages. Minimize downtime with diagnostic tools for most common issues.

What's included: EasyPlus titrator, sensor, burette, sample vessel, stirrer, tubing, fittings, and power cord.



Cou-Lo Aquamax Coulometric Karl Fischer Titrator

Use it wherever you need it!



- Guaranteed synchronization of electrolysis current produced and count rate displayed with automatic compensation
- Get hard copy of results with built-in high-speed printer
- Easy to use for determination of water in liquids, gases, and powders
- Meets ASTM D1533, D4928, D6304, IP 386, API MPMS Chapter 10.9, and BS 60814 test methods

The Cou-Lo Aquamax titrator sets new standards in versatility and ease of operation for determining water content in liquids, gases, and powders. The unique ACE (Automatic Compensation of Errors) control system guarantees that the actual electrolysis current produced and the count rate displayed are always correctly synchronized, regardless of changes to the electrolysis cell resistance.

Titrator displays results in %, ppm, mg/kg, and µg of water. Delayed start, automatic three-fold end point indication, and four different calculation modes accommodate a variety of applications. Printed results show statistics, data input parameters, sample ID numbers, and time-and-date stamp. Results can also be downloaded via the optional Results Manager software package into a PC spreadsheet format.

What's included: built-in stirrer, titration vessel, detector electrode, generator electrode, drying tube, injection septa, glass syringe, luer needle, molecular sieve, stir bar, funnel, printer, paper, universal AC voltage adapter, DC car adapter, and internal battery.



Specifications



Resolution: 0.1 mV **Output:** USB
Repeatability: 0.5% RDS **Power:** 100 to 240 VAC, 50/60 Hz

Model	Tests	Catalog number	Price
Mettler Easy pH titrator system	Acid/base	LR-94190-02	
Mettler Easy Cl titrator system	Precipitation	LR-94190-04	
Mettler Easy Ox titrator system	Redox	LR-94190-06	
Mettler Easy Pro titrator system	Acid/base, precipitation, and redox	LR-94190-08	
Mettler Easy KFV titrator system	Karl Fischer volumetric	LR-94190-10	

Accessories

- [LR-94190-55](#) EasyDirect titration software package
- [LR-94190-50](#) Replacement pH electrode, with BNC connector
- [LR-94190-51](#) pH electrode, for non-aqueous applications, with BNC connector
- [LR-94190-52](#) Replacement redox electrode, with BNC connector
- [LR-94190-53](#) Replacement KF electrode, with BNC connector
- [LR-94190-54](#) Replacement precipitation electrode, with BNC connector

Find even more online!
Go to ColeParmer.com to see full product details.

Specifications

Range: 1 µg to 100 mg water **Accuracy**
Resolution: 0.1 µg From 10 to 100 µg: ±3 µg
Rate: 2.0 mg/min max titration From 100 µg to 1 mg: ±5 µg
Moisture range: 1 ppm to 100% Above 1 mg: ±0.5%
Units displayed: %, ppm, mg/kg, µg

Description	Power	Catalog number	Price
Cou-Lo Aquamax Coulometric Karl Fischer Titrator	90 to 264 VAC, 47 to 63 Hz	LR-94101-00	

Accessories

- [LR-94101-50](#) Carrying case
- [LR-94101-55](#) Results Manager software package



Environmental Express® HotBlock® 100 Digestion Systems

Perform digestions faster, cleaner, and more reliably

- Eliminate corrosion and sample contamination—made of PTFE-coated graphite and other nonmetallic materials
- No additional cables or controllers—all electronics housed below unit
- Get uniform heating to all samples, up to 150°C
- Easily transport samples with included polycarbonate transfer racks

HotBlock digestion systems are EPA approved for all methods approved for hot plate digestions including, but not limited to, methods 3005, 3010, 3050B, 200.2, 200.7, 200.8, 7470A, 7471A, 245.1 and 245.7.



Sample size†	Number of wells	Uniformity	Maximum temperature	Dimensions (W x H x D)	Power			Catalog number	Price
					VAC	Hz	Amps		
15 mL	96	±2.7°F (1.5°C)	302°F (150°C)	15" x 9" x 21½" (38 x 23 x 54 cm)	120	60	9	LR-53205-00	
50 mL	36	±2.7°F (1.5°C)	302°F (150°C)	15" x 9" x 15" (38 x 23 x 38 cm)	120	60	9	LR-53205-02	
					240	50	4.5	LR-53205-03	
50 mL	54	±2.7°F (1.5°C)	302°F (150°C)	15" x 9" x 21½" (38 x 23 x 54 cm)	120	60	9	LR-53205-04	
					240	50	4.5	LR-53205-05	
100 mL	25	±2.7°F (1.5°C)	302°F (150°C)	15" x 9" x 15" (38 x 23 x 38 cm)	120	60	9	LR-53205-06	
					240	50	4.5	LR-53205-07	
100 mL	35	±2.7°F (1.5°C)	302°F (150°C)	15" x 9" x 21½" (38 x 23 x 54 cm)	120	60	9	LR-53205-08	
					240	50	4.5	LR-53205-12	

†Order PP cups separately on page 52.

Environmental Express® HotBlock® 200 Digestion Systems

Get uniform heating to all samples, up to 200°C

- Eliminate corrosion and sample contamination—made of PTFE-coated graphite and other nonmetallic materials
- Easily transport samples with included polycarbonate transfer racks
- Mount external controller safely outside the hood

Perform a wider range of experiments and digestions with the expanded temperature range—up to 200°C. The HotBlock 200 digestion system is available with 25 to 96 wells, and accepts cup sizes of 15, 50, or 100 mL. Blocks and controllers are sold separately.

Easy-to-use external controllers feature automatic shut-off, alarms, and ability to save profiles with ramp and soak settings. Dual-block controller 53206-02 can control up to two heating blocks independently and simultaneously. Safely place the controller outside the fume hood—mount to a metal surface using magnets, in an electrical outlet, or place on a benchtop.

Note: Use glass or PTFE digestion cups when operating at temperatures above 130°C†.

NEW



REQUIRED System Components

- 1) Heating block
- 2) Controller

Specifications

Temperature range: ambient to 200°C	Temperature uniformity: ±0.2°C
Temperature resolution: 0.1°C	Temperature element: RTD

1. Heating Blocks



Sample size†	Number of wells	Dimensions (L x W)	Power		Catalog number	Price
			VAC	Amps		
15 mL	96	21½" x 15" (54.6 x 38.1 cm)	120	13	LR-53206-04	
50 mL	36	15" x 15" (38.1 x 38.1 cm)	120	13	LR-53206-06	
	54	21½" x 15" (54.6 x 38.1 cm)	120	13	LR-53206-08	
100 mL	25	15" x 15" (38.1 x 38.1 cm)	120	13	LR-53206-10	
	35	21½" x 15" (54.6 x 38.1 cm)	120	13	LR-53206-12	

†Order PP cups separately on page 52; only for use up to 130°C.

2. Controllers

Number of blocks accepted	Dimensions (L x W)	Power (VAC)	Catalog number	Price
1	6" x 7"	120	LR-53206-00	
2	(15.2 x 17.8 cm)		LR-53206-02	

Environmental Express® HotBlock® Hot Plate

Heat vessels with flat bottoms with ease

- Durable graphite and Kydex® construction
- Uniform heating of samples
- Low-wattage mat uses a maximum of 1065 watts of power



Temperature range	Dimensions (W x H x D)	Power			Catalog number	Price
		VAC	Hz	Amps		
Ambient to 302°F (150°C)	15" x 9" x 21½" (38 x 23 x 54 cm)	120	60	14	LR-53205-10	
		240	50	7	LR-53205-11	

Polycarbonate Transfer Racks

Safely place multiple samples into heating block

- No more moving one sample at a time
- Resists heat and acids



Description	Sample size	Number of racks/pk	Catalog number	Price/pk
(3) 32-place racks	15 mL	3 racks	LR-53205-49	
(1) 18-place rack	50 mL	1 rack	LR-53201-11	
(1) 15-place and (1) 10-place rack	100 mL	2 racks	LR-53201-13	
(1) 15-place and (2) 10-place rack	100 mL	3 racks	LR-53205-48	

Ribbed Watch Glasses

Achieve partial reflux during digestion

- Easily place and remove watch glass with center stem
- Free of contaminants—made of polypropylene



Description	Diameter	Catalog number	Qty/pk	Price/pk
For 15-mL digestion cups	19.5 mm	LR-53201-02	1000	
For 50-mL digestion cups	44 mm	LR-53201-04	1000	
For 100-mL digestion cups	52 mm	LR-53201-08	500	

Disposable Reflux Cap

Center hole for smooth addition of reagents

- Fits 50-mL digestion cup
- Achieve equal reflux as the ribbed watch glasses



Diameter	Catalog number	Qty/pk	Price/pk
34 mm	LR-53201-06	1000	

Wait!

There's More at ColeParmer.com

Find all the product specs you need!

Environmental Express® Digestion Cups Graduated for better sample dilutions

- Cups that act as a digestion vessel, graduated cylinder, or storage container and fit perfectly into the HotBlock® systems
- Certified with low metals background and EPA approved for digestions

Environmental Express digestion cups are approved for hot plate digestions†, and certified for volume to 0.5%. The accurate graduations eliminate the need for graduated cylinders and transfer steps, saving you both time and labor costs. The clarified homopolymer polypropylene (PP) construction has greater chemical resistance and heat tolerance than commonly used co-polymer polypropylene.

All cups include a Certificate of Analysis for 68 trace metals—only metals-free materials come in contact with your sample. The Ultimate Clean cup comes in packaging to ensure ready-to-use arrival and are further trace-metal analysis certified to parts-per-billion and parts-per-trillion levels.

The Ultimate Clean™ and the UltimateCup™ vessels have been redesigned for increased durability, stability, and a tighter seal. The UltimateCup also comes in a Rack Lok version for simple one-handed cap placement and removal.

†Approved for, but not limited to, EPA Methods 3005, 3010, 3050B, 200.2, 200.7, 200.8, 7470A, 7471A, 245.1, and 245.7.

NEW



ENVIRONMENTAL EXPRESS®

Description	Total capacity	Graduations	Dimensions	Cap	Catalog number	Qty/cs	Price/cs
15-mL digestion cup	18 mL	To 15 mL	17.5 x 105 mm	Natural, no liner	LR-53201-01	1000	
50-mL Ultimate Clean digestion cup	68 mL	To 50 mL	30 x 106 mm	Natural, no liner	LR-53204-17	150	
50-mL UltimateCup digestion cup	63 mL	To 50 mL	30 x 106 mm	—	LR-53203-03	500	
				Green with PE liner	LR-53203-13	500	
				White with PE liner	LR-53203-15	500	
				Natural, no liner	LR-53203-17	500	
50-mL UltimateCup digestion cup with Rack Lok	63 mL	To 50 mL	30 x 106 mm	—	LR-53203-23	500	
				White with PE liner	LR-53203-25	500	
				Natural, no liner	LR-53203-27	500	
100-mL digestion cup	125 mL	To 100 mL	46 x 100 mm	White with PE liner	LR-53201-07	225	

Environmental Express® FilterMate® Filtration Systems Eliminate sample transfer—filter and digest in the same cup

- Filter 15- and 50-mL samples within sample cups
- Simple to use—attach FilterMate plunger to filter assembly, then press down on plunger
- No need for separate filtration devices before analyzing samples

These easy-to-use filtration systems filter within vessels so you don't need to do a separate filtration of sample before analysis.

What's included: 100 filter assemblies and plungers.

FilterMate®



Optional holder keeps FilterMate stable

Membrane type	Pore size (µm)	Lot certified	Applications	Catalog number	Qty/pk	Price/pk
PTFE-faced polypropylene	6	No	Most laboratory applications	LR-35202-00	100	
Acid-washed glass fiber with polyethylene frit	0.7	No	TCLP extractions	LR-35202-01	100	
PVDF with PTFE prefilter	0.45	No	Dissolved metals only	LR-35202-02	100	
Certified PTFE	6	Yes	Trace level analysis	LR-35202-03	100	
PVDF with PTFE prefilter	0.45	Yes	Dissolved metals only	LR-35202-04	100	
Polyethylene frit	2	No	Use with 15-mL digestion cups	LR-35202-05	100	

Accessories

[LR-35202-06](#) Holder for FilterMate filtrations, secures the 50-mL digestion cup during filtration. HDPE material

[LR-35202-07](#) Replacement plunger fits 50-mL cup. Pack of 500



Environmental Express® SimpleDist® Micro Distillation System

Eliminate broken glassware

- Accepts disposable polypropylene distillation tubes—no more costly glass apparatus to clean or replace
- Save time—smaller sample size means quicker distillations
- Reduce waste—requires just 6 mL of sample
- Distills 26 samples simultaneously
- No need for cooling water
- For optimal results, use our disposable micro tubes

The EPA approves the use of micro distillation systems with disposable tubes for reporting of cyanide; system can be adapted for ammonia reporting as well. This high-throughput unit lets you distill 26 samples simultaneously, using only 6 mL of sample per tube. It's quick and easy—everything is done in the micro tube! Simply add sample, heat, and bring the distillate to volume in the collection part of the tube.



Description	Number of wells	Temperature range	Power	Catalog number	Price
SimpleDist Micro heating block	26	Ambient to 150°C	120 VAC	LR-35202-36	
			240 VAC	LR-35202-38	

Accessories

[LR-35202-86](#) Tube press



SimpleDist Micro heating block shown with disposable distillation micro tubes—order tubes separately below.

Disposable Micro Tubes

- Save time and improve safety in your lab
- Eliminate broken glassware—made of polypropylene with hydrophobic membrane and cap
- No more having to wash distillation tubes—just use and toss!
- Molded-in graduations at 6 mL and 10 mL for easy measuring
- Score line for quick separation of collection tube

Qty/pk	Ammonia tubes		Cyanide tubes		Phenol tubes	
	Cat. no.	Price/pk	Cat. no.	Price/pk	Cat. no.	Price/pk
10	LR-35202-90		LR-35202-70		LR-35202-80	
21	LR-35202-91		LR-35202-71		LR-35202-81	
26	LR-35202-92		LR-35202-72		LR-35202-82	
100	LR-35202-93		LR-35202-73		LR-35202-83	

Environmental Express® SimpleDist® Distillation System

Perform safe and easy ammonia and cyanide distillations

- Minimize cleanup—only glassware to clean is the boiling tube
- No chiller or water lines required—distilled ammonia and cyanide collected right in the trap
- Conforms to established methods—uses the same reagents in the same molar concentrations as EPA Method 335.4 and Standard Method 4500-CN-C for Cyanide as well as EPA Method 350.1 and Standard Methods 4500-NH3 for ammonia

This complete SimpleDist system comes with a 12-place HotBlock® digestion system and a 12-valve manifold kit. Order additional accessories separately to optimize the system for your needs.



Description	Power	Catalog number	Price
SimpleDist complete 12-valve system	120 VAC, 6 A	LR-35209-84	
	240 VAC, 3 A	LR-35209-85	



Description	Cat. no.	Qty/pk	Price/pk
Boiling tube, borosilicate glass, 30 x 200 mm	LR-35205-72	1	
Tube rack, 12-place	LR-35209-89	1	
Collection traps, 25 mL	LR-35209-90	100	
Reagent addition tube with funnel tip	LR-35209-91	100	
Screw cap, open-top, polypropylene, 38 mm	LR-35209-92	6	
Black washer, neoprene, for 38-mm screw caps	LR-35209-93	6	
Two-port cap insert, for 38-mm screw caps	LR-35209-94	6	
Tubing adapters to fit 1/4" ID tubing and cyanide trap	LR-35209-95	12	
Tubing kit; 12 pre-cut pieces of tubing with adapters pre-inserted in one end	LR-35209-96	1	



Cole-Parmer® Symmetry® LT Precision Toploading and LA Analytical Balances

Quality and precision at an affordable price

- Large, backlit LCD provides clear visibility of weighing results
- Get secure data connections via USB, RS-232, Ethernet, and Wi-Fi interfaces
- Easily adjust filter settings depending on your working environment
- Multiple working modes handle a variety of weighing functions
- Fast stabilization and response time
- Quickly diagnose weighing errors with autotest GLP function
- Industry-leading 5-year warranty

NEW

Easy to operate, these rugged balances feature a large, backlit LCD providing a clear presentation of the weighing results. Choose from internal calibration for quick and easy accuracy checks or external calibration with the use of a calibration weight.

To achieve the best possible weighing conditions, the balances feature a filter level setting that can be adjusted to a fast or slow mode depending on the working environment.

Working modes include weighing, parts counting, check weighing, dosing, percent weighing, density of solids, density of liquids, animal weighing, statistics, totalizing, and peak hold. Other features include quick access keys, balance taring, balance zeroing, auto switch-off, and backlight turn-off time.

Several built-in databases allow you to record users, products, weighings, and tares. Only users with appropriate access can adjust balance settings, export data, import data, and delete records. Use the simple external connections to a computer or printer for GLP/GMP-compliant output. The autotest GLP function provides an enhanced balance summary to aid in assessing operation and diagnosing reasons for occurrence of errors in weighing.



10102-23

Symmetry®



10102-27

NTEP-approved models are available online.



Specifications

Weighing units: g, mg, kg, ct, lb, oz, ozt, dwt, tih, tils, tlt, tlc, mom, gr, N, ti, baht, tola, msg, u1, u2

Stability indicator: yes

Output: RS-232 (2), USB-A, USB-B, Ethernet, and Wi-Fi (internal cal only)

Power: 100/240 VAC, 50/60 Hz

Capacity	Readability	Repeatability	Linearity	Pan size	Internal calibration and Wi-Fi interface		External calibration	
					Catalog number	Price	Catalog number	Price
LT toploading balances								
360 g	0.001 g	±0.002 g	±0.002 g	5" x 5" (12.8 x 12.8 cm)	LR-10102-27[‡]	—	LR-10102-37[‡]	—
600 g		±0.003 g	±0.003 g		LR-10102-28[‡]	—	LR-10102-38[‡]	—
1200 g	0.01 g	±0.02 g	±0.02 g	7 ¹ / ₁₆ " x 7 ¹ / ₁₆ " (19.5 x 19.5 cm)	LR-10102-29	—	LR-10102-39	—
2100 g		±0.02 g	±0.02 g		LR-10102-30	—	LR-10102-40	—
4500 g		±0.02 g	±0.02 g		LR-10102-31	—	LR-10102-41	—
6000 g		±0.03 g	±0.03 g		LR-10102-32	—	LR-10102-42	—
LA analytical balances								
62 g	0.0001 g	±0.00003 g	±0.00006 g	3 ¹ / ₂ " (9 cm)	—	—	LR-10102-33[‡]	—
82/220 g	0.00001/0.0001 g	±0.00001 g	±0.00002 g		LR-10102-23[‡]	—	—	—
160 g	0.0001 g	±0.0001 g	±0.0002 g	4" (10 cm)	LR-10102-24[‡]	—	LR-10102-34[‡]	—
220 g		±0.0002 g	±0.0003 g		LR-10102-25[‡]	—	LR-10102-35[‡]	—
310 g		±0.0002 g	±0.0003 g		LR-10102-26[‡]	—	LR-10102-36[‡]	—

[‡]Includes short open-air draft shield.

[‡]Includes tall enclosed glass draft shield with three doors.

[LR-10100-83](#) Cable, RS-232 to USB

[LR-10100-84](#) Cable, RS-232 to printer

[LR-10100-85](#) Printer

[LR-10100-86](#) Printer paper. Pack of 3

[LR-10100-88](#) Density determination kit for 5" x 5" (12.8 x 12.8 cm) weighing pan

[LR-10100-87](#) Density determination kit for analytical models

[LR-10100-90](#) Lock-down cable, 36"L x 3/32" dia (91.4 x 0.3 cm)

[LR-10100-93](#) Draft shield for 5" x 5" (12.8 x 12.8 cm) weighing pan

[LR-01017-04](#) Square weigh boats, white polystyrene, 20 mL.

Pack of 100

[LR-17101-52](#) NIST-traceable calibration with data for balances

Cole-Parmer® elements™ Griffin Low-Form Graduated Beakers, Glass

Suitable for all lab procedures

NEW

- Easy-read graduations and marking area
- Withstands wide temperature range –50 to 550°C
- Graduated tolerances from ±0.02 to ±0.05 depending on size
- Autoclavable

Borosilicate 3.3 glass beakers with pour spout provide excellent general use at an economical price.



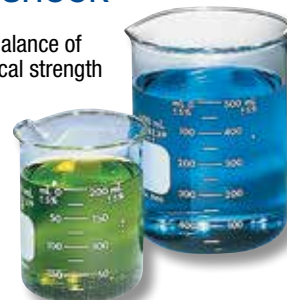
Buy More...Save More!
15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

Capacity mL (oz)	Graduation range (mL)	Graduation interval (mL)	Catalog number	Qty/pk	Price/pk
10 (1/8)	—	10	LR-34502-20	12	
20 (2/8)	5 to 20	5	LR-34502-36		
25 (7/8)	5 to 25	5	LR-34502-37		
30 (1)	10 to 30	5	LR-34502-38		
50 (1 3/4)	10 to 50	10	LR-34502-39		
100 (3)	20 to 100	10	LR-34502-40	12	
150 (5)	25 to 150	12.5	LR-34502-41		
200 (6)	50 to 200	25	LR-34502-42		
250 (8)	50 to 250	25	LR-34502-43		
300 (10)	50 to 300	25	LR-34502-44	8	
400 (13)	100 to 400	50	LR-34502-45		
500 (16)	100 to 500	50	LR-34502-46		
600 (20)	100 to 600	50	LR-34502-47		
800 (27)	200 to 800	100	LR-34502-48	6	
1000 (32)	200 to 1000	100	LR-34502-49		
1500 (51)	300 to 1500	100	LR-34502-50		
2000 (64)	400 to 2000	200	LR-34502-51	2	
3000 (96)	500 to 2500	250	LR-34502-52		
4000 (128)	500 to 3500	250	LR-34502-53	1	
5000 (160)	500 to 4500	500	LR-34502-54		

PYREX® Brand 1000 Griffin Low-Form Beakers, Glass

Stand up to thermal shock

- Uniform wall thickness offers optimal balance of thermal shock resistance and mechanical strength
- Know how much is left and how much is gone—double graduation scale indicates approximate content (on 250- to 400-mL sizes only)
- No mystery liquids—extra-large marking spot for easy identification
- Reference: ASTM E-960



Buy More...Save More!
15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

Capacity mL (oz)	Graduation range (mL)	Graduation interval (mL)	Catalog number	Qty/pk	Price/pk
10 (1/8)	—	—	LR-34502-01	12	
20 (2/8)	5 to 15	5	LR-34502-02		
30 (1)	5 to 25	10	LR-34502-03		
50 (1 3/4)	10 to 40	10	LR-34502-04		
100 (3)	20 to 80	10	LR-34502-05	12	
150 (5)	20 to 140	10	LR-34502-06		
250 (8)	25 to 200	25	LR-34502-07		
400 (13)	25 to 325	25	LR-34502-08		
600 (20)	50 to 500	50	LR-34502-09	6	
800 (27)	50 to 750	50	LR-34502-10		
1000 (32)	50 to 1000	50	LR-34502-11		
2000 (64)	200 to 2000	100	LR-34502-13	4	
3000 (96)	250 to 2500	125	LR-34502-14		
4000 (128)	500 to 3500	250	LR-34502-15	1	
10 (1/8)	—	—	LR-34502-21	48	
20 (2/8)	5 to 15	5	LR-34502-22		
30 (1)	5 to 25	10	LR-34502-23		
50 (1 3/4)	10 to 40	10	LR-34502-24		
100 (3)	20 to 80	10	LR-34502-25	48	
150 (5)	20 to 140	10	LR-34502-26		
250 (8)	25 to 200	25	LR-34502-27		
400 (13)	25 to 325	25	LR-34502-28		
600 (20)	50 to 500	50	LR-34502-29	36	
800 (27)	50 to 750	50	LR-34502-30		
1000 (32)	50 to 1000	50	LR-34502-31		
2000 (64)	200 to 2000	100	LR-34502-33	8	
3000 (96)	250 to 2500	125	LR-34502-34		
4000 (128)	500 to 3500	250	LR-34502-35	6	
Starter set contains one each of 50 mL, 100 mL, 250 mL, 600 mL, 1000 mL				5	

Cole-Parmer® Class A Griffin Low-Form Beakers, Glass

Easy readings and exceptional durability

- Double-scale graduations for easy measuring while pouring in or out
- Meet ASTM E960 specifications for Class A borosilicate glass beakers
- Stand up to temperatures of 445°F (230°C) for long-term, or 752°F (400°C) for short-term
- Autoclavable



Buy More...Save More!
15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

Capacity mL (oz)	Graduation interval (mL)	Catalog number	Qty/pk	Price/pk
10 (1/8)	—	LR-34503-42†	12	
25 (7/8)	5	LR-34503-44	12	
50 (1 3/4)	10	LR-34503-46	12	
100 (3)	10	LR-34503-48	12	
150 (5)	20	LR-34503-50	12	
250 (8)	25	LR-34503-52	12	
400 (13)	25	LR-34503-54	12	
600 (20)	50	LR-34503-56	6	
1000 (32)	50	LR-34503-58	6	
2000 (64)	100	LR-34503-60	4	
3000 (96)	125	LR-34503-62	1	
5000 (160)	250	LR-34503-64	1	

†The 10-mL beaker does not have graduations.



Qorpak® Precleaned Glass Sample Bottles

Save time—prewashed

- Vacuum and ionization process removes contaminants such as dirt, dust, carton lint, oil, aerosols, and fine glass particles
- Individually sealed for long-term storage with no contamination
- Bottles come with PTFE-lined caps; jars are available with PTFE-lined or pulp/vinyl-lined caps
- Clear wide-mouth square glass bottles have French square design for a more efficient use of shelf space while making the container easier to grip when pouring



Buy More...Save More!

\$ 15% off on 10+ packs or cases
10% off on 5 to 9 packs or cases

Capacity mL (oz)	Neck size (mm)	Catalog number	Qty/cs	Price/cs
A. Clear narrow-mouth bottles				
30 (1)	20	LR-34606-00	48	
60 (2)	20	LR-34606-10		
120 (4)	22	LR-34606-20	24	
240 (8)	24	LR-34606-30		
480 (16)	28	LR-34606-40	12	
960 (32)	33	LR-34606-50		
B. Clear wide-mouth square glass bottles				
15 (½)	20	LR-34610-00		
30 (1)	24	LR-34610-10	48	
60 (2)	28	LR-34610-20		
120 (4)	33	LR-34610-30	24	
240 (8)	43	LR-34610-40		
480 (16)	48	LR-34610-50		
960 (32) [†]	58	LR-34610-60	12	
C. Amber narrow-mouth glass bottles				
60 (2)	20	LR-34607-00		
120 (4)	22	LR-34607-10	24	
240 (8)	24	LR-34607-20		
480 (16)	28	LR-34607-30	12	
960 (32)	33	LR-34607-40		
D. Amber wide-mouth glass bottles				
30 (1)	28	LR-34609-00		
60 (2)	33	LR-34609-10	24	
120 (4)	38	LR-34609-20		
240 (8)	45	LR-34609-30		
480 (16)	53	LR-34609-40	12	
960 (32)		LR-34609-50		
E. Clear wide-mouth glass jars with PTFE lined caps				
30 (1)	43	LR-34608-00	48	
60 (2)	53	LR-34608-10		
120 (4)	58	LR-34608-20	24	
270 (9)	70	LR-34608-30		
480 (16)	89	LR-34608-40	12	
960 (32)		LR-34608-50		
F. Clear wide-mouth glass jars with pulp/vinyl lined caps (not shown)				
30 (1)	43	LR-34608-05	48	
60 (2)	53	LR-34608-15		
120 (4)	58	LR-34608-25	24	
270 (9)	70	LR-34608-35		
480 (16)	89	LR-34608-45	12	
960 (32)		LR-34608-55		

[†]Graduated in mL and oz.

Cole-Parmer® Precleaned EPA Sample Containers

Precleaned and ready to use

- Include certificate of conformance to EPA specifications
- Identify samples easier with included labels (unattached)

A-D. Glass Bottles, Jars, and Jugs are processed and certified to meet the requirements of the current US EPA "Specifications and Guidance for Contaminant-Free Sample Containers" document for semi-volatile organics, pesticides, PCBs, metals, cyanide, fluoride, nitrate and nitrite analyses. Include PTFE-lined caps.



E. Glass Septa Jars are processed and certified to meet the requirements of the current US EPA "Specifications and Guidance for Contaminant-Free Sample Containers" document for purgeable volatile organic analysis. Include PTFE-lined silicone septa bonded to open-top caps.



Capacity mL (oz)	Neck size	Qty/cs	Catalog number	Price/cs
A. Clear wide-mouth glass jars				
60 (2)	53 mm	24	LR-35204-03	
125 (4)	58 mm	24	LR-35204-14	
250 (8)	70 mm	24	LR-35204-28	
500 (16)	89 mm	12	LR-35204-42	
950 (32)	89 mm	12	LR-99540-44	
B. Amber narrow-mouth glass bottles				
125 (4)	22 mm	24	LR-99540-30	
250 (8)	24-414	12	LR-35204-63	
500 (16)	28 mm	12	LR-35204-37	
1000 (34)	33-430	12	LR-35204-50	
C. Amber wide-mouth glass bottles				
125 (4)	38 mm	24	LR-35204-61	
250 (8)	45 mm	24	LR-35204-24	
500 (16)	53 mm	12	LR-35204-38	
950 (32)	53 mm	12	LR-35204-49	
D. Amber narrow-mouth glass jugs				
2500 (80)	38-430	6	LR-35204-56	
4000 (135)	38-430	4	LR-35204-58	
E. Clear wide-mouth glass septa jars				
60 (2)	53 mm	24	LR-99540-20	
125 (4)	58 mm	24	LR-99540-21	

Graduated Sample Containers, PP

Unbreakable and chemical resistant

- Sterile containers are individually wrapped

Buy More...Save More!

\$ 20% off on 120+
15% off on 30 to 119
10% off on 6 to 29 packs or cases



Capacity, mL (oz)	Description	Catalog number	Qty/pk	Price/pk
118 (4)	Sterile, no tab	LR-06049-40	100	
118 (4)	Nonsterile with white tab	LR-06049-50	500	

Radio Frequency Identification (RFID) Bottles Coming Late Fall!
Ask our Application Specialists for details.



Thermo Scientific™ Nalgene™ Automatic Self-Zeroing Burettes

No lubrication of PTFE plug needed

- Won't break—made of clear acrylic body, PTFE stopcock, and PMP tip
- Individually calibrated for accuracy to meet ASTM E 287 requirements

Unaffected by most dilute acids and bases (except HF and ammonium hydroxide). Use over full pH range. Not designed for use with alcohols or organic solvents. Include a cover, a squeeze bottle with closure, and 3 ft (1 m) of vinyl tubing.



Burette 06209-30 shown with stand 06703-00 and clamp 06703-10

Capacity	Graduation intervals	Reservoir	Catalog number	Price
10 mL	0.1 mL	500 mL	LR-06209-10	
25 mL	0.1 mL	500 mL	LR-06209-20	
50 mL	0.1 mL	1000 mL	LR-06209-30	

[LR-06703-00](#) Support stand with center rod; 30" (76 cm) L x 1/2" (1.3 cm) dia

[LR-06703-10](#) Single burette clamp, HDPE

Cole-Parmer® elements™ Graduated Cylinders, Glass

NEW

Hexagonal base prevents cylinder from tipping over

- Durable borosilicate 3.3 glass
- Easy-read graduations
- Withstands wide temperature range –50 to 550°C
- Graduated tolerances from ±0.1 to ±20 depending on size
- Autoclavable



elements™
Cole-Parmer

Buy More...Save More!
15% off on 10+ packs or cases 10% off on 5 to 9 packs or cases

Capacity (mL)	Graduations (mL)	Tolerance (mL)	Catalog number	Qty/pk	Price/pk
5	0.1	±0.1	LR-34502-68	2	
10	0.2	±0.2	LR-34502-69		
25	0.5	±0.5	LR-34502-70	1	
50	1	±1	LR-34502-71		
100	1	±1	LR-34502-72		
250	2	±2	LR-34502-73		
500	5	±5	LR-34502-74		
1000	10	±10	LR-34502-75	1	
2000	20	±20	LR-34502-76		

Automatic Self-Zeroing, Self-Supporting Burettes

Prevent contamination from outside elements

- Get easy, drop-by-drop delivery with unique push-button stopcock
- Quickly repeat titration by presetting drop speed
- Easy-to-read blue graduations



What's included: LDPE bottle, base, and tube; vinyl stopper; glass burette; and PP stopcock.

Capacity	Subdivisions	Reservoir	Catalog number	Price
10 mL	0.05 mL	500 mL	LR-07879-10	
15 mL	0.1 mL	500 mL	LR-07879-20	
25 mL	0.1 mL	1000 mL	LR-07879-30	
50 mL	0.1 mL	1000 mL	LR-07879-40	

Titrette® Digital Bottletop Electronic Burettes

Easily calibrate for GLP and ISO compliance

- No more wasting titrant with SafetyPrime™ valve
- Eliminate meniscus reading errors—dispensed results displayed on LCD with 0.01-mL resolution
- Mount directly to bottle (not included), reducing liquid transfer
- Always view bottle label with 360° rotatable valve block
- Suitable for solutions up to 2N



What's included: 33-mm, 38-mm, and STJ 29/32 polypropylene (PP) bottle adapters; fine-tip titrating tube, a 195- to 350-mm telescoping filling tube, lithium battery, and a performance certificate.

ISO9001:2008 CERTIFIED SUPPLIER CE

Specifications

Cumulative volume: up to 99.99 mL in 0.01-mL increments	Wetted materials: borosilicate glass, PP, PTFE, ETFE, FEP, PFA, platinum-iridium, and ceramic
Reproducibility: ±0.1%	Power: lithium battery (included) >60,000 titrations
Fitting: fits 45-mm bottle thread	

Capacity	Accuracy	Catalog number	Price
25 mL	±0.2% (±50 µL)	LR-07910-51	
50 mL	±0.2% (±100 µL)	LR-07910-53	

[LR-07878-53](#) Drying tube. Protects sensitive reagents from moisture or CO₂

[LR-07193-05](#) Drierite® drying agent for 07878-53. Twelve 1-lb packs per carton

Wait!

There's More at
ColeParmer.com

Find all the
product specs
you need!



Digi-Sense™ Traceable® Data Loggers with TraceableGO™ Wireless Capability

Easily access collected data between destinations

- Connect to your data via smartphone or tablet—any Bluetooth®-enabled device—using a downloadable Bluetooth App
- View and download data with free TraceableGO App
- Data loggers store up to 90 alarm events
- Get accurate, reliable measurements with included NIST-traceable calibration

NEW

Track environmental conditions of reagents, clinical samples, vaccines, pharmaceuticals, and food items during transport to any location.

Configure the data loggers from your device using the TraceableGO App to start; stop; change memory mode, unit preference, alarm setting, logging interval; and enable/disable alarm. When all the parameters are set, simply press START on the logger to begin monitoring. Once the shipment is delivered, double press START/STOP on the logger to enable Bluetooth® and export the data to your device. You will get an immediate response to see if your contents have been exposed to conditions outside the set parameters.

You have the option to subscribe to cloud-based TraceableLIVE® service to upload data to cloud—ideal for tracking data from multiple loggers or to comply with regulatory agency requirements. The low-cost TraceableLIVE subscription provides unlimited trip data to be saved on the cloud and to send a report to an email.

What's included: two AAA batteries, free TraceableGO App for download to your device, and NIST-traceable calibration certificate.

Description	Temperature data logger	Temperature/humidity data logger
Catalog number	LR-18004-12	LR-18004-13
Temperature range	-4 to 158°F (-20 to 70°C)	-4 to 158°F (-20 to 70°C)
Temperature resolution	0.1°	0.1°
Temperature accuracy	±0.7°F (±0.4°C)	±0.7°F between 14 and 158°F; otherwise ±0.9°F (±0.4°C between -10 and 70°C, otherwise ±0.5°C)
Humidity range	—	0 to 95% RH, noncondensing
Humidity resolution	—	0.1% RH
Humidity accuracy	—	±3% RH from 5 to 75%, otherwise ±5% RH
Price		



18004-12



18004-13

Specifications

Memory: 64K (65,536) data points, 7.5 months on a 5-minute logging interval
Sampling rate: 1 min. to 12 hours, 1-min. steps
Dimensions (W x H x D): 3½" x 2" x 1¼"
Power: two AAA batteries (included)

Digi-Sense™ Temperature/Humidity Touch-Screen Recorder

Virtually unlimited data logging with 8 GB of on-board memory

- Use right out of the box with resident self-booting software—no installation necessary!
- Quickly download data in .csv format via included USB cable
- Convenient wall-mount or desktop operation

This tablet-based instrument measures, displays, and logs temperature, relative humidity, and dew point conditions. Measured values are simultaneously displayed both graphically and digitally on a high-resolution, color display. Easily program sample frequency, sample size, alarm settings, start mode, and units of measure through the intuitive touch-screen menu. Monitor conditions related to pharmaceutical, food, and chemical processing and storage; also ideal for use in greenhouses, museums, and labs.

What's included: tablet with built-in stand, temperature/RH sensor, 6-ft (1.8-m) sensor extension cable, USB cable, wall-mounting bracket, power supply, and NIST-traceable calibration certificate.



Removable sensor allows local or remote measurements using extension cable.



Specifications

Memory: 8 GB
Display: 6" x 3½" (15.2 x 8.9 cm) color LCD, with 1024 x 600 resolution
Power: 110 VAC; 2500 mAh rechargeable battery backup
Sampling rate: 1 second to 24 hours
Dimensions (W x H x D): 7½" x 4¼" x ½"

Parameters	Range	Resolution	Accuracy	Catalog number	Price
Temperature	14 to 176°F (-10 to 80°C)	0.1°F (0.1°C)	±0.9°F (0.5°C)	LR-20250-40	
Humidity	0 to 100% RH, noncondensing	0.1%	±2.0% at 25°C, 20% to 80% RH; ±2.5% for remaining		

Cole-Parmer® Syringe Filters

Get easy, reliable filtration—just slip on and twist



- Easy identification—membrane type and pore size printed on each filter
- Filter more confidently—filters are 100% integrity tested and manufactured in accordance with ISO 9002 standards
- Get a secure fit—bidirectional membrane support and luer lock inlet/outlet
- Sterile filters are sterilized by gamma irradiation and certified nonpyrogenic, noncytotoxic, and blister packed

Glass Prefilters with Final Filter

- Save time—borosilicate glass fiber prefilter and cellulose filter in one
- Prefilter extends life of final filter by removing particulates from sample
- Reduces retention volume and sample loss



Membrane Type	Dia	Pore size	Housing	Retention volume	Qty/ bx	Catalog number	Price/ bx
Nonsterile filters							
Cellulose acetate	26 mm	0.20 µm	Acrylic	0.23 mL	100	LR-02915-90	
		0.45 µm				LR-02915-92	
		0.80 µm				LR-02915-94	
Sterile filter							
Cellulose acetate	26 mm	0.20 µm	Acrylic	0.23 mL	50	LR-02915-40	

Cellulose Acetate Filters

- Low protein binding—ideal for biological solutions
- Use for sterilization and clarification of aqueous solutions



Pore size	Membrane dia	Housing	Color	Qty/bx	Catalog number	Price/bx
Nonsterile filters						
0.22 µm	26 mm	Acrylic	Blue	100	LR-02915-60	
0.45 µm			Clear		LR-02915-58	
0.80 µm			Green		LR-02915-62	
Sterile filters						
0.22 µm	26 mm	Acrylic	Blue	50	LR-02915-12	
0.45 µm			Clear		LR-02915-00	
0.80 µm			Green		LR-02915-10	

Nylon Filters

- Low levels of extractables with no wetting agents
- Hydrophilic nylon for good chemical resistance—ideal for aqueous and most organics



Pore size	Membrane dia	Housing	Color	Qty/bx	Catalog number	Price/bx
Nonsterile filters						
0.22 µm	25 mm	PP	Natural	100	LR-02915-16	
0.45 µm					LR-02915-14	
Sterile filters						
0.20 µm	25 mm	PP	Red	50	LR-02915-04	
0.45 µm			Natural		LR-02915-02	

Choose the Right Filter!

Membrane type	Applications
Glass prefilter	One-step prefiltration and filtration. Choose the final membrane to meet your application needs. High particle loading capacity.
Cellulose acetate	Sterilization and clarification of aqueous solutions. Low protein binding.
Nylon	Filtration of organic and aqueous solutions. Low extractables.
PTFE	Sterilization of gases and alcohols; cleaning acids, alkalies, and organic solvents; venting purposes. For aggressive chemicals.
Nitrocellulose	High protein retention; microbiological analysis, waste water treatment; sterilization of aqueous solutions.

Specifications

Membrane dia	Housing type	Sample volume	Retention volume†	Pressure limit at 25°C	Max temp	Effective filtration area
15 mm	PP	≤5 mL	10 µL	87 psi	127°C	1.7 cm ²
25 mm	PP	≤100 mL	0.1 mL	87 psi	127°C	4.8 cm ²
26 mm	Acrylic	≤100 mL	0.1 mL	87 psi	50°C	5.3 cm ²
50 mm	PP	≤2 L	0.5 mL	60 psi	134°C	20 cm ²

†Varies for glass prefilters; see glass prefilter table at left.

PTFE Filters

- Ideal for aggressive chemicals—organic solvents, concentrated acids and bases, propellants and more
- Use for gas/air filtration
- 50-mm membranes have stepped hose barb connectors for 1/4" to 1/2" ID tubing



Pore size	Membrane dia	Housing	Color	Qty/bx	Catalog number	Price/bx
Nonsterile filters						
0.20 µm	15 mm	PP	Natural	100	LR-29550-08	
0.45 µm					LR-29550-10	
0.20 µm	25 mm	PP	Natural	100	LR-02915-20	
0.45 µm					LR-02915-22	
0.20 µm	50 mm	PP	Natural	20	LR-02915-28	
0.45 µm					LR-02915-30	
Sterile filters						
0.20 µm	25 mm	PP	Natural	50	LR-02915-08	
0.50 µm					LR-02915-06	

Nitrocellulose Filters

- Good for macromolecules—highest protein retention
- Get fast flow rates with aqueous solutions
- Ideal for microbiological analysis, waste water treatment, and sterilization of aqueous solutions



Pore size	Membrane dia	Housing	Color	Qty/bx	Catalog number	Price/bx
Nonsterile filter						
0.20 µm	26 mm	Acrylic	Blue	100	LR-02915-56	
Sterile filters						
0.20 µm	26 mm	Acrylic	Blue	50	LR-02915-52	
0.45 µm					LR-02915-53	



Showa® Best® N-DEX® Nitrile Gloves

Special formulation for comfort

- Nonlatex—soft 100% lightweight nitrile
- Three times the resistance of rubber or vinyl
- Ambidextrous

General and Laboratory Grade N-DEX Gloves protect your hands from the environment. **Industrial Grade N-DEX Plus Gloves** are thicker for greater puncture and tear resistance. Gloves provide good resistance to chemicals and abrasion.

Compliance: FDA 21 CFR, parts 170-199, acceptable for food and pharmaceutical use.



Puncture resistant



Size	Length	Thickness	Qty/pk	Catalog number	Price per pack	
					1 pk	10 pk
General and laboratory grade low-powder† N-DEX gloves						
Small	9½" (24 cm)	4 mil	100	LR-86287-70		
Medium				LR-86287-71		
Large				LR-86287-72		
X-large				LR-86287-73		
General and laboratory grade powder-free N-DEX gloves						
Small	9½" (24 cm)	4 mil	100	LR-86287-80		
Medium				LR-86287-81		
Large				LR-86287-82		
X-large				LR-86287-83		
Industrial grade N-DEX Plus low-powder† gloves						
Small	9½" (24 cm)	8 mil	50	LR-86287-60		
Medium				LR-86287-61		
Large				LR-86287-62		
X-large				LR-86287-63		

†USP grade cornstarch

Cole-Parmer® Nitrile Gloves

Don't lose your grip

- Soft feel with textured fingertips for better grip
- Powder-free
- Ambidextrous



Size	Length	Thickness	Qty	Catalog number	Price
Small	9½" (24 cm)	4.0 mil	1 box of 100	LR-15954-42	
Medium				LR-15954-43	
Large				LR-15954-44	
X-large				LR-15954-45	
Small	9½" (24 cm)	4.0 mil	10 boxes of 100 (1000 total)	LR-15954-24	
Medium				LR-15954-25	
Large				LR-15954-26	
X-large				LR-15954-46	

Assorted Size Packs; convenient bundle of 12 boxes, assorted sizes

	Boxes included				Catalog number	Price
	Small	Medium	Large	X-large		
2	4	4	4	2	LR-25000-13	
4	4	4	4	—	LR-25000-15	
—	4	4	4	4	LR-25000-17	
—	6	6	6	—	LR-25000-19	

Masterflex® C/L® Compact Pumps

Pump in even the tightest spaces!

- Pump fluids in either direction—easily switchable reversing motor
- Easy tubing changes—open cover and release occlusion bed in one motion
- Stop/start remotely via contact closure
- MAX button quickly primes or purges tubing



FEATURES

- ✓ Flow range: 0.00013 to 43 mL/min
- ✓ Reversible pumping
- ✓ Remote control capabilities



Power supplies are:



rpm	Speed control (repeatability)	Number of channels	Number of rollers	Reversible motor	IP rating	Dimensions—¼ DIN (L x W x H)	Power		Catalog number	Price
							VAC, Hz	Amps		
1.7 to 10	±5%	1	4	Yes	IP22	7" x 3¾" x 3½" (17.8 x 9.5 x 8.9 cm)	90 to 260, 50/60	110 mA at 115 VAC	LR-77122-04	
12 VDC†							—	LR-77122-06		
13 to 80			90 to 260, 50/60				175 mA at 115 VAC	LR-77122-14		
50 to 300			3				12 VDC†	—	LR-77122-16	
							90 to 260, 50/60	400 mA at 115 VAC	LR-77122-24	
							12 VDC†	—	LR-77122-26	

†Power supply not included with 12 VDC models.

Tube ID (mm)	Tygon® E-Lab	Silicone (platinum-cured)	Silicone (peroxide-cured)	PharMed® BPT	Tygon E-LFL (long flex life)	Viton®	Puri-Flex™	C-Flex®	Solvent/hydrocarbon
0.19	LR-06460-10	—	LR-07625-10	LR-95809-10	LR-06449-10	—	LR-96418-10	LR-95718-10	LR-95712-10
0.25	LR-06460-12	—	LR-07625-12	LR-95809-12	LR-06449-12	—	LR-96418-12	LR-95718-12	LR-95712-12
0.51	LR-06460-18	LR-95590-18	LR-07625-18	LR-95809-18	LR-06449-18	LR-97632-18	LR-96418-18	LR-95718-18	LR-95712-18
0.89	LR-06460-26	LR-95590-26	LR-07625-26	LR-95809-26	LR-06449-26	LR-97632-26	LR-96418-26	LR-95718-26	LR-95712-26
1.14	LR-06460-30	LR-95590-30	LR-07625-30	LR-95809-30	LR-06449-30	LR-97632-30	LR-96418-30	LR-95718-30	LR-95712-30
1.42	LR-06460-34	LR-95590-34	LR-07625-34	LR-95809-34	LR-06449-34	LR-97632-34	LR-96418-34	LR-95718-34	LR-95712-34
2.06	LR-06460-42	LR-95590-42	LR-07625-42	LR-95809-42	LR-06449-42	LR-97632-42	LR-96418-42	LR-95718-42	LR-95712-42
2.79	LR-06460-48	LR-95590-48	LR-07625-48	LR-95809-48	LR-06449-48	LR-97632-48	LR-96418-48	LR-95718-48	LR-95712-48
Length/pk	30.4 m (100 ft)	15.2 m (50 ft)	15.2 m (50 ft)	30.4 m (100 ft)	30.4 m (100 ft)	15.2 m (50 ft)	15.2 m (50 ft)	15.2 m (50 ft)	15.2 m (50 ft)
Price/pk									



Masterflex® L/S® Digital Miniflex® Pumps

Small footprint, yet delivers accurate flow over a wide range

- Flow range of 0.004 to 315 mL/min (depending on tubing size)
- Tubing calibration function ensures accuracy
- Open-head sensor stops drive when pump head is opened
- Remote control via 25-pin connector on back of drive
- Automatic tubing retention makes tube loading quick and easy

Compact, stackable pump with durable ABS housing is easy to wipe down. The Miniflex pump head features a wide occlusion angle that prevents fluid backflow up to the rated pressure of the tubing. Self-lubricating thermoplastic polyester rollers are low friction and long wearing for smooth operation and long life.

Flow Rates (mL/min) at 0.1 to 300 rpm

Pump model	Precision pump tubing			
	L/S 13	L/S 14	L/S 16	L/S 25
07525-20	0.004 to 12	0.014 to 42	0.05 to 162	0.11 to 315
07525-40	0.004 to 12	0.014 to 42	0.05 to 162	—

Number of channels	rpm	Speed control (repeatability)	Reversible motor	IP rating	Dimensions (L x W x H) (23.9 x 14.0 x 15.7 cm)	Power (50/60 Hz)		Catalog number	Price
						VAC	Amps		
1	0.1 to 300	±0.1%	Yes	IP33		90 to 260	0.34 at 115 VAC, 0.2 at 230 VAC	LR-07525-20	
2							LR-07525-40		

LR-07523-92 Foot switch, momentary start/stop; DB25 male; 6-ft (1.8-m) cable

LR-07523-95 Cable assembly, DB25 male connector and 25-ft (7.9-m) cable with stripped wire ends

NEW



FEATURES

- ✓ Flow rates: 0.004 to 315 mL/min
- ✓ Intuitive icon-driven programming
- ✓ Tubing calibration for accuracy
- ✓ Single- or dual-channel models

MASTERFLEX®

ISO9001:2008
CERTIFIED SUPPLIER

Power supplies are:



LR-07523-97 Handheld remote controller, DB25 male, route tubing through handle for dispensing applications; 6-ft (1.8-m) cable

LR-17050-01 NIST-traceable calibration with data for peristaltic pump drive

Masterflex® L/S® Digital Miniflex® Media Dispensing Pump Systems

Faster and more reliable than pouring media by hand

- Accurately dispense culture media, buffer solutions, diluents, nutrients, additives, and other fluids
- Minimize risk of human error and contamination—copy dispense function lets you easily set repeat dispense volumes, and programmable delay interval pauses pump between cycles
- Extremely flexible—dispense volumes from 0.1 to 9999 mL at flow rates from 0.11 to 315 mL/min
- BioPharm Plus silicone pump tubing offers low spallation, long pumping life, and exceptional flow stability over time

Boost efficiency and ergonomics in your lab's dispensing and filling regimens—these systems offer better accuracy and greater reliability than hand pouring, manual pipetting, or bottletop dispensers. These complete media dispensing systems will have you filling plates, flasks, vials, and bottles right out of the box.

NEW



System 77922-10 with foot switch and stand assembly

System 77922-12 with handheld remote controller



Both systems include: L/S digital pump drive with single-channel Miniflex pump head, PTFE tube weight to hold tubing in source container, and 25 ft (7.6 m) of L/S 25 BioPharm Plus silicone tubing.

MASTERFLEX®

ISO9001:2008
CERTIFIED SUPPLIER

Power supplies are:



Description	Power	Catalog number	Price
System with hands-free foot switch, lab stand, support rod, frame clamp, nozzle clamp, and stainless steel nozzle	90 to 260 VAC, 50/60 Hz	LR-77922-10	
System with handheld remote controller		LR-77922-12	

LR-96440-25 Additional Masterflex L/S 25 BioPharm Plus silicone pump tubing, 25 ft (7.6 m)



Stir-Pak® General-Purpose Mixer

Get full-range performance

- Ideal for reliable light-duty mixing of water-like fluids
- Integrated control for both on/off and speed settings
- Smooth-start motor ramps to set speed
- Mixer includes SS shaft, propeller and mounting rod; complete system adds clamp and support stand



Description	Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
Mixer	0 to 4000	1/50	9.5	115/230, 50/60	LR-04555-00	
Complete system					LR-04555-50	

Cole-Parmer® Ultra-Compact Digital Mixer

Dependable mixing in a compact unit

- Maintenance-free brushless motor provides mixing from 50 to 2500 rpm
- LED display allows precise speed adjustments and repeatability
- Ready to go out of the box—includes mixer, stand, and two mixing blades



Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
50 to 2500	1/100	14.2	100 to 240, 50/60	LR-50006-01	

IKA® EUROSTAR Digital Constant-Speed Mixers

Speed won't change even as viscosity does

- Automatic adjustment to desired speed with unique continuous speed comparison
- No need to move mixer head to remove samples—through-shaft design for impeller adjustments
- Worry-free operation—maintenance-free motor with overload protection



EUROSTAR 60 Digital Mixer (50704-20 and -25) handles volumes up to 10.6 gallons (40 liters) and viscosities up to 50,000 cps.

EUROSTAR 100 Digital Mixer (50704-30 and -35) will mix volumes up to 26.4 gallons (100 liters) and viscosities up to 70,000 cps.

What's included: chuck (accepts up to 3/8" [10 mm] dia shaft) and 6 1/4" L x 1/2" dia (159 mm x 13 mm) mounting rod.



Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
Eurostar 60 digital mixer					
30 to 2000	3/16	85	115, 50/60	LR-50704-20	
			230, 50/60	LR-50704-25	
Eurostar 100 digital mixer					
30 to 1300	1/5	142	115, 50/60	LR-50704-30	
			230, 50/60	LR-50704-35	

IKA® EUROSTAR Digital Mixers

Mix viscous samples up to 30,000 cps

- Speed won't change even as viscosity changes
- Won't overheat—thermal overload shut-off for safety
- Maintenance-free design for continuous duty



EUROSTAR 20 Digital Mixer handles volumes up to 4 gallons (15 liters) and viscosities up to 10,000 cps.

EUROSTAR 40 Digital Mixer will mix volumes up to 6.6 gallons (25 liters) and viscosities up to 30,000 cps.

What's included: chuck (accepts up to 3/8" [10 mm] dia shaft) and 6 1/4" L x 1/2" dia (159 mm x 13 mm) mounting rod.



Speed (rpm)	hp	Max torque (in-oz)	Power (VAC, Hz)	Catalog number	Price
Eurostar 20 digital mixer					
30 to 2000	1/16	28.3	115, 50/60	LR-50702-30	
			230, 50/60	LR-50702-35	
Eurostar 40 digital mixer					
30 to 2000	1/8	56.6	115, 50/60	LR-50702-40	
			230, 50/60	LR-50702-45	

Cole-Parmer® Single-Channel Pipettors

Don't sacrifice performance

- Ergonomic, lightweight design with soft plunger movement minimizes hand fatigue

Pipettors feature streamlined, low-pressure tip ejector for easy access to narrow containers. They facilitate last drop dispensing and reverse pipetting or autoclaving.

Adjustable-volume pipettors feature quick, easy click-stop, digital volume settings. Individually calibrated in accordance with DIN 12650 Standards and supplied with a computer-generated calibration document supplied by the manufacturer and calibration tool.



Volume	Increments	Accuracy	Reproducibility	Catalog number	Price
Fixed-volume pipettors					
100 µL	—	±0.3%	±0.2%	LR-21600-00	
200 µL				LR-21600-02	
500 µL				LR-21600-04	
1000 µL				LR-21600-06	
5000 µL				LR-21600-08	
Adjustable-volume pipettors					
0.1 to 10 µL	0.1 µL	±2.5%	1.33%	LR-21600-10	
5 to 50 µL	1.0 µL	±1.3%	0.7%	LR-21600-12	
20 to 100 µL	1.0 µL	±1.1%	0.4%	LR-21600-14	
40 to 200 µL	1.0 µL	±0.9%	0.3%	LR-21600-16	
200 to 1000 µL	10.0 µL	±0.8%	0.2%	LR-21600-18	
1 to 5 mL	100.0 µL	±0.6%	0.2%	LR-21600-20	

Tips, Polypropylene

Volume (µL)	Qty/pk	Catalog number	Price/pk
0.2 to 10	Bag of 1000	LR-25711-06	
	10 racks of 96	LR-25711-12	
50 to 1000	Bag of 1000	LR-18889-08	
	Bag of 500	LR-25711-70	
1000 to 5000	Bag of 500	LR-25711-71	
	Bag of 250	LR-25711-72	

Argos Technologies® Omega Zen™ Pipette Controllers

Exceptional control in an ergonomic design

NEW

- Easily fine-tune pipetting speed with thumbwheel control and speedometer display
- Accepts glass or plastic serological pipettes, from 1 to 100 mL
- Durable, UV-resistant plastic housing is ideal for use in cleanrooms and fume hoods
- Maintain sterility with removable nosepiece autoclavable at 121°C



Eight speeds from drip dispense to 8.3 mL/sec allow for precision and versatility while pipetting. Gravity mode is nonmotorized drop dispensing

What's Included: two 0.45 µm sterile filters (one installed), wall-mount holder, rechargeable Li-ion battery, charging desk stand, and 100–240 VAC, 50/60 Hz adapter.



Easy-to-read LCD indicates aspirate/dispense speed, gravity mode, and battery charge



Housing color	Catalog number	Price
Blue	LR-25300-96	
Purple	LR-25300-97	
Steel gray	LR-25300-98	

Cole-Parmer® Transfer Pipettes

No more breakage or cross-contamination

- Translucent, shatterproof LDPE is nontoxic and biologically inert
- Nonbinding for cells and proteins to prevent sample loss
- Heat sealable and liquid nitrogen compatible



NEW

Key	Description	Graduations		Bulb Draw (µL)	Total capacity	Drops per mL	Length in. (mm)	Qty/pk	Catalog number	Price/pk
		Increments	Maximum							
A	Mini, short stem	—	—	0.9 µL	1.2 mL	25	2.5 (6.4)	500	LR-06226-30	
		—	—	0.9 µL	1.7 mL	25	3.4 (87)	500	LR-06226-21	
B	Short narrow stem	—	—	3 µL	4 mL	25	3.4 (86)	500	LR-06226-27	
C	Large bulb narrow stem	—	—	8 µL	15 mL	19	6.125 (155)	250	LR-06226-32	
D	General purpose	—	—	1.9 µL	5 mL	25	6.125 (155)	500	LR-06226-25	
		—	—	3.2 µL	7.5 mL	20	6.125 (155)	500	LR-06226-11	
		—	—	3.2 µL	7.5 mL	20	6.125 (155)	500	LR-06226-31	
		—	—	1 mL	1.5 mL	50	4.1 (104)	500	LR-06226-34	
E	Small bulb, graduated	—	—	3.3 mL	5.8 mL	50	6.18 (157)	500	LR-06226-33	
		—	—	4.6 µL	8 mL	20	5.875 (152)	400	LR-06226-17	
		0.1 mL	0.3 mL	0.8 µL	1.5 mL	21	4.6 (116)	500	LR-06226-13	
		0.5 mL	2 mL	1.9 µL	5 mL	25	6.125 (155)	500	LR-06226-03	
F	Large bulb, graduated	0.25 mL	1 mL	2.1 µL	3 mL	25	5.4 (138)	500	LR-06226-23	
		0.25 mL	1 mL	2.1 µL	3 mL	25	5.5 (140)	500	LR-06226-29	
		0.25 mL	1 mL	3.4 µL	5 mL	25	6.125 (155)	500	LR-06226-12	
		0.5 mL	3 mL	3.2 µL	7.5 mL	20	6.125 (155)	500	LR-06226-01	
G	Large bulb, graduated, sterile	0.25 mL	1 mL	3.4 µL	5 mL	25	6.125 (155)	500	LR-06226-15	
H	Large bulb, double graduated	0.25 mL	1 mL	3.4 µL	5 mL	25	6.125 (155)	500	LR-06226-19	
I	General purpose, wide bulb	—	—	—	7 mL	—	5 (125)	500	LR-06226-35	
J	General purpose, extra long	—	—	2.3 µL	6 mL	25	9 (230)	500	LR-06226-22	
		—	—	7.3 µL	23 mL	20	12 (300)	100	LR-06226-24	





Cole-Parmer® StableTemp™ Laboratory Refrigerators

Ideal for the requirements of daily lab applications

- Fully insulated chamber ensures minimal temperature fluctuation
- Sliding wire shelves pull out fully for easy access to all samples
- Thermal line recorder for easy tracking of temperature

NEW



Our complete line of refrigerators provides the reliability that is essential for your valuable samples in the 2 to 10°C (35 to 50°F) range. Performance is driven on all models by a high-efficiency evaporation system made with low corrosive materials and a fully insulated stainless steel chamber. An intuitive easy-to-use control panel has VFD and touch-sensitive buttons for controlling all the essential functions.

Adjustable full-extension sliding shelves provide efficient and customizable use of interior space and easy access to stored samples. Built-in 50-mm diameter cable port allows use of external temperature probes. Bright fluorescent lighting (except 52412-00 to -02) for convenient viewing of samples. Safety features include high/low temperature and overcurrent protection, open door alarm, automatic fan stop, keypad lock function, and built-in door lock with key permit access control.

What's included: plastic-coated wire sliding shelves and brackets, thermal line recorder, and power cord with plug.

StableTemp

Capacity	Temperature range	Dimensions (W x H x D)		No. of doors	No. of shelves	Max no. of shelves	Power†			Shpg wt lb (kg)	Catalog number	Price
		Interior	Exterior				VAC	Hz	Amps			
5.5 cu ft (156 L)	2 to 10°C (35.6 to 50°F)	21¾" x 22¾" x 19½" (55 x 58 x 49 cm)	26½" x 31½" x 34½" (68.3 x 79.1 x 87 cm)	1	2	4	120	60	5	253 (115)	LR-52412-00	
							230	50	2.5		LR-52412-02	
10.7 cu ft (303 L)	2 to 10°C (35.6 to 50°F)	55" x 55" x 100" (21.7 x 21.7 x 39.4 cm)	26¾" x 30¾" x 59½" (67 x 77 x 151.5 cm)	1	3	7	120	60	5	319 (145)	LR-52412-03	
							230	50	2.5		LR-52412-05	
21.3 cu ft (603 L)	2 to 10°C (35.6 to 50°F)	25½" x 25¼" x 57½" (65 x 64 x 145 cm)	30½" x 34½" x 77½" (77 x 86.5 x 196.5 cm)	1	3	11	120	60	5	495 (224)	LR-52412-06	
							230	50	4		LR-52412-08	
28.4 cu ft (805 L)	2 to 10°C (35.6 to 50°F)	29½" x 29½" x 57½" (75 x 74 x 145 cm)	34½" x 37½" x 77½" (87 x 96.5 x 196.5 cm)	1	3	11	120	60	5	605 (274)	LR-52412-09	
							230	50	4		LR-52412-11	
46.9 cu ft (1327 L)	2 to 10°C (35.6 to 50°F)	56½" x 25¼" x 57½" (143 x 64 x 145 cm)	61" x 34½" x 77½" (155 x 86.5 x 196.5 cm)	2	6	22	120	60	10	880 (399)	LR-52412-12	
							230	50	7.5		LR-52412-14	

†Additional voltages available; call for details.

Digi-Sense® Data Logging Refrigerator Thermometers with TraceableLIVE® Wireless Technology

Get alerts before you lose valuable samples

- Remotely monitor your critical environments 24/7 via Wi-Fi
- View current conditions anywhere—cloud-based interface sends email, text, and push notifications
- Securely connect to data via smartphone, tablet, or PC
- No software required—web, Android™, Apple® iOS data visibility
- Models with bottle probes are temperature-buffered to protect sensor from rapid changes when refrigerator door is opened.
- Use included hook-and-loop fastener and magnetic strip for surface mounting, or use the built-in stand on a shelf



NEW

Digi-Sense data loggers with TraceableLIVE wireless technology provide a simple, efficient, and reliable way to ensure your critical samples are not compromised due to parameter variations. This latest technology is ideal for monitoring a process in real time, any time. Plus you get the value, accuracy, and peace of mind of NIST-traceable calibration at a noncalibrated price.

TraceableLIVE allows you to view current conditions from anywhere with a cloud-based interface. Once setup is complete, you can view conditions in real time; set alarm parameters; view data logging history; generate data reports in real time; get email, text and push notifications; and receive alerts for temperature alarm, connectivity interruption and low battery.

†Requires a low-cost TraceableLIVE subscription.



Specifications

- Display:** dual-line LCD
- Sample rate:** 12 sec
- Max storage:** 672 records (7 days if set to 15-minute intervals)
- Max stored alarms:** 100
- Power:** four AAA alkaline batteries (included)



Sensor type	Range	Resolution	Accuracy	Catalog number	Price
2 Bottle probes				LR-99460-00	
1 Bottle and 1 bullet probe				LR-99460-05	
2 Bullet probes	–58 to 140°F (–50 to 60°C)	0.01°	±0.45°F (±0.25°C)	LR-99460-10	
2 Stainless steel probes				LR-99460-15	



Cole-Parmer® StableTemp™ Stirrers and Stirring Hot Plates

Precision control ensures accurate, repeatable results

- Stay safe—hot surface warning until plate cools below 50°C
- Don't worry about spills—raised display diverts liquids away from critical components
- Optional temperature probe maintains your sample at the set temperature
- Keep samples in place—optional rod and clamps secure containers to the top plate
- Optional splash guard protects you and your sample from mishaps

Advanced Stirrer and Stirring Hot Plate

- Greater accuracy and repeatability for advanced applications
- Set ramp/dwell programs and save settings for quick repeat
- Always know your status—view actual and set values simultaneously
- Protect you and your sample with overtemperature protection

What's included: PTFE-coated stir bar and detachable power cord with plug (EU plug for 230 VAC models). Advanced stirring hot plate also includes a temperature probe kit.

StableTemp



Top plate		Heating		Stirring		Power		Catalog number	Price
Dimensions	Material	Temperature range	Max load	Speed range	Max capacity	VAC	Hz		
Stirrers									
4 1/4" x 4 1/4" (10.8 x 10.8 cm)	Ceramic	—	25 lb (11.4 kg)	50 to 1500 rpm	1 L	100 to 120 230	50/60	LR-03406-01 LR-03406-06	
7 1/4" x 7 1/4" (18.4 x 18.4 cm)	Ceramic	—	25 lb (11.4 kg)	50 to 1500 rpm	4 L	100 to 120 230	50/60	LR-03406-11 LR-03406-16	
10 1/4" x 10 1/4" (26 x 26 cm)	Ceramic	—	25 lb (11.4 kg)	50 to 1500 rpm	6 L	100 to 120 230	50/60	LR-03406-31 LR-03406-36	
Stirring hot plates									
4 1/4" x 4 1/4" (10.8 x 10.8 cm)	Ceramic	86 to 1004°F (30 to 540°C)	25 lb (11.4 kg)	50 to 1500 rpm	1 L	100 to 120 230	50/60	LR-03407-01 LR-03407-06	
7 1/4" x 7 1/4" (18.4 x 18.4 cm)	Ceramic	86 to 1004°F (30 to 540°C)	25 lb (11.4 kg)	50 to 1500 rpm	4 L	100 to 120 230	50/60	LR-03407-11 LR-03407-16	
10 1/4" x 10 1/4" (26 x 26 cm)	Ceramic	86 to 752°F (30 to 400°C)	25 lb (11.4 kg)	50 to 1500 rpm	6 L	100 to 120 230	50/60	LR-03407-31 LR-03407-36	
Advanced stirrer and stirring hot plate									
7 1/4" x 7 1/4" (18.4 x 18.4 cm)	Ceramic	—	25 lb (11.4 kg)	50 to 1500 rpm	4 L	100 to 120 230	50/60	LR-03406-41 LR-03406-46	
7 1/4" x 7 1/4" (18.4 x 18.4 cm)	Ceramic	86 to 842°F (30 to 450°C)	25 lb (11.4 kg)	50 to 1500 rpm	4 L	100 to 120 230	50/60	LR-03407-41 LR-03407-46	

†Based on water contained in a 20-L glass flat-bottom flask.

Accessories

- LR-04600-88** Transparent splash shield for 4 1/4" x 4 1/4" units
- LR-04600-89** Transparent splash shield for 7 1/4" x 7 1/4" units
- LR-04600-90** Transparent splash shield for 10 1/4" x 10 1/4" units
- LR-04600-91** External temperature probe, 100 Ω Pt, stainless steel, 32 to 752°F (0 to 400°C)
- LR-04600-92** External temperature probe, 1000 Ω Pt, stainless steel, 32 to 752°F (0 to 400°C)
- LR-04600-93** External temperature probe, 1000 Ω Pt, Hastelloy®, 32 to 752°F (0 to 400°C)
- LR-04600-98** Support rod for securing sample containers
- LR-04600-99** Clamp and holder for securing sample containers

Corning® Digital Stirrers and Stirring Hot Plates

Maintain constant speed and temperature

- Conserve lab space—fits inside a hood or cabinet
- Get uniform heating, easy cleaning, and scratch-resistance
- Temperature display is adjustable in 5° increments and indicates when set temperature is reached
- Glass ceramic top holds up to 25 lbs



Top plate dimensions	Temp range	Stirring speed range	Power		Catalog number	Price
			VAC	Hz		
Stirrers						
5" x 7" (12.7 x 17.8 cm)	—	60 to 1150 rpm	120	60	LR-84302-40	
			220	50	LR-84302-45	
10" x 10" (25.4 x 25.4 cm)	—	60 to 1150 rpm	120	60	LR-84302-50	
Stirring hot plates						
5" x 7" (12.7 x 17.8 cm)	41 to 1022°F (5 to 550°C)	60 to 1150 rpm	120	60	LR-84303-40	
			220	50	LR-84303-45	
10" x 10" (25.4 x 25.4 cm)	41 to 1022°F (5 to 550°C)	60 to 1150 rpm	120	60	LR-84303-50	
			220	50	LR-84303-55	

LR-17002-27 NIST-traceable calibration with data for stirrers and hot plates

Cole-Parmer® Slim-Line® Stir Bars

Get complete mixing

- Slimmer profile and larger length-to-diameter ratio



Size		With spinning ring		Without spinning ring	
Length	Diameter†	Cat. no.	Price	Cat. no.	Price
1" (25.4 mm)	5/16" (7.9 mm)	LR-04775-45		LR-04775-40	
1 1/2" (38.1 mm)		LR-04775-55		LR-04775-50	
2" (50.8 mm)		LR-04775-65		LR-04775-60	

†Diameter given does not include the diameter of the spinning ring.

Digi-Sense™ Data Loggers with TraceableLIVE® Wireless Technology

Get alerts before you lose valuable samples

- Remotely monitor your critical environments 24/7 via Wi-Fi*
- View current conditions anywhere—cloud-based interface sends email, text, and push notifications
- Securely connect to data via smartphone, tablet, or PC
- No software required—web, Android™, Apple® iOS data visibility
- Ensure accurate, reliable measurements with included NIST-traceable calibration

Digi-Sense data loggers with TraceableLIVE wireless technology provide a simple, efficient, and reliable way to ensure your critical samples are not compromised due to parameter variations. This latest technology is ideal for monitoring a process in real time, any time. Plus you get the value, accuracy, and peace of mind of NIST-traceable calibration at a noncalibrated price.

A-B. Digi-Sense Ultra-Low Temperature Data Loggers



C. Digi-Sense Refrigerator/Freezer Data Loggers



D. Digi-Sense Temperature/Humidity Data Loggers



E. Digi-Sense Multiparameter Data Loggers



Specifications

- Sampling rate: 9 to 12 seconds
- Memory: 672 (7 days if set to 15-minute intervals)
- Max number of stored alarms: 100
- Power: four AAA batteries (included)

Sensor included	Parameters			Catalog number	Price
	Range	Resolution	Accuracy		
A. Cryogenic data loggers					
One 316 SS probe with 6-ft (1.8-m) cable	-328 to 221°F (-200 to 105°C)	0.01°	±0.4°F (±0.25°C)	LR-18001-08	
Two 316 SS probes with 6-ft (1.8-m) cable				LR-18001-09	
B. Ultra-low temperature data loggers					
One 316 SS probe with 6-ft (1.8-m) cable	-130 to 221°F (-90 to 105°C)	0.01°	±0.18°F (±0.1°C)	LR-18000-27	
Two 316 SS probes with 6-ft (1.8-m) cable				LR-18000-28	
C. Refrigerator/freezer data loggers					
Two bottle probes	-58 to 140°F (-50 to 60°C)	0.01°	±0.45°F (±0.25°C)	LR-99460-00	
One bottle probe and one bullet probe with detachable sensor and 10-ft (3-m) cable				LR-99460-05	
Two bullet probes				LR-99460-10	
Two SS probes with detachable sensor and 10-ft (3-m) cable				LR-99460-15	
D. Temperature/humidity data loggers					
Ambient sensor dongle	Temp: 32 to 131°F (0 to 55°C) Humidity: 0 to 100% RH	Temp: 0.01° Humidity: 0.1%	Temp: ±0.72°F (±0.4°C) Humidity: ±3% (20 to 80% RH), ±5% (remaining)	LR-18000-29	
External probe with 10-ft (3-m) cable				LR-18000-30	
E. Multiparameter data loggers					
Ambient sensor dongle for temperature/humidity/CO ₂	Temp: 32 to 131°F (0 to 55°C) Humidity: 0 to 95% RH CO ₂ : 0 to 10,000 ppm	Temp: 0.01° Humidity: 0.01% CO ₂ : 5% reading + 70 ppm	Temp: ±0.72°F (±0.4°C) Humidity: ±3% (5 to 75% RH), ±5% (remaining) CO ₂ : 1 ppm	LR-18000-31	
External probe with 3-ft (0.9-m) cable for temperature/humidity/CO ₂	Temp: 32 to 131°F (0 to 55°C) Humidity: 0 to 95% RH CO ₂ : 0 to 20%	Temp: 0.01° Humidity: 0.01% CO ₂ : 5% reading + 1 digit	Temp: ±0.72°F (±0.4°C) Humidity: ±3% (5 to 75% RH), ±5% (remaining) CO ₂ : 0.01%	LR-18000-32	
Ambient sensor dongle for temperature/humidity/barometric pressure	Temp: 32 to 131°F (0 to 55°C) Humidity: 0 to 100% RH Barometric pressure: 500 to 1100 mbar	Temp: 0.01° Humidity: 0.01% Barometric pressure: 1 mbar	Temp: ±0.72°F (±0.4°C) Humidity: ±3% (5 to 75% RH), ±5% (remaining) Barometric pressure: ±4 mbar	LR-18000-33	

*Requires a TraceableLIVE subscription.

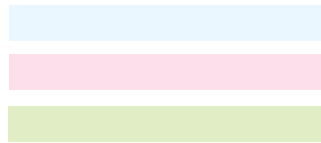


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