



Over 15 **NEW**  
Products

# VWR® Traceable® Products Catalog





## ISO 17025 Calibration Laboratory

All Traceable® products are provided with a Traceable® Calibration Certificate from an ISO 17025 calibration laboratory. Timer, thermometer, hygrometer, barometer, tachometer, gauge pressure, differential pressure, scale, balance, conductivity cell, conductivity solution, conductivity meter, UV light meter, light meter, and caliper certificates are accredited by the American Association for Laboratory Accreditation (A2LA).

A2LA is widely recognised internationally through bilateral and multilateral agreements and through its participation in the International Laboratory Accreditation (ILAC) and Multilateral Recognition Arrangement (MRA). Through A2LA Accreditation, Traceable® Certificates are internationally recognised by Accreditation Agencies and Services in over 75 countries throughout Europe, the Middle East, North America, South America, Asia, and Africa.

Traceable® Certificate indicates the product is traceable to standards provided by the National Institute of Standards and Technology (NIST), a U.S. Government agency within the Commerce Department. The Traceable® Certificate complies with ANSI/NCSL Z540-1.

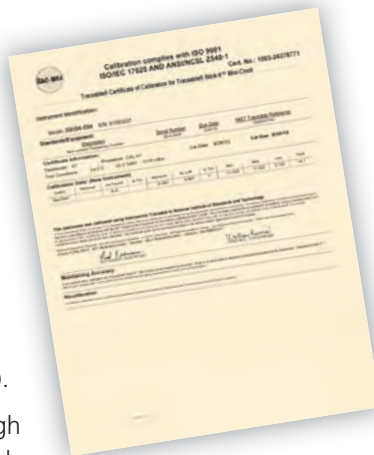
## Certified Reference Materials, ISO Guide 34

ISO Guide 34 provides the highest achievable level of quality assurance, documentation, and accuracy for chemical standards. All standards are directly traceable to NIST (National Institute of Standards and Technology) and/or a National Standards Laboratory.

Certified Reference Materials (CRM) are produced in an accredited manufacturing facility, an ISO Guide 34 Accredited Certified Reference Material (CRM) Producer. Additional certifications include ISO 31 (certificate content) and ISO 35 (statistical analysis). ISO Guide 34 Certified Reference Material (CRM) Producer is accredited by American Association for Laboratory Accreditation (A2LA Certificate No. 1750.02).

## ISO 9001 Quality Certified

All products are provided from an ISO 9001 Quality Certified Company. This quality certification provides users with the assurance that they receive only the finest and most reliable products. It is worldwide recognition of superb quality for innovative electronic products. ISO 9001 Certification insures that every product is checked and rechecked to provide for absolutely the highest quality. In addition, ISO 9001, in contrast to other ISO 9000 certifications, requires that the design phase of every product be included in the quality requirements. The 9001 certification provides that quality is designed into every product beginning with the first drawing. All products are produced under ISO 9001 quality guidelines and requirements.



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## VWR® Traceable® Memory-Card Refrigerator/Freezer Thermometer

**NEW**

Traceable® Memory-Card Refrigerator/Freezer Thermometer is a stand-alone unit with data logging capabilities. It records readings from once a minute up to once every 720 minutes on a removable standard SD memory card. Thermometer captures 5.9 million readings with the supplied 256 mb removable SD memory card. Memory card reader (supplied) plugs into any USB computer port for an instant report. Text report includes date/time-of-day and sensor readings, it may be sent to any spreadsheet or database. Capturing a continuous stream of data shows the behavior of refrigerators, room areas, or tests. The bottle probe model is ideal for monitoring refrigerators, freezers, and incubators; the stainless steel probe model is ideal for QC and research. Bottle probe model meets all CDC, federal and state refrigerator thermometer requirements. Both models include internal sensors to measure ambient temperature and humidity—ideal for monitoring store rooms, labs, and critical areas.

Sealed bottle sensor is insulated from rapid temperature changes when refrigerator door is opened. Solution in sealed bottle is GRAS—generally recognized as safe by FDA. Thin cable is easy for refrigerator door to close and seal. Minimum/Maximum feature displays highest/lowest readings for any time period. Alarm sounds and flashes a bright red LED when temperature rises above or falls below user-set trip points, alarm sets in 0.1° increments. Unique 4-line display shows temperature of probe, ambient temperature, humidity and time of day. Operates using supplied batteries or supplied AC adaptor (batteries last up to one year with no data capture and up to one month with sampling rate of one per minute)

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Probe temperature range: -22 to 158°F (-30 to 70°C) with 0.1° resolution. Probe temperature accuracy: ±0.6°C (0 to 50°C), ±1.2 (-30 to 0°C, 50 to 70°C). Probes size: bottle 1 x 2½ inches, stainless-steel 0.16 x 1-inch. Cable length: 79" (2 meters). Humidity range: 0 to 99.9%RH, resolution 0.1. Humidity accuracy: ±5%RH at 25°C for range of 20 to 85%RH, ±7%RH elsewhere. Size: 4¼ x 3½ x 1¼ inches. Weight: 7 ounces. Housing: high-impact, chemical-resistant ABS plastic. Supplied: probe, cable, 256 mb SD memory card, USB memory card reader, magnetic mounting strips, Velcro®, wall mount, bench stand, batteries, adaptor, Traceable® Certificate.



89369-154



Thin cable is makes it easy for refrigerator door to close and seal



89369-156

Description	Probe	Cat. No.	Price
VWR® Traceable® Memory-Card Refrigerator/Freezer Thermometer	Bottle probe	89369-154	\$229.00
VWR® Traceable® Memory-Card with Stainless-steel Probe (without bottle) Thermometer	Stainless-steel probe (see above)	89369-156	\$229.00



## VWR® Traceable® Platinum High-Accuracy Refrigerator Thermometer

**NEW**

Displays minimum/maximum temperatures for previous 24 hours (for each hour) and previous 7-days (for each day); or previous 30 days (for each day). Time/Date stamp key shows exact time and date for all minimum and maximum readings. A 4-wire platinum sensor insures linear response and high accuracy across entire range. Range: -58.00 to 158.00°F (-50.00 to 70.00°C). Resolution: 0.01°. Accuracy: ±0.1°C; fulfills precise requirements for refrigerators/freezers. Sealed bottle probe version is insulated from rapid temperature changes when door is opened. Sealed bottle liquid is GRAS— liquid generally recognized as safe by US Food and Drug Administration. Refrigerator/freezer door closes and seals tightly around micro-thin cable. Triple display shows current and minimum/maximum temperatures. Alarm is settable in 0.1° increments and signals when temperature rises above/ falls below set points. Visual LEDs and audible alarm signals continuously, even if temperature returns to non-alarm range.

Traceable®: To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 2¾ x 4¼ x ¾-inch. Weight: 5 ounces. Housing: high-impact, chemical-resistant ABS plastic. Supplied: platinum bottle probe, cable, magnetic strips, Velcro® tape, bench stand, batteries, Traceable® Certificate.



89369-146



89369-148

Description	Probe	Cat. No.	Price
VWR® Traceable® Platinum High-Accuracy Refrigerator Thermometer (patents pending)	Bottle probe	89369-146	\$109.50
VWR® Traceable® Platinum High-Accuracy Thermometer (patents pending)	Probe is 5/16" diameter x 3/4-inch long	89369-148	\$109.50

Available June 2013

## VWR® Traceable® Digital-Bottle™ Refrigerator/Freezer Thermometer

### Provides accurate readings anywhere

Accurately monitor temperatures in freezers, refrigerators, incubators, and environmental chambers with this temperature-buffered sensor. Bottle and solution insulate sensor from rapid changes, as an example, when a refrigerator door is opened. Solution mimics exact temperature of samples. Stainless-steel sensor/probe assures long product life. Entire unit is waterproof.

### Records high/low readings

Easy-to-read digital display shows high, low, and current temperatures. Min/Max monitors high/low readings overnight, on weekends, or for any time period—a significant advantage over glass thermometers displaying only the current temperature. The entire unit including bottle and display may be placed in any environment within the operating temperature range of -22 to 185°F (-30 to 85.0°C). The resolution is 0.1°. Accuracy is ±1.0°C between -20.0 to 85°C. Ultra™ model accuracy is ±0.4°C at tested points.

### Supplied with unique holder

Chemical-resistant ABS plastic holder stands on a shelf or holder affixes to any wall. Bottle may be removed from holder.

### Digital-Bottle™ eliminates mercury contamination

Solid-state probe eliminates the difficulty with mercury thermometer contamination. Probe is sealed in a miniature bottle filled with nontoxic glycol. Solution is GRAS (generally recognized as safe) by the U.S. FDA. It eliminates concerns about incidental contact with food or drinking water. (Also available with glass bead fill.)

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by AZLA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: holder, double-backed tape, Velcro®, replaceable silver-oxide battery. Unit size: 1 7/8 x 1 x 4 3/8 inches, holder is 2 1/4 x 2 1/4 x 1 1/8 inches. Weight: 3 2/3 ounces.



Mount anywhere with supplied double-backed tape or Velcro®

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Digital-Bottle™ Refrigerator/Freezer Thermometer (patents pending)	±1°C	89172-082	\$42.42
VWR® Traceable® Digital-Bottle™ Ultra™ Refrigerator/Freezer Thermometer (patents pending)	±0.4°C at tested points	89172-084	\$53.03
VWR® Traceable® Digital-Bottle™ Refrigerator/Freezer Thermometer (identical to Cat. No. 89172-082, comes with bottle probe filled with glass beads instead of solution) (patents pending)	±1°C	89172-086	\$42.42
VWR® Traceable® Digital-Bottle™ Ultra™ Refrigerator/Freezer Thermometer (identical to Cat. No. 89172-084, comes with bottle probe filled with glass beads instead of solution) (patents pending)	±0.4°C at tested points	89172-088	\$53.03



## VWR® Traceable® Hi-Accuracy 0.01° Refrigerator Thermometer

New high-accuracy dual thermometer, reads to 0.01 degrees while monitoring temperatures in refrigerator and freezer simultaneously or two refrigerator locations. Temperature-buffered bottle sensor insulates and eliminates rapid changes when refrigerator door is opened. May also be used in water baths, heating blocks, and incubators.

### Records time and date for Min/Max readings and Hi/Lo alarm alerts

Triple display simultaneously shows minimum/maximum and current temperatures. Monitors readings overnight, on weekends, or for any time period and displays the exact time and date when the Min/Max temperature occurred for both bottle probes. Two channel alarms provide unique visual (LEDs) and audio alerts when temperature rises above or falls below high and low set points. Unit displays the exact time and date when dual thermometer alarms are triggered. Alarms are programmable in 0.1° increments. Visual and audible alarms signal continuously even if temperature returns to non-alarm range. Ten-foot micro-cable permits refrigerator doors to close on it.

### Wide-range and high resolution

Range is -58 to 158°F and -50 to 70°C with a resolution of 0.01° and accuracy of ±0.3°C. Probe is sealed in a miniature bottle (1 x 2½ inches) filled with nontoxic glycol. Solution is GRAS (generally recognized as safe) by the US FDA (Food and Drug Administration). Eliminates concerns about incidental contact with food or drinking water.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). High-impact, chemical-resistant ABS plastic case: 2¾ x 4¼ x ¾ inches. Weight: 5 ounces. Supplied: stand, Velcro®, magnetic strips, wall mount, Traceable® Certificate, batteries.



89094-748



Date and Time of Maximum Temperature Reading



89094-750

Description	Probe	Cat. No.	Price
VWR® Traceable® Hi-Accuracy 0.01° Refrigerator Thermometer (patented)	1 bottle probe	89094-746	\$85.65
VWR® Traceable® Hi-Accuracy 0.01° Refrigerator Thermometer (patented)	2 bottle probes	89094-748	\$96.47
VWR® Traceable® Hi-Accuracy 0.01° Thermometer	2, ¾-inch sensors	89094-750	\$74.80
2 probes (Chemical-resistant, waterproof sensor measures ¾-inch in diameter and is ¾-inch long) (see lower picture.)			

## VWR® Traceable® Wireless Radio-Signal Refrigerator Thermometer

**NEW**

Unit wirelessly reads refrigerator temperatures from up to 100 feet away. Temperature readings from up to three remote refrigerator sensors are sent to a main unit via radio signal (frequency of 433 MHz, penetrates refrigerators and walls). Sealed GRAS bottle is insulated from rapid temperature changes when refrigerator door is opened. Liquid in sealed bottle is GRAS—generally recognized as safe by US FDA. Data is updated every 30 seconds. Minimum/Maximum memory allows monitoring conditions over any time period. Distinctive alarm sounds when temperature rises above/falls below settable high and low set points. Alarms may be conveniently set in 1° increments. Indicator on main unit shows rising/falling temperature trends.



89369-162

89369-160

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Range: -22.0 to 158.0°F (-30.0 to 70.0°C). Resolution: 0.1°. Accuracy: ±1.0°C. Main unit display is an easy-read, 2-line LCD with jumbo 1½-inch high digits. Size: 4¼ x 4½ x ¾-inch (main unit), 2½ x 3½ x ¾-inch (remote unit). Weight: 6 ounces (main unit), 3 ounces (remote unit). Housing: high-impact, chemical-resistant ABS plastic. Supplied: one main unit, one remote unit, flip-open stand, wall mount, Velcro®, batteries, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Wireless Radio-Signal Refrigerator Thermometer with Remote Refrigerator Bottle Probe Module	89369-160	\$119.50
VWR® Additional Traceable® Remote Refrigerator Bottle Probe Module (total of 3 may be used) (patented)	89369-162	\$59.50

## VWR® Traceable® Sentry™ Thermometer

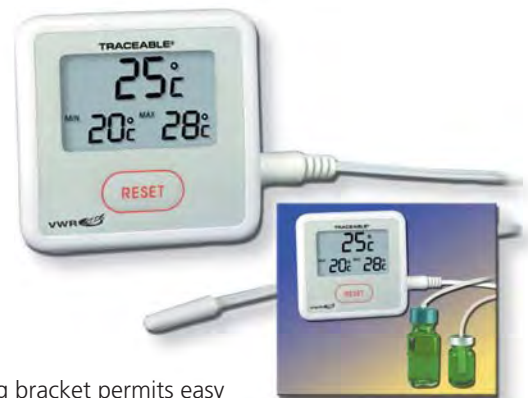
### Simultaneously displays high/low and current temperature

A triple display constantly shows high, low, and current temperatures. Instantly view if freezer, water bath, or incubator is within temperature spec. Monitor temperature of any experiment when you're not there—overnight, weekends, even during lunch. Range is -58 to 158°F or -50 to 70°C. Resolution is 1° and accuracy is ±1°C.

Sensor and 10-foot cable may be placed under water, in refrigerator, or freezer. Small cable diameter (1/16-inch) allows refrigerator doors to close on it. Unplugging the cable activates a sensor inside the unit for monitoring ambient temperature.

### One-key operation

Simple, one-key operation resets the minimum/maximum memories. Probe's wire-mounting bracket permits easy sensor placement. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Unit's high-impact ABS plastic case has a flip-open stand, wall mount, magnet, Velcro®. Size: 2½ x 2½ x ¾ inches. Weight: 1⅞ ounces.



Description	Probe	Cat. No.	Price
VWR® Traceable® Sentry™ Thermometer °F	Probe is 3/16-inch diameter and 3/4-inch long	61161-288	\$44.26
VWR® Traceable® Sentry™ Thermometer °C (see upper picture)	Probe is 3/16-inch diameter and 3/4-inch long	61161-289	\$44.26
VWR® Traceable® Sentry™ Thermometer °F with Bottle	Bottle probe specifically for refrigerator/freezer applications	36934-138	\$47.62
VWR® Traceable® Sentry™ Thermometer °C with Bottle (bottle pictured right)	Bottle probe specifically for refrigerator/freezer applications	15551-284	\$50.63
VWR® Traceable® Sentry™ 5ml Vaccine Thermometer °F with Bottle	5ml vaccine bottle. Bottle mimics vaccine temperature and fits in tray.	89094-788	\$54.75
VWR® Traceable® Sentry™ 5ml Vaccine Thermometer °C (smaller bottle pictured right)	5ml vaccine bottle. Bottle mimics vaccine temperature and fits in tray.	89094-790	\$54.75



## VWR® Traceable® Refrigerator/Freezer Thermometer



Accurately monitor temperatures in freezers, water baths, heating blocks, incubators, and refrigerators with this enclosed temperature-buffered sensor. Bottle insulates sensor from rapid temperature changes when refrigerator door is opened. Triple display simultaneously shows high, low, and current temperatures. Min/max monitors high/low readings overnight, on weekends, or for any time period—a significant advantage over current reading-only glass thermometers. Range is  $-58$  to  $158^{\circ}\text{F}$  and  $-50$  to  $70^{\circ}\text{C}$  with a resolution of  $1^{\circ}$  and accuracy of  $\pm 1^{\circ}\text{C}$ .

### Signals out-of-range conditions

Alarm feature provides alert when temperature rises above or falls below a set point. Alarm is programmable in  $1^{\circ}$  increments. Visual and audible signals continue even if temperature returns to non-alarm range. Ten-foot micro-cable permits refrigerator doors to close on it.

### Avoids contaminants

Solid-state probe eliminates mercury contamination in refrigerators. Probe is sealed in a miniature bottle (1 x 2½ inches) filled with nontoxic glycol. Solution is GRAS (generally recognized as safe) by the US FDA. Eliminates concerns about contact with food or drinking water.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). High-impact, chemical-resistant ABS plastic case is 2¾ x 4¼ x ¾ inches. Weight: 4 ounces. Supplied: Traceable® Certificate, flip-open stand, wall mounting, Velcro®, magnetic strips.

Description	Probe	Cat. No.	Price
VWR® Traceable® Refrigerator/Freezer Thermometer (patented)	Bottle probe specifically for refrigerator/freezer applications	61161-364	\$55.85
VWR® Traceable® 5ml Vaccine Thermometer (patented) (smaller bottle pictured right)	Bottle mimics vaccine temperature and fits in tray.	89094-778	\$57.51
VWR® Traceable® Memory Monitoring Thermometer (pictured right)	Probe is 3/16-inch diameter and 3/4-inch long	61161-336	\$63.31



## VWR® Traceable® Radio-Signal Remote Thermometer

### Reads temperatures 100 feet away

Module transmits on a radio frequency of 433 MHz, penetrating walls, with a range of 100 feet. Data is transmitted every 30 seconds. Main unit can receive and display data from 3 different remote modules. Modules may be set to channel 1, 2, or 3. Display's trend indicator shows whether temperature is rising or falling. Minimum and maximum memory display allows monitoring of conditions over short or long periods, including hours or months. Alarms may be set in 1° increments. Alarms sound when the temperature rises above or falls below the two set points. Jumbo digits (1 1/8 inches high) may be read from 25 feet. Cases are high-impact, chemical-resistant ABS plastic.

### Reads up to three modules

Total of three modules may be used with the main receiver. The splashproof remote module is supplied with an internal and external sensor. External sensor (3/16-inch dia. x 3/4-inch long) and 10-foot cable perform accurately even when both are under water. Switchable °F/°C range: -58.0 to 158.0°F (-50 to 70.0°C) probe, and -14.2 to 158.0°F (-9.9 to 70.0°C) ambient. Resolution is 0.1° and accuracy is ±1°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: one main unit 4 1/4 x 4 1/2 x 5/8 inches, Weight: 6 ounces, one remote module 2 1/2 x 3 1/2 x 3/4 inches, Weight: 3 ounces; internal probe and external probe/cable. Also supplied with a Traceable® Certificate, flip-open stand, wall bracket, Velcro®, batteries.



Description	Cat. No.	Price
VWR® Traceable® Radio-Signal Remote Thermometer with Module	21800-002	\$89.42
VWR® Additional Traceable® Remote Module (not pictured)	21800-004	\$45.75
VWR® Traceable® External Bottle Probe—special bottle probe specifically for refrigerator/freezer applications (patented)	21800-008	\$48.11
VWR® Traceable® 5ml Vaccine Bottle Probe—small 5ml round bottle (see lower picture)	89094-784	\$45.37
VWR® Traceable® Stainless-Steel Probe for (liquids, air/gas, semisolids) 1/8-inch diameter, 8 1/2 inches length, 5 foot cable	21800-030	\$63.76

## VWR® Traceable® Refrigerator/Freezer Plus™ Thermometer

Accurately monitor temperatures in freezers, water baths, heating blocks, incubators, and refrigerators with this enclosed temperature-buffered sensor. Bottle insulates sensor from rapid temperature changes when refrigerator door is opened.

Triple display simultaneously shows minimum, maximum, and current temperatures. Min/Max monitors high/low readings overnight, on weekends, or for any time period—a significant advantage over current reading-only glass thermometers. Range is -58 to 158°F and -50 to 70°C with a resolution of 0.1° and accuracy of ±0.5°C. Alarm feature provides alert when temperature rises above or falls below a set point. Alarm is programmable in 1° increments. Ten-foot micro-cable permits refrigerator doors to close on it.

### Avoids contaminants

Solid-state probe eliminates mercury contamination in refrigerators. Probe is sealed in a miniature bottle (1 x 2 1/2 inches) filled with nontoxic glycol. Solution is GRAS (generally recognized as safe) by the US FDA. Eliminates concerns about contact with food or drinking water. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST. High-impact, chemical-resistant ABS plastic case: 3 1/4 x 2 1/2 x 5/8 inches. Weight: 4 ounces. Supplied: Velcro®, magnetic strips, Traceable® Certificate, battery.



Description	Cat. No.	Price
VWR® Traceable® Refrigerator/Freezer Plus™ Thermometer (patented)	12777-838	\$62.52
VWR® Traceable® 5ml Vaccine Plus™ Thermometer—small 5ml round bottle (see smaller bottle)	89094-780	\$69.59
VWR® Traceable® Memory Monitoring Plus™ Thermometer—probe is 3/16-inch diameter and 3/4-inch long (see lower picture)	89094-782	\$50.62



## VWR® Traceable® Jumbo Display Refrigerator/Freezer Thermometer

Perfect jumbo digit thermometer for monitoring freezers, water baths, heating blocks, incubators, and refrigerators. Accurately monitors temperatures with its enclosed temperature-buffered sensor. Bottle insulates sensor from rapid temperature changes when refrigerator door is opened. Triple-display simultaneously shows maximum, minimum, and current probe temperatures plus room temperature. Min/max monitors high/low readings overnight, on weekends, or for any time period. Range is -58 to 158°F and -50 to 70°C with a resolution of 0.1° and accuracy of ±1°C.

### Signals out-of-range conditions

Alarm feature provides alert when temperature rises above or falls below a set point. Alarm is programmable in 1° increments. Ten-foot micro-cable permits refrigerator doors to close on it. Solid-state probe eliminates mercury contamination. Probe is sealed in a miniature bottle (1 x 1½ inch) filled with patented nontoxic glycol. Solution is GRAS (generally recognized as safe) by the US FDA. Eliminates contact with food or drinking water.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Supplied: Traceable® Certificate, flip-open stand, wall mount, Velcro®, magnet, alkaline battery. Easy-view, jumbo 1½ inch-high digits may be read from 30 feet. Sensor and 10-foot cable perform accurately even when under water. High-impact, chemical-resistant ABS plastic case: 3<sup>7</sup>/<sub>8</sub> x 4<sup>3</sup>/<sub>8</sub> x 7<sup>7</sup>/<sub>8</sub> inches. Weight: 4 ounces.



Description	Probe	Cat. No.	Price
VWR® Traceable® Jumbo Refrigerator/Freezer Thermometer (patented)	Bottle probe specifically for refrigerator/freezer applications	89094-770	\$57.94
VWR® Traceable® 5ml Vaccine Jumbo Thermometer (smaller bottle pictured)	5ml vaccine bottle. Bottle mimics vaccine temperature and fits in tray.	89094-772	\$57.94
VWR® Traceable® Jumbo Memory Monitoring Thermometer (insert)	Probe is 3/16-inch diameter and 3/4-inch long	89094-768	\$52.59

## VWR® Traceable® Thermometer with Time/Date and Max/Min Memory

Thermometer displays current, minimum, and maximum temperatures. It captures and shows the exact time and date when the minimum and maximum temperature occurred. Ideal for monitoring solutions and refrigerators. Range is -40.0 to 176.0°F and -40.0 to 80.0°C with a resolution of 0.5° and accuracy of ±1.5°C. Display's 3/8-inch-high digits show Min/Max of ambient or probe temperature, time of day, and month/day.

### Submersible probe

Wire mounting bracket permits easy probe placement. Sensor and 6 ft cable perform accurately even when both are under water. Sensor: 3/16-inch dia. x 1 1/2 inch length.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: flip-open stand, wall mounting slot, Velcro®, Traceable® Certificate, battery. High-impact ABS plastic case: 3 3/16 x 3 3/16 x 1 5/16 inches. Weight: 3 1/2 ounces.



Description	Probe	Cat. No.	Price
VWR® Traceable® Probe Thermometer with Time/Date & Max/Min Memory	Probe is 3/16-inch diameter and 3/4-inch long	62379-549	\$40.58
VWR® Traceable® Thermometer with Time/Date Max/Min Memory with bottle	Bottle probe specifically for refrigerator/freezer applications (patented)	21800-076	\$45.44
VWR® Traceable® 5ml Vaccine Thermometer with Time/Date & Max/Min Memory	5ml vaccine bottle. Bottle mimics vaccine temperature and fits in tray.	89094-786	\$48.74

## Refrigerator/Freezer Thermometer Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Length (inch)		Waterproof Total Unit/Cable/Probe	Vaccine Probe	Alarm	Display Min/Max
						Probe	Cable				
89369-154	3	Yes	-22 to 158°F / -30 to 70.0°C	0.1°	±0.6 / ±1.2	2.5	79	n/y/y	no	yes	yes
89369-156	3	Yes	-22 to 158°F / -30 to 70.0°C	0.1°	±0.6 / ±1.2	1	79	n/y/y	no	yes	yes
89369-146	4	Yes	-58 to 158°F / -50 to 70.0°C	0.01°	±0.1	2.5	120	n/y/y	no	yes	yes
89369-148	4	Yes	-58 to 158°F / -50 to 70.0°C	0.01°	±0.1	0.75	120	n/y/y	no	yes	yes
89172-082	5	Yes	-22 to 185°F / -30 to 85.0°C	0.1°	±1.0 / ±0.4	2.5	n/a	y/n/a/y	no	no	yes
89094-746	6	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	2.5	120	n/y/y	no	yes	yes
89369-160	7	Yes	-22 to 158°F / -30 to 70.0°C	0.1°	±1.0	3.5	4	n/y/y	no	yes	yes
61161-288	7	Yes	-58 to 158°F or -50 to 70°C	1°	±1	0.75	120	n/y/y	no	no	yes
36934-138	7	Yes	-58 to 158°F or -50 to 70°C	1°	±1	2.5	120	n/y/y	no	no	yes
89094-788	7	Yes	-58 to 158°F or -50 to 70°C	1°	±1	1.25	120	n/y/y	yes	no	yes
61161-336	8	Yes	-58 to 158°F / -50 to 70°C	1°	±1	0.75	120	n/y/y	no	yes	yes
61161-364	8	Yes	-58 to 158°F / -50 to 70°C	1°	±1	2.5	120	n/y/y	no	yes	yes
89094-778	8	Yes	-58 to 158°F / -50 to 70°C	1°	±1	1.25	120	n/y/y	yes	yes	yes
12777-838	9	Yes	-58 to 158°F / -50 to 70°C	0.1°	±0.5	2.5	120	n/y/y	no	yes	yes
89094-780	9	Yes	-58 to 158°F / -50 to 70°C	0.1°	±0.5	1.25	120	n/y/y	yes	yes	yes
21800-002	9	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	0.75	120	n/y/y	no	yes	yes
21800-008	9	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	2.5	120	n/y/y	no	yes	yes
89094-784	9	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	1.25	120	n/y/y	yes	yes	yes
89094-770	10	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	2.5	120	n/y/y	no	yes	yes
89094-768	10	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	0.75	120	n/y/y	no	yes	yes
89094-772	10	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	1.25	120	n/y/y	yes	yes	yes
62379-549	11	Yes	-40 to 176°F / -40 to 80°C	0.5°	±1.5	2.5	72	n/y/y	no	no	yes
21800-076	11	Yes	-40 to 176°F / -40 to 80°C	0.5°	±1.5	0.75	72	n/y/y	no	no	yes
89094-786	11	Yes	-40 to 176°F / -40 to 80°C	0.5°	±1.5	1.25	72	n/y/y	yes	no	yes
36934-132	12	Yes	14 to 131°F / -9.9 to 55°C	0.1°	±1.0 / ±0.5	n/a	n/a	n/n/n	no	no	no
89094-742	12	Yes	-3.8 to 199.9°F / -19.9 to 110°C	0.1°	±1	n/a	n/a	n/n/n	no	no	yes
36934-156	13	Yes	-13 to 158°F / -25 to 70°C	0.1°	±1.0	n/a	n/a	n/n/n	no	no	yes
36934-160	13	Yes	-99.9 to 199.9°C	0.1°	±2.0	5	120	n/y/y	no	no	no

## VWR® Traceable® Big-Digit Refrigerator Thermometer

Wide-Range Big-Digit Refrigerator Thermometer's 7/8-inch high display is easy to view. Switchable range is from -3.8 to 199.9°F and -19.9 to 110.0°C with a resolution of 0.1°. Accuracy is ±1°C in the range 0 to 25°C and ±1.5°C outside range. Ultra™ model accuracy is ±0.5°C at tested points. May be placed anywhere using four methods: secure suction cup, Velcro®, stand, and hanger. Display updates every 30 seconds (this allows capturing a reading while allowing a momentary open refrigerator door). Wide range of the thermometer also makes it an ideal unit to monitor temperatures in storerooms, labs, offices, hoods, and outdoors.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 3½ x 2 x ¾ inches. Weight: 1½ ounces.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Big-Digit Refrigerator Thermometer	±1°C	89094-742	\$17.36
VWR® Traceable® Ultra™ Big-Digit Refrigerator Thermometer	±0.5°C	89094-744	\$26.45



## VWR® Econo Traceable® Refrigerator Thermometer

Inexpensive refrigerator thermometer switchable range is from 14.2 to 131.0°F and -9.9 to 55.0°C with a resolution of 0.1°. Accuracy is ±1°C in the range of 5 to 25°C and ±1.5°C outside range. Ultra™ model accuracy is ±0.5°C at tested points. Secure suction cup and Velcro® allow unit to be located anywhere. Display updates every 30 seconds. This allows capturing a reading without any effect from an open refrigerator door. Wide range of the thermometer also makes it an ideal unit to monitor temperatures in storerooms, labs, offices, hoods, and cabinets.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Easy-view, see-through-display LCD digit height is ½-inch. Supplied: long-life battery. Size: 1 x 2½ x ¾ inches. Weight: ½ ounce.

Description	Accuracy	Cat. No.	Price
VWR® Econo Traceable® Refrigerator Thermometer	±1°C	36934-132	\$15.75
VWR® Econo Traceable® Ultra™ Refrigerator Thermometer	±0.5°C	89030-244	\$26.12



## VWR® Traceable® Big-Digit See-Thru™ Thermometer

Use the Traceable® Big-Digit See-Thru™ Thermometer outdoors, in storerooms, at fume hoods, labs, clean rooms, refrigerators, and plant areas. May be attached to the outside of a window to view outdoor temperatures. Transparent display with 1¼-inch-high digits show current and minimum/maximum temperatures. Automatically clears and updates the Min/Max readings daily. Range is –13.0 to 158.0°F or –25.0 to 70.0°C with a resolution of 0.1° and an accuracy of ±1°C.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: mounting tape, Velcro®, battery, and Traceable® Certificate. Size: 3½ x 4¼ x ¾ inches. Weight: 8 ounces.



Description	Cat. No.	Price
VWR® Traceable® Big-Digit See-Thru™ Thermometer °F	36934-156	\$24.98
VWR® Traceable® Big-Digit See-Thru™ Thermometer °C	36934-158	\$24.98

## VWR® Traceable® –100.0 Platinum Freezer Thermometer

RTD Platinum Freezer Thermometer accurately monitors temperatures in freezers, water baths, heating blocks, incubators, and refrigerators. Range is –99.9 to 199.9°C with a resolution of 0.1° and an accuracy of ±2°C. Ten-foot, ultra-thin micro-cable permits freezer doors to close on it without affecting the seal. Fast-response –100.0-ohm platinum triple purpose probe for use with liquids, air/gas, and frozen material.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Shown on the certificate are calibration test points of –80°C, 0°C, and 100°C. Supplied: adjustable probe holder, Velcro®, magnetic strips, probe, Traceable® Certificate, carrying case, battery. RTD Platinum probe length 3 inches, diameter 0.16 inch; overall length 5 inches, 10-foot cable. High-impact, chemical-resistant ABS housing: 2¾ x 4¼ x ¾ inches. Weight: 4¼ ounces.



Description	Cat. No.	Price
VWR® Traceable® –100.0°C Platinum Freezer Thermometer	36934-160	\$61.00
Easy-Use Adaptor 115 VAC	61161-384	\$53.46



## Stainless-Steel Probe attached directly to Thermometer, Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Probe Length (inch)	Waterproof Total Unit/ Probe	Unit Length (inches)	Alarm	Display Min/Max
61220-416	14	Yes	-58 to 302°F / -50 to 150°C	0.1°	±1	8	n/y	11	no	no
23226-658	14	Yes	-58 to 302°F / -50 to 150°C	0.1°	±0.2*	8	n/y	11	no	no
23609-176	14	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1	11⅞	n/y	14⅞	no	no
23609-174	14	Yes	-58 to 572°F / -50 to 300°C	0.1°	±0.5*	11⅞	n/y	14⅞	no	no
61161-368	15	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.5	3½	n/y	7	no	yes
37000-418	15	Yes	-58 to 572°F / -50 to 300°C	0.1°	±0.4*	3½	n/y	7	no	yes
23609-206	15	Yes	-58 to 536°F / -50 to 280°C	0.1°	±1.0	8	n/y	9¼	no	no
23609-204	15	Yes	-58 to 536°F / -50 to 280°C	0.1°	±0.4*	8	n/y	9¼	no	no
15551-004	16	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	8	y/y	10¼	no	yes
12777-842	16	Yes	-58 to 572°F / -50 to 300°C	0.1°	±0.4*	8	y/y	10¼	no	yes
61200-439	16	Yes	-50 to 300°C	0.1°	±1.0	4¾	n/y	4¾	no	no
37000-426	16	Yes	-58 to 572°F	0.1°	±0.4*	4¾	n/y	4¾	no	no
61161-310	17	Yes	-58 to 302°F / -50 to 150°C	0.1°	±1.0	5¼	n/y	6½	no	no
77776-720	17	Yes	-58 to 302°F / -50 to 150°C	0.1°	±0.3*	5¼	n/y	6½	no	no
23609-172	17	Yes	-58 to 302°F / -50 to 150°C	0.1°	±1.0	5¼	n/y	6½	no	no
23609-178	17	Yes	-58 to 302°F / -50 to 150°C	0.1°	±1.0	1	n/y	3¾	no	no
89094-774	18	Yes	-67 to 626°F / -55 to 330°C	0.2°	±0.5°	6	n/y	12½	no	yes
15551-002	18	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	4½	n/y	11	no	no
37000-422	18	Yes	-58 to 572°F / -50 to 300°C	0.1°	±0.3*	4½	n/y	11	no	no
77776-718	19	Yes	-58 to 536°F / -50 to 280°C	0.1°	±1.0	8	y/y	9½	no	no
37000-414	19	Yes	-58 to 536°F / -50 to 280°C	0.1°	±0.4*	8	y/y	9½	no	no

\*Ultra™ thermometers are tested at selected test points to be within tighter than normal tolerances to assist in providing improved accuracy. Other points may not fall within the same accuracy as those found at the selected test points.



## VWR® Traceable® Long-Stem Thermometer

### Replaces mercury and glass thermometers

Perfect-sized unit fits into flasks, cuvettes, test tubes, and beakers. Read temperatures in foods, gases, samples, reagents, water baths, and semisolids. Stainless-steel probe is resistant to most laboratory chemicals. Long stem allows user to make measurements while stirring solutions in deep vessels. Displays -58 to 572°F and -50 to 300°C. Resolution is 0.1° from -20 to 200 (1° outside this range). Accuracy is ±1°C between -20 to 120°C. Ultra™ model accuracies are ±0.2 and ±0.5°C at tested points. Readings are updated every second.

### Eliminates mercury

ABS plastic and stainless-steel construction (no glass or mercury) makes it safe. Brilliant LCD is ¼-inch-high. Designed for all ovens and incubators.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Housing is made of rugged ABS plastic, diameter is 1⅜-inch. Stem diameter is 0.14 inch. Weight: less than one ounce. Supplied: 1-year battery, Traceable® Certificate, and protective sleeve.

Description	Stem Length	Overall Length	Range	Accuracy	Cat. No.	Price
VWR® Traceable® Long-Stem Thermometer	8 inch	11 inch	-58 to 302°F -50 to 150°C	±1°C	<b>61220-416</b>	<b>\$34.11</b>
VWR® Traceable® Long-Stem, Ultra™ Thermometer	8 inch	11 inch	-58 to 302°F -50 to 150°C	±0.2°C at tested points	<b>23226-658</b>	<b>\$57.11</b>
VWR® Traceable® Extra-Long-Stem, Wide-Range Thermometer	11⅞ inch	14⅞ inch	-58 to 572°F -50 to 300°C	±1°C	<b>23609-176</b>	<b>\$34.75</b>
VWR® Traceable® Extra-Long-Stem, Wide-Range, Ultra™ Thermometer	11⅞ inch	14⅞ inch	-58 to 572°F -50 to 300°C	±0.5°C at tested points	<b>23609-174</b>	<b>\$57.73</b>

## VWR® Traceable® Pocket Thermometer

Unique, flat-profile design, weight of a single ounce, and built-in pocket clip make it ideal to carry in a shirt pocket. Thermometer range is –58 to 572°F and –50 to 300°C. Place probe in any solution and enjoy digital resolution of 0.1° from –20 to 200° (1° otherwise). Accuracy is ±1.5°C. Ultra™ model accuracy is ±0.4°C at tested points. A HOLD key freezes display; another key switches from °F to °C.

### Safe for all lab tests

Stainless-steel and plastic construction (no glass or mercury) makes it the safest lab thermometer ever designed. Measure temperature in soil, cuvettes, test tubes, food products, incubators, petroleum hydrocarbons, and virtually all lab tests. Probe guard snaps to the handle and extends overall length to 10¾ inches.

### Records minimum/maximum reading

At the touch of a key, memory recalls minimum/maximum temperature readings over any time period. Large, bright LCD is ¼-inch-high and 20 times more readable than eye-straining guesses at pointer or mercury positions. Readings are updated every second. Operates continuously for 1½ years on a single, replaceable silver-oxide battery. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Unit is supplied with a protective case. Dimensions: stem length, 3½ inches; stem diameter, 0.14 inches; overall length, 7 inches. Weight: 1 ounce.



Description	Accuracy	Cat. No.	Price
VWR® Traceable® Pocket Thermometer	±1.5°C	61161-368	\$34.05
VWR® Traceable® Ultra™ Pocket Thermometer	±0.4°C at tested points	37000-418	\$58.58

## VWR® Traceable® Robo™ Thermometer

### Adjustable for ultimate viewing

Rotating digital display (180 degrees) makes for easy reading at any angle. Position the readout at a right angle for a heads-up display or straight to view sample and temperature simultaneously. Read temperatures in reagents, water baths, foods, air, and any semisolid. Extra-wide range covers from –58 to 536°F and –50 to 280°C. Press a key to change between Fahrenheit and Celsius. Enjoy digital resolution of 0.1° from –20 to 200°. Accuracy is ±1°C between –20 and 100°C. Ultra™ model accuracy is ±0.4°C at tested points. Readings are updated every second. Stainless-steel probe is resistant to most laboratory chemicals. Long stem allows for stirring solutions.

### Replaces mercury thermometers

Plastic and stainless-steel construction (no glass or mercury) makes it safer than mercury thermometers. It is virtually indestructible and stores flat in a pocket.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Large, bright LCD digits are ¼-inch-high. Easier to read than eye-straining guesses at pointer or mercury positions. Stem dimensions are 8-inch length and a diameter of 0.14 inch. Overall unit length is 9¼ inches. Weight: less than one ounce. Supplied: battery and Traceable® Certificate.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Robo™ Thermometer	±1.0°C	23609-206	\$30.21
VWR® Traceable® Ultra™ Robo™ Thermometer	±0.4°C at tested points	23609-204	\$57.57



## VWR® Traceable® Lollipop™ Shock/Waterproof Thermometer

### Lollipop™ Thermometer is waterproof

New heads-up Lollipop™ Traceable® Waterproof/Shockproof Thermometer replaces hazardous mercury units. Stainless-steel probe is resistant to most laboratory chemicals. Wide range covers 99 percent of the lab's routine temperature measurements: -58 to 572°F and -50 to 300°C. Resolution is 0.1° from -20 to 200°; 1° outside this range. Accuracy is ±1°C between 0 and 100°C. Ultra™ model accuracy is ±0.4°C at tested points.

### Records minimum/maximum reading

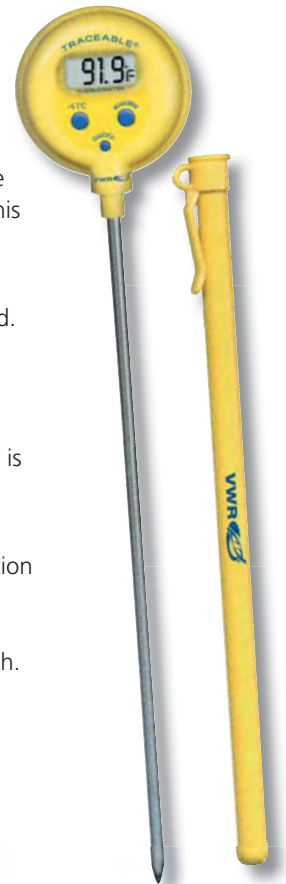
Memory recalls highest and lowest temperature readings over any time period. Reading is updated every second. Solid-state construction eliminates dangers inherent in breakable glass and toxic mercury thermometers.

### All-weather compatible

Operates without fail in any lab condition—outdoors too. Waterproof construction is ideal for wet labs, wash-down areas, and virtually all field applications. Shockproof in drop tests up to 5 feet. Bright ¼-inch-high display is easy to view.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: stainless-steel probe, probe cover, silver-oxide battery. Stem dimensions: 0.14 inch diameter and 8 inch length. Overall unit length is 10¼ inches, width is 1¾ inches, and depth is ½-inch. Weight: ⅞ ounce.



Description	Accuracy	Cat. No.	Price
VWR® Traceable® Lollipop™ Shockproof/Waterproof Thermometer	±1.0°C	15551-004	\$27.35
VWR® Traceable® Ultra™ Lollipop™ Shockproof/Waterproof Thermometer	±0.4°C at tested points	12777-842	\$60.69

## VWR® Traceable® Digital Dial Thermometer °F/°C

### Range from “brrr” to blistering

Range is -58 to 572°F and -50 to 300°C. Wide temperature span combines the ranges of more than 90 different mercury thermometers. Place probe in a water bath and enjoy digital resolution to 0.1° and an accuracy of ±1°C between -20 to 100°C. Ultra™ model accuracy is ±0.4°C at tested points. Stainless-steel and plastic construction (no glass and no mercury) makes it the best and safest lab thermometer ever designed. Ideal for use in soil, cuvettes, test tubes, food products, incubators, biomedical reagents, and petroleum hydrocarbons.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Lightweight for portability

Large, bright ¾-inch-high LCD (liquid crystal display) is 20 times more readable than eye-straining guesses at pointers or mercury positions. Readings are updated every 10 seconds. Supplied: protective case, silver-oxide battery, and Traceable® Certificate. Unit dimensions are 4¾-inch stem length, stem diameter of 0.19 inch, and 1½-inch dial diameter. Weight: 1½ ounces.



Description	Accuracy	Cat. No.	Price
VWR® Traceable® Digital Dial Thermometer °F	±1.8°F	61220-417	\$27.82
VWR® Traceable® Digital Dial Thermometer °C	±1.0°C	61200-439	\$27.82
VWR® Traceable® Ultra™ Digital Dial Thermometer °F	±0.4°F	37000-426	\$58.58
VWR® Traceable® Ultra™ Digital Dial Thermometer °C	±0.2°C	37000-428	\$58.58



## VWR® Traceable® Jumbo-Display Dial Thermometer

### Thermometer reads both °F and °C

Dedicate this thermometer to a specific test. Provides continuous monitoring for over a year. To provide for even longer battery life, the unit has an on/off switch. Thermometer is switchable between °F/°C. Wide range of -58 to 302°F/-50 to 150°C covers 90 percent of lab temperature measurements. To achieve this temperature range with equivalent precision would require over 150 mercury thermometers. Enjoy digital resolution of 0.1° from -20 to 200° (1° outside this range). Accuracy is ±1°C between -20 and 100°C. Ultra™ model accuracy is ±0.3°C at tested points. Readings are updated every second.



### Resists corrosion

Smooth, stainless-steel probe is perfect for gunky and viscous solutions. Probe is resistant to most laboratory chemicals. Its piercing tip makes it perfect for measuring temperatures of semisolids. Plastic and stainless-steel construction makes it safer than mercury thermometers.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Extra-large, easy-to-read display is 3/8-inch-high. Bright LCD is easier to read than eye straining guesses at pointers or mercury positions. Stem length is 5 1/4 inches, stem diameter is 0.15 inch, and top diameter is 2 1/8 inches. Overall length is 6 1/2 inches. Weight: 1 ounce. Supplied: silver-oxide battery and Traceable® Certificate.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Jumbo-Display Dial Thermometer	±1.0°C	61161-310	\$37.98
VWR® Traceable® Ultra™ Jumbo-Display Dial Thermometer	±0.3°C	77776-720	\$50.42
VWR® Traceable® Surface Dial Thermometer Identical to Cat. No. 61161-310 but with 1/2-inch-diameter metal disk at end of probe.	±1.0°C	23609-172	\$44.39

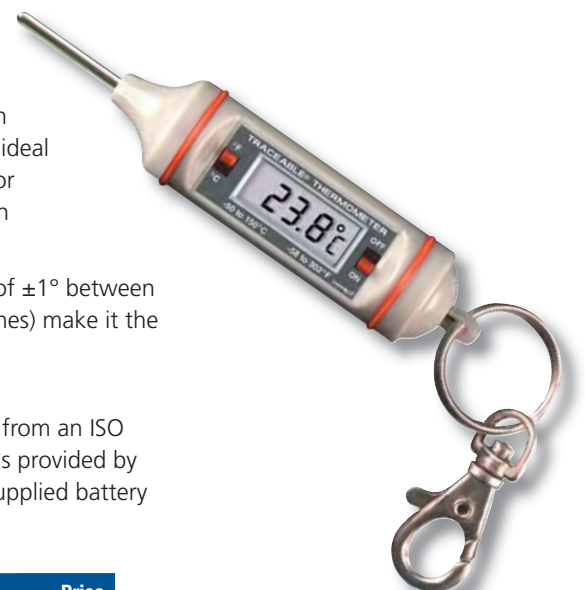
## VWR® Traceable® Key-Chain Thermometer

Pocket-size Traceable® Key-Chain Thermometer is perfect for carrying with you. Clip to a lab coat buttonhole, jacket zipper, or belt loop, or use it with your keys. Hang in storerooms or fume hoods for easy monitoring. Fast, one-second response makes it ideal for measuring ambient air temperature. One-inch stainless-steel probe is designed for penetration of semisolids and liquid measurements. Provides accurate readings when immersed only 1/8-inch.

Range is -58 to 302°F and -50 to 150°C with a resolution of 0.1° and an accuracy of ±1° between -20.0 to 100.0°C. Lightweight (1/2 oz) and miniature size (3/4-inch diameter x 3 3/4 inches) make it the convenient pocket thermometer.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Case is rugged ABS plastic. Supplied battery powers unit for 1 year of continuous operation.



Description	Cat. No.	Price
VWR® Traceable® Key-Chain Thermometer	23609-178	\$25.35

## VWR® Traceable® Waterproof Food HACCP Thermometer

Traceable® Waterproof Food HACCP Thermometer's easy-to-use membrane keys and rugged ABS body make it ideal for food labs, food processing, food preparation, and brewing. Waterproof construction allows for use in labs, plants, and all food areas.

For versatility, unit combines non-contact, non-invasive, no-touch, infrared thermometer and piercing stainless-steel probe thermometer. Designed specifically as a HACCP (Hazard Analysis and Critical Control Point) thermometer, it's a state of the art approach to food safety. LEDs indicate the HACCP zones: green light under 4°C (40°F), green light over 60°C (140°F), and red danger light between 4 to 60°C (40 to 140°F).

Temperature range for infrared is -67 to 482°F (-55 to 250°C), and probe range is -67 to 626°F (-55 to 330°C). Resolution is 0.2°C (0.5°F) between -10 and 200; otherwise 1°. Accuracy between -5 to 65°C for infrared is ±0.6°C and for probe is ±0.5°C. Readings are updated every second. The display shows current temperature, minimum or maximum temperature, low battery, and emissivity value. Infrared emissivity default is 0.95. It is adjustable from 0.1 to 1.0. Field of view ratio is 2.5:1 (at a distance of 5 inches the reading spot size is 2 inches).

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Bright LCD digits are ¼-inch-high. Six-inch stainless-steel probe folds out of 6½ x 1 x 1½ inches. Unit extends to an overall length of 12½ inches. Weight: 3½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Waterproof Food HACCP Thermometer	89094-774	\$130.48

## VWR® Traceable® Flip-Stick™ Thermometer

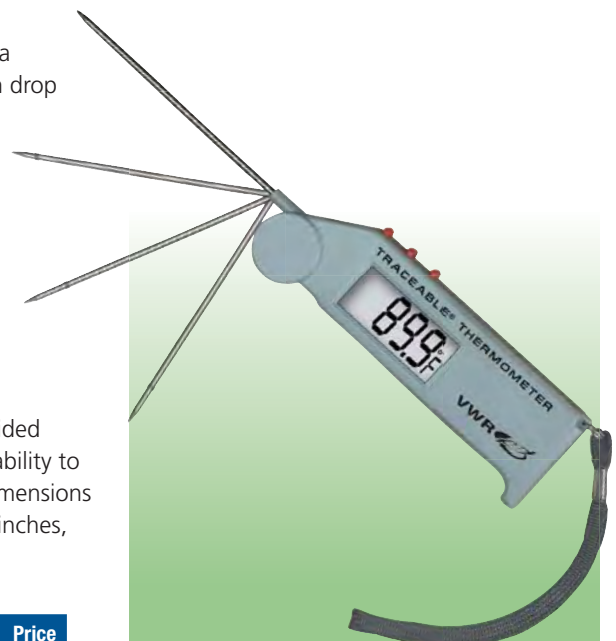
New flip-to-open design is easy to use. Stainless-steel probe may be positioned at any angle. Fold-up, protected probe permits carrying on the wrist strap or in a pocket. Big-digit, ¾-inch-high display may be viewed at a glance. Shockproof in drop tests up to 5 feet.

### Reading is updated every second

Features include °F/°C switch, minimum and maximum memory readings over any time period, and a HOLD key freezes the display to capture temperature. Wide range covers 99 percent of routine temperature measurements: -58 to 572°F and -50 to 300°C. Resolution is 0.1° from -20 to 200° (1° outside this range). Accuracy is ±1°C between -20 and 100°C. Ultra™ model accuracy is ±0.3°C at tested points.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Dimensions are a 0.14 inch stem diameter, 4½-inch stem length, an extended length of 11 inches, 6-inch folded length, width of ⅝-inch and 1½-inch-height. Weight: 2⅜ ounces.



Description	Accuracy	Cat. No.	Price
VWR® Traceable® Flip-Stick™ Thermometer	±1°C	15551-002	\$29.26
VWR® Traceable® Ultra™ Flip-Stick™ Thermometer	±0.3°C	37000-422	\$55.70

## VWR® Traceable® Waterproof/Food Thermometer

Traceable® Waterproof/Food Thermometer's membrane keys, ABS body, and stainless-steel probe make it ideal for food labs, food processing, food preparation, and brewing. Waterproof construction allows it to be used in labs, plants, wash-down areas, and the field. Unit eliminates the dangers inherent in breakable glass and toxic mercury thermometers.

Range is -58 to 572°F and -50 to 300°C, resolution is 0.1° from -20 to 200° (1° otherwise), and accuracy is ±1.5°C. Ultra™ model accuracy is ±0.4°C at tested points. At the touch of a key, it displays minimum and maximum readings over any period.



Unique holder allows probe to be positioned at any height while attached to beakers, stainless cylinders, or vats. Flat-profile design, weight of a single ounce, and built-in pocket clip make it ideal for carrying in a shirt pocket. Probe guard snaps to handle to extend overall length to 10¾ inches. Readings are updated every second. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: probe holder, key-chain, and lanyard. Bright LCD is ¼-inch-high. Operates for 1½ years on supplied replaceable silver-oxide battery. Size: stem length, 3½ inches; stem diameter, 0.14 inches; overall length, 7¼ inches. Weight: 1 ounce.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Waterproof/Food Thermometer with holder	±1.5°F	36934-166	\$20.83
VWR® Traceable® Ultra™ Waterproof Food Thermometer with holder	±0.4°C at tested points	36934-168	\$30.06

## VWR® Traceable® Food/Waterproof/Piercing Thermometer

New piercing thermometer measures the internal temperature of stored, frozen, or prepared food. Stainless-steel probe is ideal for use in soil, brewing, food processing, refrigeration, and pharmaceutical applications. Waterproof construction allows it to be used in labs, plants, wash-down areas, and the field. Manufactured to be drop-proof from 5 feet. Eliminates the dangers inherent in breakable glass and toxic mercury thermometers. Wide range covers 99 percent of routine temperature measurements: -58 to 536°F and -50 to 280°C. Resolution is 0.1° from -20 to 200° (1° outside this range). Accuracy is ±1°C between -20 to 100°C. Ultra™ model accuracy is ±0.4°C at tested points. Reading is updated every second.



### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Large, bright, highly readable LCD is ¼-inch-high. Stem dimensions: 0.19 inch diameter and 8-inch length. Unit dimensions: 9½-inch overall length, 3½-inch-width, and 1-inch depth. Weight: 1¼ ounces. Supplied: battery and Traceable® Certificate.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Food/Waterproof/Piercing/Drop-proof Thermometer	±1.0°C	77776-718	\$25.41
VWR® Traceable® Ultra™ Food/Waterproof/Piercing/Drop-proof Thermometer	±0.4°C at tested points	37000-414	\$55.14

# Traceable® Thermometers



## VWR® Traceable® Full-Scale Thermometer

Readings are updated every second and displayed on a  $\frac{3}{8}$ -inch LCD. Magnetic back allows for placement on a metal surface (incubators, freezers, water baths). Unit also incorporates flip-open stand for use on lab bench and spring fastener for clipping to any edge. Stainless-steel probe with piercing tip allows constant exposure to extreme temperatures at the ends of the range.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Full-Scale Thermometer model resolution is 0.1° from -20 to 200° and 1° elsewhere.



### Plus model

Resolution is 0.1° from -20 to 200° and 1° elsewhere. Plus model also includes the following features: high/low alarm, minimum/maximum memories, and hold.

Dimensions: Thermometer diameter 2.1 inches and  $\frac{9}{16}$ -inch depth; probe length 5 $\frac{3}{4}$ -inch and 0.14 inch diameter; 10 foot cable length. Supplied: Traceable® Certificate and battery.

Description	Range	Accuracy	Cat. No.	Price
VWR® Traceable® Full-Scale Thermometer (pictured left)	-58 to 500°F (-50 to 250°C)	±1.0°C between -20 to 100°C	<b>61161-328</b>	<b>\$45.66</b>
VWR® Traceable® Ultra™ Full-Scale Thermometer (pictured left)	-58 to 500°F (-50 to 250°C)	±0.5°C at tested points	<b>37000-424</b>	<b>\$62.11</b>
VWR® Traceable® Full-Scale Plus Thermometer (pictured right)	-58 to 572°F (-50 to 300°C)	±1.0°C between -20 to 100°C	<b>37000-430</b>	<b>\$53.65</b>
VWR® Traceable® Ultra™ Full-Scale Plus Thermometer (pictured right)	-58 to 572°F (-50 to 300°C)	±1.0°C between -20 to 100°C	<b>37000-432</b>	<b>\$70.29</b>

## Stainless-Steel Probe attached by cable to Thermometer, Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Probe Length (inch)	Waterproof Total Unit/ Cable/Probe	Unit Size (inches)	Alarm	Display Min/Max
89204-742	19	Yes	-58 to 158°F / -50 to 70°C	0.01°	±0.30	9	n/n/y	2 $\frac{3}{4}$ x 4 $\frac{1}{4}$ x $\frac{3}{4}$	yes	yes
61161-328	20	Yes	-58 to 500°F / -50 to 250°C	0.1°	±1.0	5 $\frac{3}{4}$	n/n/y	2 $\frac{1}{8}$ dia. x $\frac{9}{16}$	no	no
37000-424	20	Yes	-58 to 500°F / -50 to 250°C	0.1°	±0.5*	5 $\frac{3}{4}$	n/n/y	2 $\frac{1}{8}$ dia. x $\frac{9}{16}$	no	no
37000-430	20	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	5 $\frac{3}{4}$	n/n/y	2 $\frac{1}{8}$ dia. x $\frac{9}{16}$	yes	yes
37000-432	20	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	5 $\frac{3}{4}$	n/n/y	2 $\frac{1}{8}$ dia. x $\frac{9}{16}$	yes	yes
61220-601	21	Yes	-58 to 302°F / -50 to 150°C	0.001°	±0.05	6 $\frac{3}{8}$	n/n/y	3 $\frac{1}{2}$ x 5 $\frac{1}{2}$ x 1 $\frac{1}{4}$	no	yes
89094-752	22	Yes	0.00° / 25.00° / 37.00° or all	0.01°	±0.05	9	n/n/y	2 $\frac{3}{4}$ x 4 $\frac{1}{4}$ x $\frac{3}{4}$	yes	yes
89369-150	23	Yes	-148 to 199.99°F / -100 to 199.99°C	0.01°	±0.1	9	n/y/y	2 $\frac{3}{4}$ x 4 $\frac{1}{4}$ x $\frac{3}{4}$	yes	yes
89369-152	23	Yes	-148 to 199.99°F / -100 to 199.99°C	0.01°	±0.1	1	n/y/y	2 $\frac{3}{4}$ x 4 $\frac{1}{4}$ x $\frac{3}{4}$	yes	yes
15551-000	24	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	7 $\frac{1}{2}$	y/y/y	4 $\frac{1}{4}$ x 3 $\frac{1}{4}$ x 1	yes	yes
89369-138	24	Yes	-328 to 932°F / -200 to 500°C	0.001/0.0001	±0.05	9	n/n/y	3 $\frac{1}{2}$ x 5 $\frac{1}{2}$ x 1 $\frac{1}{4}$	no	yes
89369-140	24	Yes	-328 to 932°F / -200 to 500°C	0.001/0.0001	±0.05	1	n/n/y	3 $\frac{1}{2}$ x 5 $\frac{1}{2}$ x 1 $\frac{1}{4}$	no	yes
89369-136	25	Yes	14 to 230°F / -10 to 110°C	0.1°	±1.0	20	y/y/y	4 $\frac{1}{4}$ x 3 $\frac{1}{2}$ x 1 $\frac{1}{4}$	no	no
21800-068	25	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	7 $\frac{1}{2}$	n/n/y	2 $\frac{1}{2}$ x 4 $\frac{3}{4}$ x $\frac{1}{2}$	yes	yes
61161-274	26	Yes	-58 to 500°F / -50 to 260°C	0.1°	±1.0	7 $\frac{1}{4}$	n/n/y	2 x 4 x $\frac{1}{2}$	yes	yes
62344-925	26	Yes	-58 to 302°F / -50 to 150°C	0.1°	±1.0	7	n/n/y	3 x 2 x $\frac{1}{2}$	no	no
62344-916	27	Yes	32 to 392°F / 0 to 200°C	1°	±2.0	8 $\frac{1}{2}$	n/n/y	2 $\frac{3}{4}$ x 3 x $\frac{1}{2}$	yes	no
61161-283	27	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	4 $\frac{3}{4}$	y/y/y	1 $\frac{3}{4}$ x $\frac{1}{2}$	no	yes
46610-024	27	Yes	-58 to 572°F / -50 to 300°C	0.1°	±0.5*	4 $\frac{3}{4}$	y/y/y	1 $\frac{3}{4}$ x $\frac{1}{2}$	no	yes
77776-730	28	Yes	-58 to 572°F / -50 to 300°C	0.1°	±1.0	2 $\frac{3}{4}$	n/n/y	1 $\frac{1}{2}$ x 2 $\frac{1}{6}$ x $\frac{1}{2}$	no	yes
23609-234	28	Yes	-58 to 500°F / -50 to 260°C	0.1°	±1.0	8	n/n/y	2 $\frac{1}{2}$ x 6 $\frac{1}{2}$ x 1	yes	yes

\*Ultra™ thermometers are tested at selected test points to be within tighter than normal tolerances to assist in providing improved accuracy. Other points may not fall within the same accuracy as those found at the selected test points.

## VWR® Traceable® Digital Thermometer

### Traceable® Digital Thermometer reads to 0.001°

Scientific thermometer is ideal for critical experimental requirements, quality control, and routine measurements. Unit reads in °C and °F. Expanded temperature range covers -58.000 to 302.000°F and -50.000 to 150.000°C. Resolution is 0.001°. Accuracy is ±0.05°C between 0.0 to 100°C.

### Unit conforms to ITS-90, International Temperature Standard

Instant MEMORY key recalls minimum and maximum readings over any time period. HOLD key freezes display for reading later. For ease in reading, one key changes the display to show one, two, or three significant numbers after the decimal point. Internal data logger captures the minimum and maximum temperatures every hour for 24 hours. Monitor shows exactly when a reading occurred. High precision makes unit ideal for measuring temperatures in cuvettes, gas systems, reagents, chemical solutions, soil, water baths, ovens, incubators, pharmaceuticals, petroleum products, foods, and wastewater. Designed for years of reliable service even in severe environments. Large, 12.7 mm-high, bright, high-contrast LCD makes the thermometer easy to read. Membrane keys provide a splash-proof design.

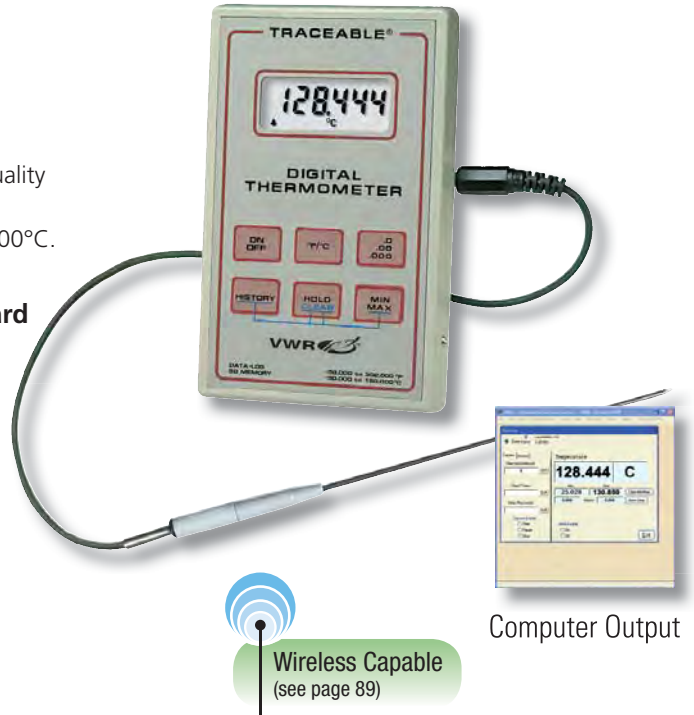
### Lightning-fast temperature changes

The fast-response probe supplied with the unit displays even the slightest temperature change instantly. Readings are updated three times a second. Universal, stainless-steel probe is triple purpose for liquid, air/gas, and semisolids. Accurate readings with tip penetration of 8.4 mm. Probe has a diameter of 3.2 mm, stem length of 160 mm, an overall length of 230 mm and a cable length of 1.5 meters.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 89 x 140 x 32 mm. Weight: 226.8 g. Supplied: probe, 9-volt alkaline battery, plastic carrying case, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Digital Thermometer	61220-601	\$613.51
VWR® Traceable® Digital Thermometer for YSI/MSI Series 400 probes	61220-670	\$556.35
Replacement Probe	61220-604	\$78.33
Padded Carrying Case	61220-667	\$17.73
VWR® Data Acquisition System (page 88)	89030-266	\$223.69
VWR® Universal Wireless Radio-Signal Transceivers (page 89)	89140-200	\$432.50
AC Adaptor	89030-250	\$29.57



Computer Output

## Air Probe

Measures air temperatures. Dimensions: 0.3 cm diameter, 10 cm stem length, 15.25 cm overall length, 183 cm cable length.

Description	Cat. No.	Price
VWR® Air Probe	89030-236	\$105.83



## Micro Probe

Stainless-steel, 0.1 cm diameter, 7 cm stem length, 14 cm overall length, 152 cm cable length.

Description	Cat. No.	Price
VWR® Micro Probe	61220-665	\$122.41



## Surface Probe

### Accessory probe

Measures surface temperatures. Dimensions: 0.8 cm disk diameter, 9 cm stem length, 15.25 cm overall length, 178 cm cable length.

Description	Cat. No.	Price
VWR® Surface Probe	89030-234	\$144.94



## VWR® Traceable® International Standards Extreme-Accuracy Digital Thermometer

Four Traceable® International Standards Digital thermometers provide the exact readings required for critical requirements, quality control checks, and routine measurements. Units read 0.00, 25.00, 37.00, or a combination of all three with a resolution of 0.01° and an accuracy  $\pm 0.05^\circ\text{C}$  within  $\pm 2^\circ\text{C}$  of standard. Units read in  $^\circ\text{C}$  and  $^\circ\text{F}$ .

### Impervious stainless-steel probe

Stainless-steel probe shows the slightest temperature change. Probe is triple purpose for liquid, air/gas, and semisolids. Accurate readings with tip penetration of  $\frac{1}{8}$ -inch. Probe has a diameter of  $\frac{1}{8}$ -inch, stem length of  $6\frac{1}{4}$  inches, overall length of 9 inches and a cable length of 5 feet.

### Unit conforms to ITS-90, International Temperature Standard

High-precision unit is ideal for measuring temperatures in water baths, cuvettes, gas systems, reagents, standards solutions, ovens, incubators, pharmaceuticals, petroleum products, foods, and wastewater.

### Records time and date for min/max readings and hi/lo alarm alerts

Display shows minimum/maximum and current temperatures. Min/max monitors readings overnight, on weekends, or for any time period and displays the exact time and date when the min/max temperature occurred. Alarm provides two visual (LEDs) and two audio alerts when temperature rises above or falls below high and low set points. Unit displays the exact time and date when dual thermometer alarms are triggered. Alarms are programmable in  $0.1^\circ$  increments. Visual and audible alarms signal continuously even if temperature returns to non-alarm range. First thermometer ever designed to permit user one-key calibration.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). High-impact, chemical-resistant ABS plastic case is  $2\frac{3}{4} \times 4\frac{1}{4} \times \frac{3}{4}$  inches. Weight: 5 ounces. Stand, Velcro®, magnetic strips, and wall mount allow placing thermometer anywhere. Supplied: Traceable® Certificate, stainless-steel probe, two batteries.



Date and Time of Maximum Temperature Reading



## VWR® Traceable® Extreme/High-Accuracy Thermometers

Dual range is  $-50$  to  $70^\circ\text{C}$  with a resolution of  $0.01^\circ$  and accuracy of  $\pm 0.30^\circ\text{C}$ . Two channel thermometers are available with one or two stainless-steel probes. Two probes are useful in monitoring inlets and outlets; tracking tests simultaneously; and measuring temperatures in two locations.

Description	Range	Cat. No.	Price
VWR® Traceable® Extreme-Accuracy Standards Thermometer 0.00°	0.00° ( $-2.00$ to $2.00^\circ$ )	89094-752	\$96.50
VWR® Traceable® Extreme-Accuracy Standards Thermometer 25.00°	25.00° ( $23.00$ to $27.00^\circ$ )	89094-754	\$96.50
VWR® Traceable® Extreme-Accuracy Standards Thermometer 37.00°	37.00° ( $35.00$ to $39.00^\circ$ )	89094-756	\$96.50
VWR® Traceable® Extreme-Accuracy Standards Thermometer 0.00°, 25.00°, 37.00°	0.00°, 25.00°, 37.00° ( $\pm 2^\circ$ for each standard)	89094-758	\$105.22
VWR® Traceable® High-Accuracy Dual Thermometer (1 stainless-steel probe supplied)	$-58$ to $158^\circ\text{F}$ and $-50$ to $70^\circ\text{C}$	89204-742	\$92.78
VWR® Traceable® High-Accuracy Dual Thermometer (2 stainless-steel probes supplied)	$-58$ to $158^\circ\text{F}$ and $-50$ to $70^\circ\text{C}$	89204-744	\$113.63

## VWR® Traceable® Platinum High-Accuracy Freezer Thermometer

**NEW**

Thermometer displays minimum/maximum temperatures for last 24 hours (for each hour) and last 7-days (for each day); or last 30 days (for each day). Time/Date stamp key shows the exact time and date for all minimum and maximum readings. Range: -148.00 to 199.99°F (-100.00 to 199.99°C). Resolution: 0.01°. Accuracy: ±0.1°C. Thermometer is ideal for freezers. Triple display shows current °F/°C and minimum/maximum temperatures. Alarm is settable in 0.1° increments and signals when temperature rises above/falls below set points. Visual LEDs and audible alarm signal continuously even if temperature returns to non-alarm range. A 4-wire platinum sensor insures linear response and high accuracy across the entire range.

Supplied platinum waterproof stainless steel probe provides accurate readings with tip penetration of 0.3-inch, waterproof cable, and adjustable probe holder or supplied with platinum waterproof stainless steel Bullet™ probe and waterproof cable. Handle probe model features stainless steel probe, diameter 0.13 inches, stem length 9.0 inches, overall length 12 inches. Bullet™ probe model features PTFE cable to withstand temperatures of -100 to 200°C, 0.25-inch diameter x 1 inch probe. Both models feature a 10-foot waterproof cable.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 2¾ x 4¼ x ¾-inch. Weight: 5 ounces. Housing: high-impact, chemical-resistant ABS plastic. Supplied: platinum probe/cable, bench stand, wall mount, batteries, and Traceable® Certificate.



Description	Probe	Cat. No.	Price
VWR® Traceable® Platinum High-Accuracy Freezer Thermometer (patents pending)	Stainless-steel with handle	89369-150	\$124.50
VWR® Traceable® Platinum High-Accuracy Freezer Thermometer with stainless-steel Bullet™ probe (patents pending)	Bullet™ Probe	89369-152	\$124.50

Available June 2013



## VWR® Traceable® Platinum Ultra-Accurate Digital Thermometer

Platinum sensor insures linear response and high accuracy across the entire range. Range: -200.00 to 500.000°C (-328.00 to 932.000°F). Resolution: 0.001° or 0.0001°. Accuracy: +0.05°C between -80 to 250°C. High-precision unit is designed for years of reliable service even in the most severe environments. Thermometer is ideal for foods, pharmaceuticals, petroleum products, wastewater, gas systems, soil, ovens, and electronics manufacturing. Membrane keys are splash-proof and easy to operate. Decimal-placement key changes display to show one, two, three, or four significant numbers after decimal. Internal data logger automatically captures Min/Max readings every hour for last 24 hours. Instant response probe updates readings 3 times per second for liquids, air/gas, semi-solids. HOLD allows user to freeze display for reading later. Computer output allows readings to be captured in real time.

Handle Probe Model: fast-response, 4-wire, platinum, waterproof, stainless-steel probe. Handle probe: 0.13-inch diameter x 6.3 inch stem length, 9-inch overall, 5-foot cable, waterproof, for liquids, air/gas, and semi solids with readings at tip penetration of 0.3-inch. Bullet™ Probe Model: fast-response, 4-wire, platinum, waterproof, stainless-steel. Bullet™ probe: ¼-inch diameter x 1-inch long, with high temperature (500°C) 10-foot flexible glass cable, waterproof, for liquids, air/gas, and semi solids.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 3½ x 5½ x 1¼-inch. Weight: 8 ounce. Supplied: battery, platinum probe/cable, plastic carrying case, Traceable® Certificate.



Description	Cat. No.	Price
VWR® Traceable® Platinum Ultra-Accurate Digital Thermometer with Handle Probe	89369-138	\$339.00
VWR® Traceable® Platinum Ultra-Accurate Digital Thermometer with Bullet™ Probe	89369-140	\$339.00
Accessories		
Handle Probe Low-Temp Cryo Platinum stainless, range -196 to 150°C	89369-142	\$249.00
Bullet™ Probe Low-Temp Cryo Platinum stainless, range -196 to 150°C	89369-144	\$249.00

Available June 2013

## VWR® Traceable® Memory/Waterproof Thermometer

Versatile panel-mount module snaps into place or is stand-alone unit. Comes complete with stainless-steel probe featuring an extended 10 foot cable and easy-to-grab handle.

### Easy-view, four-digit LCD is ¾-inch-high

Records minimum and maximum memory readings over any time period. Temperature range encompasses virtually all testing requirements: -58 to 572°F and -50 to 300°C. Resolution is 0.1° from -20 to 200°; 1° outside this range. Accuracy is ±1°C between -20 and 100°C. Reading updates every second.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Dimensions: 4¾-inch-height; 3¼-inch width; 1-inch depth. Probe diameter 0.19 inch; probe length (including handle) 7½ inches; cable length 10 feet. Supplied: Traceable® Certificate, probe, cable, and battery.



Description	Cat. No.	Price
VWR® Traceable® Memory/Waterproof Thermometer	15551-000	\$45.35



## VWR® Traceable® Extra-Extra Long-Probe Waterproof Thermometer

**NEW**

Extra-long probe, 20 inches (0.5 meter) created for deep vessels. Thermometer is ideal for placing in large beakers/flasks, vats, pails, and drums. Applications include foods, pharmaceuticals, and industrial plants. Waterproof (IP67) to a depth of 10 feet (3 meters) meter/probe/cable. Jumbo LCD can be read at 70 feet. Accurate readings with tip penetration of only 1 inch. Stainless-steel spring-powered holder for ease in placing probe anywhere. Wall mount provides instant viewing, indoor/outdoor use.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Range: 14.0 to 230.0°F (-10.0 to 110.0°C). Resolution: 0.1°. Accuracy: ±1°C. Probe: waterproof, stainless-steel, 20 inches (0.5 meter) length x 0.2 inches (5 mm) diameter. Probe handle: waterproof, chemical-resistant, length 2½ inches (6.5 cm). Cable length: Waterproof 10 feet (3 meters). Probe holder: stainless-steel, spring-loaded clamp, rugged construction. Size: 4¾ x 3⅓ x 1¼-inch. Weight: 7 ounces. Supplied: stainless-steel probe, stainless steel spring-loaded holder, wall mount, batteries, Traceable® Certificate.



Description	Cat. No.	Price
VWR® Traceable® Extra-Extra Long-Probe Waterproof Thermometer	89369-136	\$129.00

Available June 2013

## VWR® Traceable® Kangaroo™ Thermometer

Traceable Kangaroo™ Thermometer carries the 42-inch probe-cable in a reel-compartment pouch in the back of the unit. Perfect carry-around unit fits in any pocket, or use the convenient flip-open stand.

Intuitive, never-read-the-instructions operation allows every user to record identical results. Range is -58.0 to 572°F and -50.0 to 300°C with a resolution of 0.1° (between -19.9 to 199.9) otherwise 1° and an accuracy of ±1°C (between -30 and 250°C) otherwise ±2°C. Unit automatically captures and recalls minimum and maximum temperature readings over any time period. High and low alarm may be programmed in 1° increments. Alarm sounds every minute until temperature returns to non-alarm condition. HOLD key freezes the display to record a current reading.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Stainless-steel probe has a diameter of 0.14 inches x 7½ inch length. Supplied silver-oxide battery runs continuously for 1 year. Large ¾-inch digits are readable from 20 feet. Compact size: 2½ x 4¾ x ½ inches. Weight: 2¾ ounces.



Description	Cat. No.	Price
VWR® Traceable® Kangaroo™ Thermometer	21800-068	\$33.88



## VWR® Traceable® Digital Thermometer

At the touch of a key, display temperatures from -58.0 to 500.8°F and -50.0 to 260.0°C, switch from °F to °C, or set high/low alarms.

### Ideal for all solutions

This is the thermometer to use in foods, soils, cuvettes, water baths, wastewater, and incubators. Resolution is 0.1° and accuracy is ±1°C. Thermometer monitors temperature around the clock. Single battery runs continuously for 1 year. One-half-inch high display is readable from 10 feet. Thermometer automatically monitors solutions. Both a high and low alarm may be programmed in 1° increments. When temperature rises above or falls below set points, a 1-minute audible alarm signals an out-of-range condition. Alarm automatically resets when temperature returns to in-range reading. Alarm mode may be switched off when not required. Timer counts down from 99 hours, 59 minutes and may be set in 1-minute increments. When zero is reached, a 1-minute alarm sounds, and display flashes until a key is pressed.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Probe clips to unit for handy storage. Stainless-steel probe has a diameter of 0.14 inch, a length of 7¼ inches, and a cable length of 3 feet. Size: 2 x 4 x ½ inches. Weight: 3 ounces. Supplied: flip-open stand, probe, battery, and Traceable® Certificate.



Description	Cat. No.	Price
VWR® Traceable® Digital Thermometer	61161-274	\$60.38

## VWR® Traceable® Mini-Thermometer

### So easy—no instructions needed

Business-card size is perfect to carry anywhere. Fits in tool kit, briefcase, or coat pocket. Small but powerful unit displays from -58 to 302°F and -50 to 150°C, with a resolution of 0.1° between -20 and 200°. Accuracy is ±1°C between -20 to 100°C.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Easy-to-read digits are ¾-inch-high. Stainless-steel probe (0.14-inch diameter x 7-inch length) is resistant to most chemicals. Cable (18-inch length) wraps into a slot around unit and probe clips to unit for easy storage. Size: 3 x 2 x ½ inches. Weight: 1 ounce. Supplied: Traceable® Certificate and 1-year silver-oxide battery.



Description	Cat. No.	Price
VWR® Traceable® Mini-Thermometer	62344-925	\$40.38

## VWR® Traceable® Alarm Thermometer/Alarm Timer

Unique thermometer/timer with alarms is perfect for monitoring liquids, air/gas, or semisolids. Measure in °F or °C with a range of 32 to 392°F and 0 to 200°C. Resolution is 1° and accuracy is ±2°C. Triple display simultaneously shows time remaining to zero, probe temperature, and temperature alarm setting. Large, 1½ x 2-inch LCD may be read from 9 feet away. Two distinctive alarms signal time and temperature.

### Alarms for temperatures and time

Temperature alarm may be set in 1° increments. A five-minute alarm sounds continuously when temperature rises above alarm set point. Alarm continues for 5 seconds every minute until switched off or temperature falls below set point. Timer counts down from 24 hours and may be set in 1-minute increments. When zero is reached, a 1-minute alarm sounds, Time's Up flashes, and timer begins counting up. For repetitive times, a memory recalls previous setting. Intuitive controls are front-mounted. Viewing angle is adjustable. Fold-back display panel and magnets on back permit vertical mounting.

### Metal cable for ovens

Detachable, curved stainless-steel probe has a ¼-inch diameter and 8½-inch length. Metal cable (42 inches) may be placed in an oven or incubator. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST. High-impact, chemical-resistant ABS plastic base: 2¾ x 3 x ½ inches, LCD: 2¾ x 2½ x ½ inches. Weight: 4¼ ounces.



Description	Cat. No.	Price
VWR® Traceable® Alarm Thermometer/Alarm Timer	62344-916	\$40.47

## VWR® Traceable® Waterproof Thermometer °F/°C

Here's the perfect thermometer for wet areas. Case is waterproof and shockproof. Use for monitoring of liquids, air/gas, or semisolids in freezers, water baths, incubators, and refrigerators. Stainless-steel probe is resistant to most laboratory chemicals.

### Wide temperature range

Wide range covers 99 percent of the lab's routine temperature measurements: Range is -58 to 572 °F and -50 to 300°C with a resolution of 0.1° from -19.9 to 199.9° (otherwise 1°). Accuracy is ±1°C between -20 and 100°C. Ultra™ model accuracy is ±0.5°C at tested points. Easy-view ¼-inch-high LCD digits.

### Records minimum/maximum readings

At the touch of a key, memory recalls highest and lowest temperature readings over any time period. Reading updates every second. Solid-state construction eliminates dangers inherent in breakable glass and toxic mercury thermometers. Thermometer operates in rugged conditions and outdoors. Waterproof construction is ideal for wet labs, wash-down areas, and virtually all field applications. Unit is engineered to be shockproof in drop tests up to 5 feet. Stainless-steel, 4¾-inch long, 0.14-inch diameter probe, 10-foot cable, and digital-display housing are all waterproof. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST. Supplied: suction cups, magnets, Velcro®, Traceable® Certificate, 1.5 volt silver-oxide battery. Size: 1¾ inch dia. x ½-inch depth. Weight: 2 ounces.



Description	Accuracy	Cat. No.	Price
VWR® Traceable® Waterproof Thermometer with probe/cable	±1°C	61161-283	\$40.42
VWR® Traceable® Ultra™ Waterproof Thermometer with probe/cable	±0.5°C	46610-024	\$52.89



## VWR® Traceable® Snap-in Module with Probe

Versatile panel-mount module snaps into place or is stand-alone unit. Comes complete with stainless-steel probe featuring an extended 10-foot cable and easy-to-grab handle.

### Easy-view, four-digit LCD is ¾-inch-high

Records minimum and maximum memory readings over any time period. Temperature range encompasses virtually all testing requirements: -58 to 572°F and -50 to 300°C. Resolution is 0.1° from -20 to 200°; 1° outside this range. Accuracy is ±1°C between -20 and 100°C. Reading updates every second.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Dimensions: 1½-inch-height; 2¼-inch width; ½-inch-depth. Probe diameter 0.14 inch; probe length (including handle) 2¾ inches; cable length 10 feet. Supplied: Traceable® Certificate, probe, cable, and battery.



Description	Cat. No.	Price
VWR® Traceable® Snap-in Module with Probe	77776-730	\$26.13

## VWR® Traceable® Universal Thermometer with Alarm

### Universal Thermometer is affordable and easy to use

Use this thermometer anywhere. Constructed of shock-resistant ABS plastic. Water-resistant case is sealed with an O-ring gasket to stop dirt, dust, fumes, and water. Perfect for use in lab or plant's worst environment. Splash-proof pouch with shoulder strap protects unit and provides probe storage. Reads °F/°C on a jumbo, ¾-inch-high LCD. Range is -58.0 to 500.0°F and -50.0 to 260.0°C. Resolution is 0.1° and accuracy is ±1.0°C or 1% of reading. Thermometer monitors temperature continuously for 3 years and features a selectable display update rate of 1 second or 10 seconds. A high and low alarm may be programmed in 1° increments. When temperature rises above or falls below the set points, a 1-minute audible alarm signals an out-of-range condition, and a symbol flashes on the LCD. The alarm mode may be switched off for use as a non-alarm thermometer. At the touch of a key, memory recalls highest and lowest temperature readings over any time period.

### Countdown timer

Countdown timer function may be programmed in 1-minute increments from 99 hours 59 minutes (display shows hours, minutes, and seconds remaining). Unit sounds alarm when zero is reached. Accuracy is 0.01%.

### Traceable to NIST for accuracy

To assure accuracy individually serial-numbered Traceable® Certificates for time and temperature are provided from an ISO 17025 calibration laboratory accredited by A2LA. They indicate traceability to standards provided by NIST (National Institute of Standards and Technology).

### Total package

Supplied: Traceable® Certificates, probe, soft pouch, and two alkaline batteries. Triple-purpose, stainless-steel probe (liquids, air/gas, and semisolids) dimensions: diameter 0.14 inch, stem length 4¼ inches, overall length 8 inches. Cable length is 4 feet. Size: 2½ x 6½ x 1 inches. Weight: 8 ounces.



Description	Cat. No.	Price
VWR® Traceable® Universal Thermometer with Alarm	23609-234	\$128.37

## Probe attached by cable to Thermometer, Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Length (inch)		Waterproof Total Unit/Cable/Probe	Unit Size (inches)	Alarm	Display Min/Max
						Probe	Cable				
61161-324	29	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	0.75	120	n/y/y	4 x 4¼ x ¾	no	yes
61161-278	29	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	0.75	120	n/y/y	3¼ x 2¼ x ⅝	no	no
62344-914	30	Yes	-50 to 70°C	0.1°	±1.0	0.68	42	n/y/y	4 x 4 x ⅝	yes	no
62344-920	30	Yes	-50 to 70°C	0.1°	±1.0	0.68	36	n/y/y	3 x 3 x ½	yes	no
61161-334	31	Yes	-58 to 158°F / -50 to 70°C	0.1°	±1.0	0.75	120	n/y/y	2¾ x 2¾ x ¾	no	no
61161-332	31	Yes	32 to 122°F / 0 to 50°C	0.1°	±1.0	N/A	N/A	n/na/na	2¾ x 2¾ x ¾	no	no



## VWR® Traceable® Monitoring Thermometer

### Always-on Monitoring Thermometer with 10 feet of submersible cable and probe

Monitor temperatures of liquids, air/gas, and semisolids from across the room on a giant LCD. Perfect thermometer for monitoring reagents or solutions in tanks, water baths, incubators, and refrigerators. Reads from -58.0 to 158.0°F and -50.0 to 70.0°C with 0.1° resolution and ±1°C accuracy. Reads in °F or °C with the flick of a switch. Unit displays ambient temperature and probe temperature at the touch of a key. Microcomputer and solid-state construction rid lab of glass thermometer breakage and mercury problems. Display updates every 10 seconds, thus eliminating 3-minute lag inherent in glass and dial thermometers.

### Place anywhere

Easy-view, ¾-inch-high display may be read from 10 feet. Velcro® tabs on back allow unit to be placed on ovens, water baths, desiccators, or refrigerators. Ten-foot cable and sensor perform accurately even under water.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Sensor diameter is ⅜ inch and length is ⅘ inches. Unit is 3¼ x 2¼ x ⅝ inches. Weight: 2½ ounces. Supplied: Traceable® Certificate, probe bracket, Velcro® tabs, flip-open stand, battery.

Description	Cat. No.	Price
VWR® Traceable® Monitoring Thermometer	61161-278	\$40.93

## VWR® Traceable® Big-Digit Memory Thermometer

### Big-digit thermometer with dual min/max memory

Easy-view, 1½-inch-high jumbo digits may be read from 25 feet. Dual display permits reading ambient and probe temperatures simultaneously. Minimum/maximum memory readings may be displayed or reset at the touch of a key. External probe range is -58.0 to 158.0°F / -50.0 to 70.0°C. Ambient sensor (inside case) range is 23.0 to 122.0°F/-5.0 to 50.0°C. Resolution is 0.1° and accuracy is ±1°C. This stable and accurate unit requires no adjustment or maintenance. External (⅜-inch diameter by ⅘-inch length) probe is supplied with a 10-foot cable. Both cable and sensor perform accurately when under water. Always-on instrument reads temperatures constantly.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: flip-open stand, wall mounting, Velcro®, Traceable® Certificate, and battery. Case is high-impact, chemical-resistant ABS plastic. Size: 4 x 4¼ x ¾ inches. Weight: 4 ounces.



Description	Cat. No.	Price
VWR® Traceable® Big-Digit Memory Thermometer	61161-324	\$41.34



## VWR® Traceable® Four-Alarmer Thermometer

Thermometer has four unique alarm configurations: alarm triggers when temperature is higher than set point, lower than set point, outside of high and low set points, or inside of high and low set points. This allows precise monitoring of any appliance (water bath, incubator, refrigerator) or experiment.

Green/red lights blink and alarm sounds when out-of-range condition is detected. Continuous alarm sounds every minute for 5 seconds until the temperature returns to non-alarm condition or until alarm is turned off. Temperature range is  $-58.0$  to  $158.0^{\circ}\text{F}$  or  $-50.0$  to  $70.0^{\circ}\text{C}$  with a resolution of  $0.1^{\circ}$  and an accuracy of  $\pm 1^{\circ}\text{C}$ . One-half-inch-high digits are readable from 10 feet. Front panel controls make it easy to set.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

High-impact, chemical-resistant ABS plastic case is  $3 \times 3 \times \frac{1}{2}$  inches. Probe size: 0.2-inch dia. x  $\frac{5}{8}$ -inch length, 3-foot cable. Weight:  $2\frac{1}{4}$  ounces. Supplied: removable suction cup, stand, self-adhesive wall mount, Traceable® Certificate, battery.

Description	Cat. No.	Price
VWR® Traceable® Four-Alarmer Thermometer °C	62344-920	\$36.65
VWR® Traceable® Four-Alarmer Thermometer °F	62344-918	\$36.65

## VWR® Traceable® Big-Digit 4-Alert Alarm Thermometer

Large,  $1\frac{1}{8}$ -inch-high digits can be viewed from across the lab. Unique Four-Alert Thermometer provides user with precise monitoring of the slightest change in temperature. Temperature range is  $-58.0$  to  $158.0^{\circ}\text{F}$  or  $-50.0$  to  $70.0^{\circ}\text{C}$ , resolution is  $0.1^{\circ}$ , and accuracy is  $\pm 1^{\circ}\text{C}$ . Front panel controls are easy to set. Unit displays both probe and ambient temperature.

### Warns if too hot or cold

Alarm will activate at a temperature above a setting, below a setting, between two settings, or outside two settings. Green/red lights blink and an alarm sounds when an out-of-range condition is detected. Continuous alarm sounds every minute for 5 seconds until the temperature returns to a non-alarm condition or until the alarm is turned off. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: wall mount, stand, and suction cup. Sensor dimensions: 0.2-inch dia. x  $\frac{2}{5}$ -inch length,  $3\frac{1}{2}$ -foot cable. ABS plastic shock-resistant and chemical-resistant case:  $4 \times 4 \times \frac{5}{8}$  inches. Weight:  $4\frac{1}{4}$  ounces.



Description	Cat. No.	Price
VWR® Traceable® Big-Digit Four-Alert Alarm Thermometer °C	62344-914	\$38.14
VWR® Traceable® Big-Digit Four-Alert Alarm Thermometer °F	62344-922	\$38.14

## VWR® Traceable® Solar-Powered Thermometer

Thermometer is always-on and runs for years powered from light in lab or plant. Efficient and cost-saving solar panels make unit environmentally attractive. Monitor ambient temperature or temperatures of liquids, air/gas, and semisolids. Perfect thermometer for measuring temperatures of solutions in tanks, water baths, incubators, and refrigerators. Sensor and cable perform accurately even when under water. It's ideal for food inspection, petroleum tests, quality control, biomedical studies, R/D analysis, and wastewater tests. Reads in °F or °C at the flick of a switch. Display updates every 10 seconds to save time and eliminate 3-minute lag inherent in glass and dial thermometers. Resolution is 0.1°. Accuracy is ±1°C.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: slot for wall mounting, Velcro®, solar panels, backup battery for dim areas, external 3/16-inch-diameter by 1/8-inch sensor, and 10-foot cable. Unit: 2 3/4 x 2 3/4 x 3/4 inches. Weight: 2 ounces.



Description	Range	Cat. No.	Price
VWR® Traceable® Solar-Powered Thermometer, External	Probe sensor range is -58.0 to 158°F and -50.0 to 70.0°C	<b>61161-334</b>	<b>\$28.60</b>
VWR® Traceable® Solar-Powered Thermometer, Internal	Internal ambient sensor range is 32.0 to 122°F and 0 to 50.0°C	<b>61161-332</b>	<b>\$27.31</b>

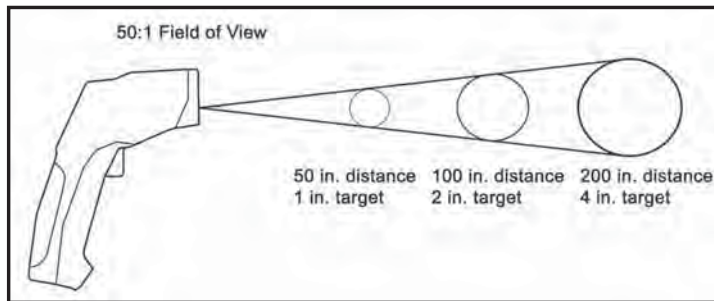
## Infrared Thermometer Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Field of View ①	Emissivity ②	Laser	Min/Max Readings	Hi/Lo Alarms	Type-K Probe	Features
89140-188	32	Yes	-76 to 1022°F / -60 to 550°C	0.1°	±2 of the reading or 2°C	12:1	0.1 to 1.00 in .01 steps	Yes	Yes	Yes	Yes	Dual laser/Type-K
33501-416	33	Yes	-7 to 230°F / -22 to 110°C	0.1°	±1 between 15 to 40°C or ±1.5	1:1	0.95 fixed	N/A	Yes	N/A	No	Key-chain
36934-174	33	Yes	-27 to 428°F / -33 to 220°C	0.1°	±1 + 2%	1:1	0.95 fixed	N/A	N/A	N/A	No	Pocket clip/ strap/ key-chain
36934-176	33	Yes	-67 to 482°F / -55 to 250°C	0.1°	±1 + 2%	6:1	0.5 to 1.00 in .01 steps	Yes	Yes	N/A	No	Wrist strap
12777-846	34	Yes	-76 to 932°F / -60 to 500°C	0.1°	±2 or 2%	11:1	0.95 fixed	Yes	N/A	N/A	No	Trigger grip
12777-844	34	Yes	0 to 788°F / -20 to 420°C	1°	±2 or 2%	8:1	0.3 to 1.00 in .01 steps	Yes	Yes	Yes	No	9 memories
21800-018	35	Yes	14 to 572°F / -10 to 300°C	0.1°	±2 or 2%	7:1	0.1 to 0.95 in .01 steps	N/A	Yes	N/A	No	Probe 40-inch cable
36934-180	35	Yes	-58 to 1832°F / -50 to 1000°C	0.1° to 200, 1° over 200	±1.5% + 2°C	50:1	0.95 fixed	Yes	N/A	N/A	No	Trigger grip
36934-182	35	Yes	-58 to 1832°F / -50 to 1000°C	0.1° to 200, 1° over 200	±1.5% + 2°C	50:1	0.1 to 1.00 in .01 steps	Yes	Yes	Yes	No	Trigger grip
36934-178	36	Yes	-76 to 932°F / -60 to 500°C	0.1°	±1 + 2%	11:1	0.1 to 1.00 in .01 steps	Yes	Yes	Yes	Yes	Trigger grip
77776-724	36	Yes	-4 to 752°F / -20 to 400°C	0.1°	±3 or 3%	7:1	0.2 to 1.00 in 0.1 steps	Yes	Yes	N/A	Yes	Trigger grip



## ① What is Field of View?

Field of view is similar to a flashlight. The further the object is away, the larger the diameter of the beam. The further you are from a sample, the larger the area the IR thermometer is measuring. For example: if the field of view ratio for a thermometer is 6:1, then, when the thermometer is six inches from an object, the sensor is looking at and measuring a one-inch diameter. If the thermometer is 12 inches away, then the spot size being measured is two inches.



## ② What is Emissivity?

Emissivity refers to the amount of infrared radiation an object emits. The emissivity adjustment on IR thermometers is used to compensate for different materials. The default emissivity of 0.95 covers 90% of typical applications. For thermometers with adjustable emissivity a materials chart with suggested settings is provided. Generally very shiny, highly reflective surfaces require low emissivity settings.

## VWR® Traceable® Infrared Dual Lasers Thermometer with Type-K Probe

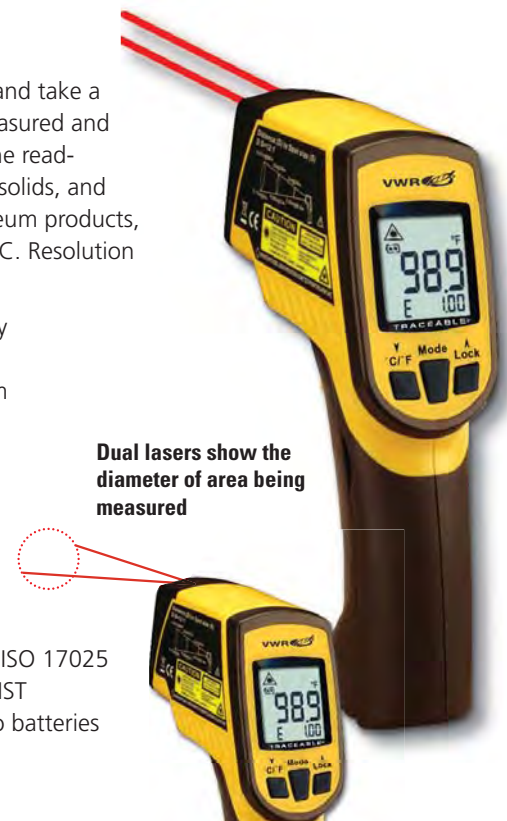
Traceable® Infrared Dual Laser Thermometer, operation is simple—turn on, point at sample, and take a reading in less than a second. Dual lasers indicate the diameter of the surface area being measured and the white LED light illuminates the surface. Field of view is 12:1 (at a distance of 24 inches the reading spot size is 2 inches). Unit reads both Fahrenheit and Celsius of any surface—solids, semisolids, and liquids. Non-invasive, measurements are ideal for food, life sciences, pharmaceuticals, petroleum products, clean rooms, electronics, and field use. Temperature range is -76 to 1022°F and -60 to 550°C. Resolution is 0.1°. Accuracy is ±2% of the reading or 2°C, whichever is greater.

The dual display shows current temperature plus one of the following eight modes: emissivity value, maximum memory, minimum memory, differential, average (time weighted), high temperature alarm, low temperature alarm, and probe temperature. Minimum and maximum feature permits viewing highest and lowest readings at any time. Thermometer displays the average of all readings made while taking measurements and the difference between two readings. Audible, user settable, high and low alarms signal out of range conditions. Display backlight permits viewing in low light conditions. For measurement of different types of material, adjustable emissivity may be set from 0.1 to 1.00 in increments of 0.01. Range using Type-K thermocouple jack is -83 to 2552°F and -64 to 1400°C.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Type-K beaded temperature sensor and two batteries are supplied with unit. Size: 7 x 3¾ x 2 inches. Weight: 9 ounces.

**(For a complete description of Type-K accessory probes see page 42.)**



Description	Cat. No.	Price
VWR® Traceable® Infrared Dual Lasers Thermometer with Type-K Probe	89140-188	\$130.43



## VWR® Traceable® Infrared Thermometer with Pocket Clip

### Traceable® Infrared Thermometer operation is simple

Turn on, point at sample, and take a reading in less than a second. Unit reads both Fahrenheit and Celsius of any surface—solids, semisolids, and liquids. Non-invasive, no-touch measurements are ideal for food, life sciences, pharmaceuticals, petroleum products, clean rooms, and electronics.

Temperature range is  $-27$  to  $428^{\circ}\text{F}$  and  $-33$  to  $220^{\circ}\text{C}$ . Resolution is  $0.1^{\circ}$ . Accuracy is  $\pm 1^{\circ}\text{C} + 2\%$ . To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Hold freezes the display at the current reading. Field of view is 1:1. The fixed emissivity of 0.95 covers 90% of all applications. Supplied: pocket clip, key-chain, lanyard, battery, Traceable® Certificate. Size:  $3\frac{1}{4} \times \frac{3}{4}$  inches. Weight:  $\frac{3}{4}$  ounces.



Description	Cat. No.	Price
VWR® Traceable® Infrared Thermometer with Pocket Clip	36934-174	\$39.98

## VWR® Traceable® Micro IR Thermometer

### New generation in IR—the pocket revolution

Pocket-size, infrared thermometer captures temperature readings of any surface—liquids, solids, and semisolids in less than a second. Operation is simple—turn it on, point at sample, and take reading. Non-invasive, no-touch temperature measurements are ideal for food, life sciences, field use, clean rooms, and for fast inspections. Range is  $-7.0$  to  $230^{\circ}\text{F}$  and  $-22.0$  to  $110^{\circ}\text{C}$  with a resolution of  $0.1^{\circ}$ . Accuracy is  $\pm 1^{\circ}\text{C}$  between  $15.0$  to  $40.0^{\circ}\text{C}$ , and  $\pm 1.5^{\circ}\text{C}$  outside of this range. Emissivity is fixed at 0.95. Field of view is 1:1. Sophisticated break-thru and remarkable performance are a result of NASA-style microelectronics.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Features include: easy-read  $\frac{1}{2}$ -inch-high digital display, soft-touch keys, key-chain, switchable  $^{\circ}\text{C}/^{\circ}\text{F}$ , hold, min only/max only readings, low battery alert, flip-open stand, battery. Size:  $2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$  inches. Weight: 1 ounce.



Description	Cat. No.	Price
VWR® Traceable® Micro IR Thermometer	33501-416	\$42.86

## VWR® Traceable® Infrared Laser Thermometer with Wristband

Traceable® Infrared Laser Thermometer is simple to operate—turn on, point at sample, and take a reading in less than a second. Unit reads both Fahrenheit and Celsius of any surface—solids, semi-solids, and liquids. Non-invasive, no-touch, measurements are ideal for food preparation, life sciences, pharmaceuticals, petroleum products, clean rooms, electronics, and field use.

Temperature range is  $-67$  to  $482^{\circ}\text{F}$  and  $-55$  to  $250^{\circ}\text{C}$ . Resolution is  $0.1^{\circ}$ . Accuracy is  $\pm 1^{\circ}\text{C} + 2\%$ . To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Hold freezes the display at the current reading. Field of view is 6:1. The emissivity is 0.05 to 1.00 in .01 steps. Minimum and maximum feature permits viewing highest and lowest readings at any time. Laser beam permits perfect sample target sighting. Supplied: wristband, battery, Traceable® Certificate. Size:  $4 \times 2 \times \frac{3}{4}$  inches. Weight:  $2\frac{1}{4}$  ounces.



Description	Cat. No.	Price
VWR® Traceable® Infrared Thermometer with Wristband	36934-176	\$68.79



## VWR® Traceable® Infrared Thermometer Gun

Small, lightweight Traceable® Infrared Thermometer Gun takes instant, less-than-a-second, temperature readings of any surface. Unique design permits one-handed point-and-shoot readings. Laser-sighting beam permits aiming precisely at target surface. Use for food, pharmaceuticals, electronics, safety inspection, and any liquid or solid.

Range is -76 to 932°F and -60 to 500°C with a resolution of 0.1°. Accuracy:  $\pm 2^{\circ}\text{C} + 1\%$  of reading. Emissivity is fixed at 0.95. Field of view is 11:1 (reads a spot the size of 2 inches from 22 inches away). Features include backlighting at the touch of a key, data hold freezes display reading, laser, low-battery indicator, automatic maximum recording, °C/°F key, and an auto-off feature.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 7 x 3 x 1½ inches. Weight: 6 ounces. Supplied: two batteries, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Infrared Thermometer Gun	12777-846	\$116.04

## VWR® Traceable® Infrared Thermometer with Memory/Alarm

### Utilizes laser targeting for precise touchless measurement

Temperature range is 0 to 788°F and -20 to 420°C with a resolution of 1° and an accuracy of  $\pm 2^{\circ}\text{C}$  or 2% of the reading. Small, lightweight, unit takes readings in under one second. Laser beam permits perfect temperature target sighting. Use in petroleum, electronics, plants, and outdoors. Use with liquids or solids. Keys permit adjusting emissivity from 0.3 to 1.0. Field of view is 8:1 (reads a spot the size of 2 inches from 16 inches away).

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Features include backlighting at the touch of a key, data hold freezes display reading, laser, maximum/minimum memory, 9 memories, high/low audible alarm, average readings, differential readings, low-battery indicator, and a °C/°F key. Size: 6 x 2 x 1¼ inches. Weight: 6 ounces. Supplied: wrist-strap, soft-sided carrying case, battery, Traceable® Certificate.



Description	Cat. No.	Price
VWR® Traceable® Infrared Thermometer with Memory/Alarm	12777-844	\$147.95



## VWR® Traceable® Infrared Wide-Range Thermometer Gun with 50:1 field of view

Infrared Thermometer Gun takes instant, less-than-a-second, temperature readings of any surface. Unique design permits one-handed point-and-shoot readings. Laser-sighting beam permits aiming precisely at target surface. It is ideal for food preparation, pharmaceuticals, field use, electronics, and safety inspection.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Range: -58 to 1832°F and -50 to 1000°C with a resolution of 0.1° to 200, 1° over 200. Accuracy: ±1.5% + 2°C. Field of view is 50:1 (reads a spot the size of 6 inches from 25 feet away). Features include backlighting at the touch of a key, data hold freezes display reading, laser, low-battery indicator, and °C/°F keys. Size: 9 x 4 x 2¼ inches. Weight: 10 ounces. Supplied: battery, carrying case, and Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Infrared Wide-Range Thermometer with 50:1 field of view (Emissivity is fixed at 0.95) (pictured left)	36934-180	\$230.16
VWR® Traceable® Infrared Wide-Range Plus Thermometer with 50:1 field of view Emissivity adjustable from 0.10 to 1.00 in 0.01 steps. Also features Min/Max memory, average readings, and Hi/Lo audible alarms. (pictured right)	36934-182	\$270.20



## VWR® Traceable® Infrared Digital Thermometer

Probe never comes in contact with surface or solution. Cable permits exact positioning of the sensor. Jumbo, 1¾-inch-high display may be switched from 14.0 to 572°F and -10.0 to 300°C. Switchable resolution is 0.1° or 1°. Accuracy is ±2°C or 2% of the reading.

### Connects to computer or data logger

Serial, computer output allows the thermometer to be connected to a computer or data logger for monitoring and storing results.

### Recalls high, low, and average readings

The field of view is 7:1 (at a distance of 21 inches the reading spot Size: 3 inches). Probe has an emissivity adjustment with a range of 0.1 to 0.95. This allows all types of material and liquid to be read. Sensor wavelength is 6 to 12 microns. Ultra-fast sampling rate is once per second. At the touch of a key, instrument recalls highest, lowest, and average readings. DATA HOLD key freezes display to capture readings. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: probe (6 x 1½ x 1½ inches), 40-inch cable, Traceable® Certificate, battery, and computer output software. Size: 7 x 3 x 1½ inches. Weight: 9½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Infrared Digital Thermometer	21800-018	\$313.07
VWR® Data Acquisition System (see complete description on page 88)	61161-386	\$131.75
VWR® Universal Wireless Radio-Signal Transceivers (see complete description on page 89)	89140-200	\$432.50
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Adaptor 115 VAC	61161-384	\$53.46

Computer Output





## VWR® Traceable® Infrared Thermometer with Trigger Grip

Traceable® Infrared Thermometer, operation is simple—turn on, point at sample, and take a reading in less than a second. Unit reads both Fahrenheit and Celsius of any surface—solids, semi-solids, and liquids. Non-invasive, no-touch, measurements are ideal for food preparation, life sciences, pharmaceuticals, petroleum products, clean rooms, electronics, and field use. IR temperature range:  $-76$  to  $932^{\circ}\text{F}$  and  $-60$  to  $500^{\circ}\text{C}$ . Resolution:  $0.1^{\circ}$ . Accuracy:  $\pm 1^{\circ}\text{C} + 2\%$ .

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). The dual display shows current temperature plus one of the following eight modes: emissivity value, maximum memory, minimum memory, differential, average (time weighted), high temperature alarm, low temperature alarm, and probe temperature. Min/Max feature permits viewing highest and lowest readings at any time. Thermometer displays the average of all readings made and the difference between two readings.

Audible, user settable, high and low alarms signal out of range conditions. Memory permits recalling individually captured temperatures. Hold freezes the display at the current reading. Backlighting permits viewing in low light conditions. Adjustable emissivity from 0.1 to 1.00. Field of view is 11:1 (for example, at a distance of 22 inches the reading spot size is 2 inches). Type-K thermocouple jack range:  $-83$  to  $2552^{\circ}\text{F}$  and  $-64$  to  $1400^{\circ}\text{C}$ . Supplied: Type-K probe, batteries, and Traceable® Certificate. Size:  $7 \times 2\frac{3}{4} \times 1\frac{1}{2}$  inches. Weight: 6 ounces.

(For a complete description of Type-K accessory probes see page 42.)

## VWR® Traceable® Noncontact Temperature Infrared Thermometer

Portable noncontact, infrared temperature measuring thermometer features adjustable emissivity. This control provides the widest possible range for accurately measuring different surface temperatures. Unique gun design allows one-handed use.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Adjustable emissivity from 0.2 to 1.0. Field of view is 7:1 (at a distance of 21 inches the reading spot size is 3 inches). Surface temperature range is switchable from  $-4.0$  to  $752^{\circ}\text{F}$  and  $-20.0$  to  $400^{\circ}\text{C}$ . Resolution:  $0.1^{\circ}$ . Accuracy:  $\pm 3^{\circ}\text{C}$  or  $\pm 3\%$  of the reading, whichever is greater.

### Min/Max memory

Features data hold, maximum memory, minimum memory, and 1-second sampling. Dimensions:  $7\frac{3}{4} \times 4\frac{3}{4} \times 2\frac{1}{3}$  inches. Weight:  $9\frac{5}{8}$  ounces. Supplied: Traceable® Certificate, Type-K beaded probe, carrying case, and battery.

(For a complete description of Type-K accessory probes see page 42.)

Description	Cat. No.	Price
VWR® Traceable® Infrared Thermometer with Trigger Grip	36934-178	\$128.29

Description	Cat. No.	Price
VWR® Traceable® Noncontact Temperature Infrared Thermometer	77776-724	\$229.62

## Type-K Probe Thermometer Specifications Chart

Cat. No.	Page No.	Traceable® Certificate	Range	Resolution	Accuracy (°C)	Length (inch)		Waterproof Total Unit/Cable/Probe	Alarm	Display Min/Max
						Probe	Cable			
61161-279	37	Yes	-40 to 2000°F / -40 to 1200°C	1°	±1	0.13	48(2)	n/y/y	no	no
21800-070	37	Yes	-58 to 1382°F / -50 to 750°C	1°	±(0.75% + 1°C)	0.13	48	n/y/y	no	no
89094-738	38	Yes	-328 to 2372°F / -200 to 1300°C	0.1°/1°	±0.3% + 1°C	0.13	48	y/y/y	no	yes
89094-740	38	Yes	-58 to 2000°F / -50 to 1300°C	0.1°/1°	±0.3% + 1°C	0.13	48	n/y/y	no	max only
23609-232	39	Yes	-328 to 2498°F / -200 to 1370°C	0.1°/1°	±1.0	0.13	48	n/y/y	yes	yes
77776-722	39	Yes	-58 to 1999°F / -50 to 1300°C	1°	±0.3% + 1°C	0.13	48(2)	n/y/y	no	max only
77776-726	40	Yes	-50 to 1999°F / -50 to 1300°C	0.1°/1.0°	±0.3% + 1°C	0.13	48	n/y/y	no	max only
23609-230	40	Yes	-50 to 1999°F / -50 to 1230°C	0.1°/1.0°	±0.3% + 1°C	0.13	48(2)	n/y/y	no	no
23226-656	41	Yes	-50 to 1999°F / -50 to 1230°C	0.1°/1.0°	±0.75% + 1°C	0.13	48(2)	n/y/y	no	yes
77776-716	41	Yes	-328 to 2498°F / -200 to 1370°C	0.1°/1°	±1.0	6.25	40	n/n/y	no	yes
21800-074	43	Yes	-58.0 to 2372°F / -50.0 to 1300°C	0.1°/1°	±(0.75% + 1°C)	5	40	n/n/y	no	no
61161-286	43	Yes	-328 to 2431°F / -200 to 1333°C	0.1°	±1.0 and ±1.5°C	0.13	48(2)	n/n/y	yes	yes

## VWR® Traceable® Expanded-Range Thermometer

### Pocket-size, Expanded-Range Thermometer is inexpensive

Shockproof, pocket-size thermometer is ideal for lab, plant, and field use. Expanded-range, fast-response, and one-switch operation make it the perfect routine thermometer. Range is -40 to 2000°F or -40 to 1200°C. Resolution is 1° and meter only accuracy is ±(1°C + 1%) from 0 to 750°C. Two probes allow simultaneous monitoring of two tests. This thermometer is designed for simple operation. Three-position switch indicates probe 1, probe 2, or off. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### As small as a 3x5-inch card

Comes ready to use with two fast-response, Type-K beaded sensors, battery, and 4-foot cable. Size: 3 x 5 x 1 inch. Weight: 4 ounces.

Description	Cat. No.	Price
VWR® Traceable® Expanded-Range Thermometer °F	61161-279	\$107.28
VWR® Traceable® Expanded-Range Thermometer °C	61161-280	\$107.28
Easy-Use™ Adapter 115 VAC	61161-384	\$53.46



(For a complete description of Type-K accessory probes see page 42.)

## VWR® Traceable® Pocket-Size™ Type-K Thermometer

Shockproof, pocket-size thermometer is ideal for lab, plant, and field use. New microchip design provides ultra low cost unit. Wide-range, fast-response, and one-switch operation make it the perfect routine thermometer.

It is compatible with all Type-K probes. Range is -58 to 1382°F or -50 to 750°C, with a resolution of 1° and meter accuracy of ±(1°C + 0.75%) between 0 to 500°C and ±(1°C + 1%) 500 to 750°C. Below 0 accuracies are: -20°C ±2°C, -40°C ±4°C, and -50°C ±5°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Comes ready to use with a fast-response, Type-K probe with beaded sensor, 4-foot cable, nylon carrying case, and battery. Size: 2¾ x 4¼ x 7/8 inches. Weight: 4 ounces.

(For a complete description of Type-K accessory probes see page 42.)

Description	Cat. No.	Price
VWR® Traceable® Pocket-Size™ Type-K Thermometer °F	21800-070	\$32.81
VWR® Traceable® Pocket-Size™ Type-K Thermometer °C	21800-072	\$32.81





## VWR® Traceable® Waterproof Type-K Thermometer

### Wide range thermometer reads –200 to 1300°C

Thermometer reads from –328 to 2372°F and –200 to 1300°C with a resolution of 0.1° and 1°. Switch from °F to °C at the touch of a key. Bright, 5/8-inch-high digits are readable from 10 feet away. Back-lighting key permits reading in dark areas. Unit features HOLD key that freezes display to capture current reading. Battery powers unit for 1 year of routine use.

### Waterproof to seal out moisture

One of the most technically advanced, fastest-reading, yet easy-to-use thermometers ever designed. A microprocessor updates the display 2.5 times per second. Rugged unit is constructed of shock-resistant ABS plastic. Waterproof design stops dirt, dust, fumes, and water—perfect for use in lab or plant's worst environment. Supplied rubber boot for probe connector allows the unit to remain waterproof with thermocouple attached. At the touch of a key, recalls minimum and maximum temperature readings. Meter-only accuracy: ±0.3% of the reading plus 1°C between –200°C to 1000°C, otherwise 0.5% of the reading plus 1°C. Unique differential feature shows the difference in temperature from a set point. Uses all Type-K thermocouple probes.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Designed for rough handling

Supplied: carrying case, Traceable® Certificate, 9-volt battery, and fast-response, Type-K beaded probe with cable length of 4-feet. Size: 2 2/3 x 7 x 1 1/4 inches. Weight: 8 ounces.

**(For a complete description of Type-K accessory probes see page 42.)**

Description	Cat. No.	Price
VWR® Traceable® Waterproof Type-K Thermometer	89094-738	\$135.76

## VWR® Traceable® Big Digit Type-K Thermometer

### Wide-range thermometer reads –50 to 1300°C

Thermometer reads from –58 to 2000°F and –50 to 1300°C with a resolution of 0.1° and 1°. Switch from °F to °C at the touch of a key. Easy-to-read big digits measure over 5/8-inch-high and are readable from 15 feet away. Unit features HOLD key that freezes display to capture current reading. Max Hold feature permits capturing and displaying the highest temperature achieved over any time period.

### Innovative design, simple operation

Intuitive, four-key operation makes it easy to use. Microprocessor updates the display 2.5 times per second. Rugged unit is constructed of shock-resistant ABS plastic. Meter-only accuracy: ±0.3% of the reading plus 1°C between –50°C to 1000°C, otherwise 0.5% of the reading plus 1°C. Uses all Type-K thermocouple probes.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: carrying case, Traceable® Certificate, 9-volt battery, and fast-response, Type-K beaded probe with 4-foot cable. Size: 3 x 7 1/4 x 1 1/4 inches. Weight: 7 ounces

**(For a complete description of Type-K accessory probes see page 42.)**



Description	Cat. No.	Price
VWR® Traceable® Big Digit Type-K Thermometer	89094-740	\$72.63

## VWR® Traceable® Total-Range Thermometer

### Total-Range Thermometer reads –200 to 1370°C

Thermometer reads from –328 to 2498°F and –200 to 1370°C with a resolution of 0.1° and 1°. Switch from °F to °C at the touch of a key. Jumbo-size, 5/8-inch-high digits are readable from 10 feet away. Unit features HOLD key that freezes display to capture current reading. A microprocessor updates the display twice a second. Rugged unit is constructed of shock-resistant ABS plastic. Water-resistant case stops dirt, dust, fumes, and water—perfect for use in lab or plant’s worst environment.

### Use with all Type-K probes

Meter-only accuracy: ±1°C between –50°C to 740°C, otherwise ±2°C. Uses all Type-K thermocouple probes. At the touch of a key, recalls minimum and maximum temperature readings captured during any time. Alarm function may be set in 1° increments. Alarm sounds when the temperature rises above or falls below high/low set points. Count-up timer alarm may be set from 23 hours 59 minutes to 1 minute. Alarm sounds when time is up. Back-lighting permits reading in dark areas. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Designed for rough handling

Supplied: PVC casing, flip-out stand, Traceable® Certificate, batteries, Type-K beaded probe, 4-foot cable. Size: 3¼ x 7 x 1½ inches. Weight: 8 ounces.

(For a complete description of Type-K accessory probes see page 42.)



Description	Cat. No.	Price
VWR® Traceable® Total-Range Thermometer	23609-232	\$129.96

## VWR® Traceable® Two-Channel Thermometer with Offsets

Provides recessed front panel adjustable offsets on two channels allowing user to adjust thermometer exactly to a specific temperature, in-house calibration, or particular sensor for increased accuracy.

### Shockproof rubber case

Provided rubberized case makes it a virtually environment-proof instrument for all weather, shock, and abusive conditions.

### Temperatures to 1999°F

Large LCD shows temperatures of probe 1, probe 2, or the difference (delta) of the two probes. Readout in °F and °C. Temperature range is –58 to 1999°F and –50 to 1300°C. Resolution is 1°. Meter only accuracy is ±0.3% plus 1°C. Three-quarter-inch-display is readable from 12 feet. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Stores highest temperatures reached

MAX key captures the highest reading achieved. HOLD key freezes display to capture current reading. Uses all Type-K thermocouples. Supplied: Velcro® strap, stand, two probes, and Traceable® certificate. Size: 2¾ x 5¼ x 1¼ inches. Weight: 5½ ounces.

(For a complete description of Type-K accessory probes see page 42.)



Description	Cat. No.	Price
VWR® Traceable® Two-Channel Thermometer with Offsets	77776-722	\$141.25

User Adjustable Calibration Offsets



## VWR® Traceable® Digital Thermometer with Recorder Output



Recorder jack provides a millivolt signal output. This enables thermometer to be used with any chart recorder, strip recorder, or computer that accepts millivolt signals.

### Output results on demand

Monitor conditions in chambers, clean rooms, food processing, scientific labs, and all temperature-sensitive manufacturing operations. Recorder output provides a hard copy for today's stringent QC documentation requirements. Output specifications are 1 mV output per degree in 0.1° display mode and 0.1 mV output per degree in the 1° display mode. Range is -50 to 1999°F and -50 to 1300°C, with a meter-only accuracy of ±0.3% of the reading plus 1°C. Resolution is 0.1° from -50.0 to 199.9° and is 1° for other readings.

### Stores highest readings reached

MAX key captures the highest reading achieved. HOLD key freezes display to capture current reading. Uses all Type-K thermocouples. Large, bright, ½-inch-high, four-digit LCD can be read from 10 feet away. Unit is completely portable and designed for years of dependable and reliable service.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Comes ready to use with fast-response, Type-K beaded probe with 3-foot cable, 9-volt battery, recorder output jack, and Traceable® Certificate. Size: 2¾ x 5¼ x 1¼ inches. Weight: 5½ ounces

(For a complete description of Type-K accessory probes see page 42.)

Description	Cat. No.	Price
VWR® Traceable® Digital Thermometer with Recorder Output	77776-726	\$133.16
Easy-Use™ Adapter 115 VAC	61161-384	\$53.46

## VWR® Traceable® Dual-Channel Thermometer

### Thermometer shows two probe readings and the difference between readings

Monitors temperatures using two probes. Dual-display simultaneously shows temperature of both probes or temperature of one probe and the difference between probes (T1-T2). With two separate sensors, it is easy to note temperature variations in an incubator/oven or temperature gradations in a water bath. Sense changes between inlet and outlet temperatures in any system. HOLD key freezes the display.

### Temperature range to 1230°C

Temperature ranges are -50.0 to 1999°F and -50.0 to 1230°C. Resolution is 0.1° under 200° and 1° above 200°. Meter-only accuracy is 0.3% plus 1°C. Extra-large, ¾-inch-high display is readable from 15 feet. Uses all Type-K thermocouple probes.

### Chemical-and shock-resistant case

Ideal for quality control, measuring temperatures in petroleum products, and biotechnology applications. Case is chemical and shock-resistant ABS plastic. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery, two fast-response Type-K beaded probes, 48-inch cable. Size: 7 x 3 x 1¼ inches. Weight: 9½ ounces.

(For a complete description of Type-K accessory probes see page 42.)



Description	Cat. No.	Price
VWR® Traceable® Dual-Channel Thermometer	23609-230	\$181.05
Easy-Use™ Adaptor 115 VAC	61161-384	\$53.46



## VWR® Traceable® Double Thermometer

Serial computer output allows thermometer to be connected to computer or data logger for capturing and storing results. Resolution is 0.1° (from -50.0 to 199.9°F) and 1° in both °C and °F over the entire range of -50 to 1999°F or -50 to 1230°C. Meter only accuracy is ±0.75% + 1°C. Memory recalls maximum and minimum readings. HOLD key freezes display for reading later. Dual channels permit monitoring two separate probes. Dual display simultaneously shows temperature of both probes or temperature of one probe and the difference between probes (T1-T2).

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Digits are ¾-inch high. Case is impact-resistant ABS plastic. Uses all Type-K thermocouple probes. Supplied: two fast-response probes, two 48-inch cables, 9-volt battery, and Traceable® Certificate. Size: 7 x 3 x 1¼ inches. Weight: 9½ ounces.

(For a complete description of Type-K accessory probes see page 42.)



Wireless Capable  
(see page 89)

Computer Output

Description	Cat. No.	Price
VWR® Traceable® Double Thermometer	23226-656	\$178.71
VWR® Data Acquisition System (see complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
VWR® Universal Wireless Radio-Signal Transceivers (see complete description on page 89)	89140-200	\$432.50

## VWR® Traceable® Memory Wide-Range Thermometer

Thermometer temperature range covers -328 to 2498°F and -200 to 1370°C. Resolution is 0.1 from -200 to 640°C (-328 to 990°F) otherwise 1°. Meter only accuracy is ±1°C.

### Triple-purpose probe

Supplied stainless-steel, triple-purpose, Type-K thermocouple probe may be used to measure temperatures of liquids, air/gas, and semisolids. Large, ½-inch-high LCD is easy to read. Thermometer accepts any Type-J, K, or T probe. Minimum and maximum readings may be recalled instantly. Unit features backlit display so that answers may be read in poor lighting— even total darkness. Computer output allows thermometer to be connected to a computer or data logger for capturing and storing readings. Count-up timer provides a relative time measurement while taking temperatures and recording Min/Max memories.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: stainless-steel Type-K thermocouple probe, battery, and Traceable® Certificate. Size: 2¾ x 7 x 1¼ inches. Weight: 6½ ounces.

(For a complete description of Type-K accessory probes see page 42.)

Description	Cat. No.	Price
VWR® Traceable® Memory Wide-Range Thermometer	77776-716	\$480.58
Data Acquisition System (complete description on page 88)	89140-174	\$96.79
VWR® Universal Wireless Radio-Signal Transceivers (see complete description on page 89)	89140-200	\$432.50



Wireless Capable  
(see page 89)

Computer Output



61161-372

## VWR® Type-K Beaded Probe

Fast-response, Type-K thermocouple, beaded probe. PTFE cable can withstand temperatures of -40 to 250°C continuous or 300°C short-term use. Dimensions: 0.06-inch diameter probe with 4-foot cable for use with all Type-K thermometers in liquids, air/gas, and semisolids.

Description	Cat. No.	Price
VWR® Type-K Beaded Probe	61161-372	\$25.37



61161-305

## VWR® Stainless-steel Type-K Probe

### Accessory Probe

Stainless-steel with handle, triple purpose (liquids, air/gas, and semisolids), Type-K (NiCr/NiAl) probe. Temperature range is -50 to 700°C. Dimensions: 0.13-inch diameter; 5-inch stem length; 7½-inch overall length. Supplied: 40-inch cable.

Description	Cat. No.	Price
VWR® Stainless-steel Type-K Probe	61161-305	\$55.57



23609-238

## VWR® Low Temperature Type-K Probe

Stainless-steel with handle, triple purpose (liquids, air/gas, and semisolids), Type-K (NiCr/NiAl) probe. Temperature range is -240 to 220°C. Dimensions: diameter 0.17 inch; stem length 12 inches; overall length 17 inches. Supplied: 8-foot expandable cable.

Description	Cat. No.	Price
VWR® Low-Temperature Type-K Probe	23609-238	\$171.03



77776-728

## VWR® High Temperature Type-K Beaded Probe

Ten-foot-long 0.19-inch diameter braided metal wire cable with smooth tip measures -73 to 982°C continuous or 1093°C short-term use. For use with all Type-K thermometers in liquids, air/gas, and semi-solids.

Description	Cat. No.	Price
VWR® High-Temperature Type-K Probe	77776-728	\$279.29



89030-232

## VWR® Type-K Surface Probe

Stainless-steel probe with handle, is for use with Type-K thermometers. Temperature range is -73 to 760°C. Dimensions: 5-inch probe length; 0.5-inch tip diameter; 8½-inch overall length. Supplied: 36-inch cable.

Description	Cat. No.	Price
VWR® Type-K Surface Probe	89030-232	\$154.98

## VWR® Traceable® Workhorse™ Thermometer



Type-K Workhorse™ Thermometer provides a sharp readout in dim and very bright light. Unit provides a long battery life (150 to 200 continuous hours), high accuracy, wide temperature range, and a new chip design for an ultra low cost.

Type-K range is  $-58.0$  to  $2372^{\circ}\text{F}$  and  $-50.0$  to  $1300^{\circ}\text{C}$ . Resolution is  $0.1^{\circ}$  between  $-50.0$  to  $200.0$  and  $1^{\circ}$  elsewhere. Meter accuracy is  $\pm(1^{\circ}\text{C} + 0.75\%)$  between  $0$  to  $500^{\circ}\text{C}$ ;  $\pm(1^{\circ}\text{C} + 1\%)$   $500$  to  $750^{\circ}\text{C}$ ;  $\pm(1^{\circ}\text{C} + 2\%)$   $750$  to  $1000^{\circ}\text{C}$ ;  $\pm(3^{\circ}\text{C} + 4\%)$   $1000$  to  $1200^{\circ}\text{C}$ ;  $\pm 2^{\circ}\text{C}$  at  $-20$ ;  $\pm 3^{\circ}\text{C}$  at  $-40$ ; and  $\pm 4^{\circ}\text{C}$  at  $-50$ .

Recessed front panel adjustable offset allows user to adjust thermometer exactly to a specific temperature, in-house calibration, or a particular sensor for increased accuracy. HOLD key freezes display to capture current reading. It is compatible with all Type-K probes. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Supplied: fast response Type-K probe, bench stand, 9-volt battery, and carrying case. Probe diameter is  $\frac{1}{8}$ -inch, stem length  $3\frac{1}{8}$  inches, overall length 5 inches, and 40-inch cable. Size:  $2\frac{3}{4} \times 5\frac{1}{2} \times 1\frac{1}{4}$  inches. Weight: 6 ounces.

(For a complete description of Type-K accessory probes see page 42.)

Description	Cat. No.	Price
VWR® Traceable® Workhorse™ Thermometer	21800-074	\$48.71

## VWR® Traceable® Printing Thermometer

**Printing Thermometer provides permanent record, prints time and date**

Provides permanent record of temperature and time of day/date/month. Unit prints the time and date for maximum only, minimum only, average only, and in circularly mode T1, T2 and differential. Automatic printing may be programmed to print in any interval from 3 seconds to 23 hrs 59 mins 59 secs. The perfect unit to monitor temperature in lab, plant, and field. Fulfills federal requirements for CLIA specification 493.1252.

### Hard copy results

Printer provides hard copy for today's stringent quality-control documentation. Minimum, maximum, and average temperature memories may be displayed or cleared at any time with the touch of a key. Memory feature permits monitoring conditions overnight, on weekends, or for any time period. Alarm may be set in  $0.1^{\circ}$  increments. Alarm sounds when temperature rises above or falls below set points. Alarm output feature may be used to trigger an external device. Displays temperatures from  $-328$  to  $2431^{\circ}\text{F}$  and  $-200$  to  $1333^{\circ}\text{C}$  with a resolution of  $0.1^{\circ}$  and an accuracy of  $\pm 1^{\circ}\text{C}$  from  $-50$  to  $982^{\circ}\text{C}$ , otherwise  $\pm 1.5^{\circ}\text{C}$ . Dual probe inputs allow displaying the temperature of probe 1, probe 2, or the difference (delta) of probe 1 and 2. Thermometer will accept any Type- J, K, T, or E probe. Display is updated every second.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: two fast-response Type-K beaded sensors with 4-foot cable, Traceable® Certificate, batteries, two thermal paper rolls (good for approximately 1400 printings per roll), ABS carrying case, and batteries. Accessory adaptor for continuous AC operation is available. Tough ABS plastic case is chemical- and shock-resistant. Unit is  $7\frac{1}{2} \times 3 \times 1\frac{1}{2}$  inches. Weight: 10 ounces.

(For a complete description of Type-K accessory probes see page 42.)



Description	Cat. No.	Price
VWR® Traceable® Printing Thermometer	61161-286	\$522.07



## VWR® Traceable® RTD Platinum Thermometer

### Fast, one-key operation

Read degrees Fahrenheit or Celsius at the flick of a switch. Innovative 0.01° digital thermometer developed specifically for lab and plant use is the finest-performing RTD Platinum Thermometer ever designed. Precise answers make it ideal for experimental requirement. Ease of use makes it perfect for routine quality-control needs. One-key operation allows everyone in lab to report identical readings and eliminates operator technique errors. State-of-the-art, fourth-generation aerospace engineering incorporates the most modern and sophisticated electronics in temperature measurement to achieve utmost in precision, stability, and dependability. High-precision thermometer is geared specifically for measuring temperatures in soil, foods, ovens, cuvettes, gas systems, water baths, wastewater, incubators, chemical solutions, petroleum products, and extremely cold conditions. Manufactured for years of reliable service, even in severe environments.

### Accuracy delivers on-the-dot readings

Resolution is 0.01° below 200° and 0.1° above 200°. Accuracy is  $\pm(0.1\% + 0.2^\circ\text{C})$  below 200°C and  $\pm(0.15\% + 0.5^\circ\text{C})$  above 200°C. HOLD key freezes display for reading later. Fail-safe display shows low battery and probe condition. Readings are updated 2½ times per second. Jumbo, ½-inch-high digits and bright, high-contrast LCD make the thermometer easy to read. Computer output allows thermometer to be connected to computer or data logger for capturing and storing results. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Platinum (100-ohm) 4-wire probe is triple-purpose for liquids, air/gas, and semisolids. Probe range is -58 to 752°F and -50 to 400°C. Probe: length 6 inches, diameter 0.13 inch, overall length 9 inches, 40-inch cable. Supplied: probe, battery, and Traceable® Certificate. Size: 7 x 3 x 1¼ inches. Weight: 9½ ounces.



Computer Output

Wireless Capable  
(see page 89)

Description	Cat. No.	Price
VWR® Traceable® RTD Platinum Thermometer	23609-228	\$331.72
VWR® Data Acquisition System (see complete description on page 88)	61161-386	\$131.75
VWR® Universal Wireless Radio-Signal Transceivers (see complete description on page 89)	89140-200	\$432.50

## VWR® Traceable® Disposable Temperature Recorder

Monitor refrigerators, supply rooms, food storage, chemical warehouses, animal quarters, incubators, goods-in-transit, walk-in chambers, biological materials, and manufacturing plants.

Single-use, disposable recorder displays temperatures on a 36-inch strip chart. Records for 10 or 40 days. Temperature range is -20 to 100°F and -28 to 38°C. Displays both °F and °C on the same chart. Accuracy is  $\pm 1^\circ\text{C}$  ( $\pm 2^\circ\text{F}$ ). Solid-state, battery-driven, quartz-crystal controlled motor turns the chart with an accuracy of better than 1 second per day. Temperature sensor is bimetallic. It provides a permanent record, which is easy to read, duplicate, fax, scan, and file. It shows temperature and time/day of occurrence. Chart, marker, and battery are preloaded, simply pull a tab to begin recording. Eliminates messy pens, expensive instrumentation, confusing software, and training.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). A tamper evident seal maintains the integrity of unit and results. Recorded chart remains inside unit until seal is broken. Four-part form on the front permits writing start-time, date, location, and other pertinent information. The instrument, chart, four-part form, and Traceable® Certificate are all marked with the same serial number. They provide accurate, permanent, and complete documentation. Supplied: battery and Traceable® Certificate. Size: 5¼ x 3¾ x 2½ inches. Weight: 10 ounces.



Description	Cat. No.	Price
VWR® Traceable® Disposable Temperature Recorder Strip-Chart Recorder, 10 days	15551-008	\$40.09
VWR® Traceable® Disposable Temperature Recorder Strip-Chart Recorder, 40 days	15551-010	\$40.09

## TIMER CHART

Cat. No.	Page No.	Traceable®		Maximum Time	Resolution	Channels	Countdown/ Countup		Clock	Memory	Features
		Certificate Supplied	Accuracy				Countdown	Countup			
89087-400	45	Yes	0.01%	100 Hours	1 Second	4	down/up	Yes	Yes	Colorful frames supplied	
89369-164	46	Yes	0.01%	100 Minutes	1 Second	1	down/up	No	Yes	Extra large digits	
62344-600	46	Yes	0.001%	100 Hours	1 Second	3	down/up	Yes	Yes	Continuous alarm	
62344-641	47	Yes	0.01%	100 Hours	1 Second	4	down/up	Yes	Yes	4-channel countdown/up	
62344-588	47	Yes	0.01%	20 Hours	1 Second	3	down/up	Yes	Yes	Triple-display	
23609-202	47	Yes	0.01%	100 Hours	1 Second	6	down/up	Yes	Yes	Easy to program	
61161-340	48	Yes	0.01%	24 Hours	1 Second	2	down/up	Yes	Yes	Jumbo display black	
61161-346	48	Yes	0.01%	24 Hours	1 Second	2	down/up	Yes	Yes	Jumbo display white	
89087-398	48	Yes	0.01%	100 Minutes	1 Second	1	down/up	No	Yes	GIANT-DIGITS™	
62344-912	48	Yes	0.01%	100 Hours	1 Second	3	down/up	Yes	Yes	3-line display	
89140-194	49	Yes	0.01%	100 Minutes	1 Second	1	down/up	No	Yes	Automatic memory	
89140-196	49	Yes	0.01%	100 Hours	1 Second	2	down/up	No	Yes	Large display	
62379-563	50	Yes	0.01%	100 Hours	1 Second	3	down/up	Yes	Yes	Big-digit timer/clock	
23609-200	50	Yes	0.001%	10 Hours	1 Second	3	down/up	No	Yes	3 timing channels	
23609-164	50	Yes	0.01%	100 Hours	1 Second	2	down/up	Yes	Yes	100-decibel alarm	
62344-908	51	Yes	0.01%	24 Hours	1 Second	2	down/up	Yes	Yes	2-channel countdown	
33501-420	51	Yes	0.01%	24 Hours	1 Second	1	down/up	Yes	Yes	Visual alarm	
33501-418	51	Yes	0.01%	100 Minutes	1 Second	1	down/up	No	Yes	Easy to use	
62344-585	52	Yes	0.01%	100 Minutes	1 Second	1	down/up	No	No	Numbered keys	
62344-778	52	Yes	0.01%	24 Hours	1 Minute	1	down	No	Yes	Memory	
62344-586	52	Yes	0.01%	100 Hours	1 Second	1	down/up	No	Yes	Numbered keys	
23609-198	53	Yes	0.01%	24 Hours	1 Second	1	down/up	Yes	Yes	Compact all-in-one	
61161-330	53	Yes	0.01%	100 Minutes	1 Second	1	down	No	Yes	Easy to use	
62344-910	53	Yes	0.01%	24 Hours	1 Second	1	down/up	No	Yes	Lab-top	
46610-060	54	Yes	0.01%	24 hours	1 Second	1	down/up	Yes	Yes	Compact	
62344-904	54	Yes	0.01%	10 Hours	1 Second	1	down/up	Yes	Yes	Clock, timer, stopwatch	
62344-902	54	Yes	0.01%	20 Hours	1 Minute	1	down	No	No	Easy 3-key operation	
21800-064	55	Yes	0.01%	24 hours	1 second	2	down/up	Yes	Yes	Ultra-compact	
62379-606	55	Yes	0.005%	100 Hours	1 Second	1	down/up	No	No	Clips to everything	
23609-196	55	Yes	0.01%	100 Minutes	1 Second	1	down	No	Yes	Automatic memory	
89038-756	56	Yes	0.01%	9999 Minutes	1 Second	1	down/up	No	Yes	Times up, flashing LED	
62379-565	56	Yes	0.01%	24 Hours	1 Second	1	down/up	Yes	Yes	Repeat countdown and talking	
33500-104	57	Yes	0.01%	20 Hours	1 Minute	1	down/up	No	No	Key-chain	
61161-306	57	Yes	0.01%	20 Hours	1 Minute	1	down/up	No	No	Key-chain	
62379-604	57	Yes	0.005%	100 Hours	1 Second	1	down/up	No	No	Key-chain	
62368-035	58	Yes	0.01%	20 Hours	1 Minute	1	down	No	No	Postage stamp size	
47732-426	58	Yes	0.01%	100 Minutes	1 Second	1	down	No	No	Water-resistant	
23609-194	58	Yes	0.01%	24 Hours	1 Second	1	down/up	Yes	Yes	Lanyard	

## VWR® Traceable® Multi-Colored™ Timer

**Personalize your timer, show your distinct style with customized bold colors**

Three, bright, colorful frames permit personalization of timer. Counts down and alarms on 4 channels, and counts up during alarming indicating elapsed time since alarming. Automatic Bounceback™ Memory for repetitive timing. Times up and down from 99 hours, 59 minutes, and 59 seconds. Resolution is 1 second. Accuracy is 0.01%. Time-of-day clock (12/24 hour).

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: bench stand/clip, magnetic back, Traceable® Certificate, battery. Size: 2¾ x 2¼ x ½-inch. Weight: 2¾ ounces.



Description	Cat. No.	Price
VWR® Traceable® Multi-Colored™ Timer	89087-400	\$22.58



**NEW**

## VWR® Traceable® Extra, Extra, Large Digit Countdown Timer



Extreme 1½ inch digit size for easy viewing from up to 60 feet away. Reliable, 3-key operation makes countdown settings in 1 second increments easy to program. Timer countdowns and alarms on single channel for ease-of-use. Counts up during alarming indicating elapsed time since alarming. Times up to 99 minutes, 59 seconds with one second resolution. Automatic Bounceback™ Memory for repetitive timing. Accuracy is 0.01%. Counts up in stopwatch mode.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: 4-Way holder—hanger, clip-on, easel bench stand, magnetic back, battery, and Traceable® Certificate. Size: 3½ x 2¾ x 1-inch. Weight: 2¾ ounces.

Description	Cat. No.	Price
VWR® Traceable® Extra, Extra, Large Digit Countdown Timer	89369-164	\$19.95

## VWR® Traceable® Three-Channel Alarm Timer

### Triple display

The ultimate user-friendly timer fulfills every lab's timing needs. Displays three different times simultaneously, counts down, and alarms. Also functions as a stopwatch and a time-of-day clock.

Three different tests may be run at the same time and channels may be started individually or simultaneously. Timer can concurrently signal the duration of incubating, heating, and cooling. Program each channel from 1 second to 99 hours, 59 minutes, and 59 seconds. When zero is reached, an alarm sounds, a TIME'S UP message flashes on the display, and timer begins counting up.

### Adjustable alarm volume and duration

Adjustable alarm volume allows setting the timer to high for noisy areas or low for quiet environments. Alarm may be set to silence automatically after 1 minute or to sound continuously until turned off. The continuous setting makes certain that an alarm is never missed.

### Memory recall

Memories return the display to the previously programmed time at the touch of a key. Perfect unit to dedicate to a group of repetitive tests. In the stopwatch mode, the timer counts up from zero. For increased flexibility, the display allows simultaneous up and down timing on different channels. Unlimited number of time-outs may be taken. Unit displays date and time of day to the second. Quartz-crystal accuracy is 0.001%. Four rubber feet keep the timer off a wet bench. Battery provides 1 year of continuous running.

### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Traceable® Certificate, alkaline battery. Housing is chemical-resistant ABS plastic. Size: 3¼ x 3 x 1 inches. Weight: 3 ounces.



Description	Cat. No.	Price
VWR® Traceable® Three-Channel Alarm Timer	62344-600	\$77.57

## VWR® Traceable® 100-Hour Timer

**Reduce uncertainty in your life—own our friendliest timer**

Counts down, alarms, times up, and tells time of day with uncompromising precision and is also very user-friendly. Innovative 100-Hour Timer fulfills virtually every lab timing requirement. Multi-channels time down, time up, and tell time of day. It's the workhorse of the lab.

Timer operates on all channels simultaneously. It has five countdown channels, a stopwatch, and a time-of-day channel. Counts both up and down to 99 hours, 59 minutes, 59 seconds. Accuracy is 0.01%. Unique thru-zero feature allows counting down, alarming, and counting up. A time-out mode stops the timer for off periods in both up and down timing. T1 through T4 may be started simultaneously or individually.

Extra-large, 1/3-inch-high display and vivid LCD digits continuously show the time remaining and are readable from 6 feet. Alarm may be turned off manually or is automatically silenced after 1 minute. A TIME IS UP message is flashed on the display.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnetic back, flip-open stand, spring fastener, an opening for lanyard, battery. Size: 2 3/4 x 2 3/8 x 5/8 inches. Weight: 1 1/2 ounces.



Description	Cat. No.	Price
VWR® Traceable® 100-Hour Timer	23609-202	\$45.41

## VWR® Traceable® Triple-Display Timer

**Easily manages three tests simultaneously**

Three-line display permits simultaneous countdown alarm timing of three tests. Extra-large, 1/2-inch digits are easy to read from across the lab. Times may be set from 19 hours, 59 minutes, 59 seconds to 1 second. When zero is reached, the timer starts counting up to show time elapsed since alarming. Additional features include stopwatch, time-out, and time of day.

Three different countdown times may be set and started simultaneously or each channel may be started individually. For repetitive tests, the memory returns the display to the previously programmed countdown time at the touch of a key.

Loud, high-decibel alarm sounds for 1 minute or may be silenced manually. Timer is perfect for dedicating to a test requiring several different times. Accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnetic back, battery. Size: 2 1/2 x 3 3/8 x 7/8 inches. Weight: 3 ounces.



Description	Cat. No.	Price
VWR® Traceable® Triple-Display Timer	62344-588	\$37.73



## VWR® Traceable® Four-Channel Alarm Timer

**Easy on the eyes**

Massive, 3/4-inch-high display permits viewing from across the lab. Microcomputer chip permits setting 4 separate channels. Set any countdown time from 99 hours, 59 minutes, 59 seconds to 1 second. When zero is reached, the timer starts counting up to show time elapsed since alarming. Additional features include stopwatch, time-out, and time-of-day clock.

All 4 channels may be used simultaneously in any combination to count down or count-up. At the touch of a key the remarkable memory returns the display to the previously programmed countdown time (perfect timer to dedicate to a repetitive test). Extra-loud, high-decibel alarm sounds for 1 minute or may be silenced manually. Finger-size keys make it easy to set times and change channels.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnetic back, flip-open stand, spring fastener, an opening for lanyard, battery. Accuracy: 0.01%. Size: 2 3/4 x 2 1/2 x 1/2 inches. Weight: 2 ounces.

Description	Cat. No.	Price
VWR® Traceable® Four-Channel Alarm Timer	62344-641	\$34.29



## VWR® Traceable® GIANT-DIGIT™ Countdown Timer

### View giant size digits on your timer from across the lab

Visible from shelves, in hoods, or perched on instruments. Giant-Digits™ with 1½-inch digit height are viewable from 40 feet. Counts down and alarms on single channel for easy use, and counts up during alarming indicating elapsed time since alarming. Three-key intuitive operation eliminates reading instructions. GIANT-DIGIT™ timer has Automatic Bounceback™ Memory for repetitive timing. Timing range is 99 minutes and 59 seconds. Resolution is 1 second. Accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Traceable® Certificate, bench stand, magnetic back. Size: 3½ x 3 x ½-inch. Weight: 2¾ ounces.



Description	Cat. No.	Price
VWR® Traceable® GIANT-DIGIT™ Countdown Timer	89087-398	\$15.33

## VWR® Traceable® Jumbo Timer

Allows simultaneous programming of two different activities from 24 hours to 1 second. Resolution is 1 second; accuracy is 0.01%. Each channel has a distinct electronic alarm and display indicator when zero is reached. The alarm may be turned off or it is silenced automatically after 1 minute.

For repetitive timing, a memory recalls the last countdown time set. A second display mode shows time of day and a stopwatch (for count-up timing). Jumbo, 1-inch-high LCD digits may be read from 30 feet. Use it flat, in the sit-up position, or wall-mount with the supplied bracket. Size: 3¾ x 5½ x ½ inches. Weight: 5 ounces.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).



Description	Cat. No.	Price
VWR® Traceable® Jumbo Timer (Black)	61161-340	\$25.34
VWR® Traceable® Jumbo Timer (White)	61161-346	\$20.67

## VWR® Traceable® Three-Line Alarm Timer

User-friendly timer simultaneously displays three different countdown/alarm times. Three unique channels may be started individually or concurrently and programmed to count down from 99 hours, 59 minutes, 59 seconds to 1 second. When zero is reached, an alarm sounds, TIME'S UP is displayed, and the timer begins counting up.

Memories return the display to the previously programmed time. Perfect unit to dedicate to a group of repetitive tests. May also be used as three stopwatches or in any combination of up/down timing. Display has a time-of-day clock.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Quartz-crystal accuracy is 0.01%. For ease in reading, the digits are ¾-inch-high. Supplied: magnetic back, stand, Traceable® Certificate, and silver-oxide battery. Chemical-resistant ABS plastic housing is 2 x 3¼ x ½ inches. Weight: 3 ounces.



Description	Cat. No.	Price
VWR® Traceable® Three-Line Alarm Timer	62344-912	\$41.87



## VWR® Traceable® Flashing LED Alert Big-Digit Alarm Timer

### Easy on the eyes

Massive, 1-inch-high display permits viewing from across the lab. Microcomputer chip permits setting 3 countdown times into memory. Program the three most frequently used times and never set countdown times again. Use any countdown time from 99 minutes, 59 seconds to 1 second. When zero is reached, the timer starts counting up to show time elapsed since alarming.

Unique green light flashes every second when the countdown time reaches 10 seconds. Red light flashes when zero has been reached and the alarm is sounding. Alarm has three switch positions which allow setting to high decibel for noisy areas, low decibel for quiet environments, or off (muted) for silent, visual-flashing-LED-only operation.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnetic back, stand/spring-clip, opening for a lanyard, two alkaline batteries. Accuracy: 0.01%. Size: 3½ x 2¼ x 5⁄8 inches. Weight: 2½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Flashing LED Alert Big-Digit Alarm Timer	89140-194	\$22.62

## VWR® Traceable® Flashing LED Alert Big-Digit Dual Channel Timer

Allows simultaneous programming of two different activities from 99 hours, 59 minutes, 59 seconds to 1 second. Resolution is 1 second; accuracy is 0.01%. Each channel has a distinct electronic alarm and visual indicator when zero is reached. Alarm turns off automatically after one minute or may be silenced manually.

### Automatic or programmable memory

For repetitive timing, the microcomputer chip permits setting 2 countdown times into memory. The memory recalls the last countdown time set. Large 5⁄8-inch high LCD digits may be read from 18 feet.

Unique visual indication for each channel when counting down, green light flashes every second once the countdown time reaches 10 seconds. Red light flashes when zero has been reached and the alarm is sounding. Alarm has three positions which allow setting to high decibel for noisy areas, low decibel for quiet environments, or off (muted) for silent, visual-flashing-LED-only operation.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnetic back, stand/spring-clip, opening for a lanyard, two alkaline batteries. Size: 3½ x 3 x 5⁄8 inches. Weight: 3 ounces.



Description	Cat. No.	Price
VWR® Traceable® Flashing LED Alert Big-Digit Dual Channel Timer	89140-196	\$23.78

## VWR® Traceable® Extra-Extra-Loud Timer

### One-hundred-decibel screamer

User-friendly timer features include countdown, stopwatch, time-out, and time-of-day clock. May be heard in the noisiest plant or lab. One hundred decibel alarm penetrates high noise areas clearly. A breakthrough for easily hearing a countdown alarm in high ambient noise conditions.

### Set two separate channels

Giant display permits viewing anywhere and is ¾-inch-high. Micro computer chip permits setting two separate channels. Set any time from 99 hours, 59 minutes, 59 seconds to 1 second. When zero is reached the timer starts counting up to show time elapsed since alarming.

### Perfect for high sound zones—indoors and out

Both channels may be used simultaneously as countdown, count-up, or in any combination of count-up/down. Memories return the display to the previously programmed countdown time at the touch of a key. The extra-extra-loud, one-hundred-decibel alarm sounds for 1 minute or may be silenced manually. Large keys make it easy to set times and change channels.



### Traceable to NIST for accuracy

Quartz-crystal accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). It provides the accurate timing assurance demanded by government regulations and ISO 9000 requirements. Supplied: magnetic back, flip-open stand, batteries. Size: 4 x 2½ x ½ inches. Weight: 5 ounces.

Description	Cat. No.	Price
VWR® Traceable® Extra-Extra-Loud Timer	23609-164	\$29.20

## VWR® Traceable® Original Lab Timer



Timer signals drying and incubating times, helps catch all test results, and even alarms for appointments. The ideal bench-mate for quality-control and experimental requirements. Extremely simple operation makes it the lab's most desirable timer.

Accuracy is 0.001%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Program three different activities from 9 hours, 59 minutes, 59 seconds to 1 second. Each channel has a distinct electronic alarm and display indicator. Alarm-off operates manually or is silenced automatically after 1 minute.

Large ¼-inch-high LCD digits are easy to read. Carry it with you from the lab—mini-size and light weight make it portable. Chemical-resistant ABS plastic case is 3 x 3 x 1¾ inches. Weight: 4 ounces. Supplied: Traceable® Certificate, batteries.

Description	Cat. No.	Price
VWR® Traceable® Original Lab Timer	23609-200	\$54.72

## VWR® Traceable® Big-Foot Timer

Timer signals drying and incubating times, helps catch all test results, and even alarms for appointments. Pays for itself by saving just one missed lab analysis. Allows simultaneous programming of three different activities from 99 hours, 59 minutes, 59 seconds to 1 second.

Resolution is 1 second, accuracy is 0.01%. Each of the three channels has a distinct electronic alarm and display indicator when zero is reached. The alarm silences automatically after 1 minute. Any channel may also be used as a stopwatch or may be turned off manually. Super-jumbo display shows time of day.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Big Foot 1-inch high LCD digits may be read from 30 feet. Supplied: magnetic back, flip-open stand/spring-clip, battery. Size: 4 x 4½ x 1¾ inches. Weight: 6 ounces.



Description	Cat. No.	Price
VWR® Traceable® Big-Foot Timer	62379-563	\$34.88

## VWR® Traceable® Digital Timer/Clock

Timer remembers the last time set, counts down, alarms, and counts up. Use it to count down/up from 24 hours to 1 second in increments of 1 second. One of the most versatile timers for the lab. The clock channel features time of day to the second with AM/PM indicators. Timer signals duration of virtually every lab test, including drying, incubating, heating, and cooling times. Unit pays for itself by saving just one missed test result. Remarkable memory returns the display to the previously programmed countdown time at the touch of a key. Memory timer recalls hours, minutes, and seconds. Unique thru-zero feature allows counting down, alarming, and counting up. A time-out mode stops the timer in both up and down timing.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). The loud beeping alarm may be turned off manually or it will automatically silence after 1 minute. Visual alarm displays TIMES UP message. Digits are ¾-inch high for ease in viewing. Quartz-crystal accuracy is 0.01%. Housing is made of chemical-resistant ABS plastic. Supplied: magnet, flip-open stand/clip, replaceable battery. Size: 2¾ x 2¾ x ¾-inch. Weight: 1½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Digital Timer/Clock	33501-420	\$22.87

## VWR® Traceable® Two-Memory Timer

Count on Two-Memory Timer to deliver on-the-dot timing operations whether counting up or down from 23 hours, 59 minutes, 59 seconds. Features timing accuracy of 0.01% and 1-second resolution. It's also a time-of-day clock with user-selectable AM/PM or 24-hour format. A smooth, streamlined design and two-tone face make this an attractive companion for any lab bench. Bright LCD digits are ¾-inch-high for easy viewing.

### Times two tests at once

To perform two tests at once, both countdown timing channels may be started simultaneously. As each countdown time ends, a unique alarm sounds, and TIME'S UP flashes on the display. At zero, the display will begin counting up.

Take advantage of Timer's memory feature to perform countless repetitive tests. Both countdown timing channels may be set to recall a specific time. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 2¾ x 2½ x 7⁄8 inches. Weight: 1⅞ ounces. Supplied: magnet, flip-open stand/clip, batteries.

Description	Cat. No.	Price
VWR® Traceable® Two-Memory Timer	62344-908	\$26.28



## VWR® Traceable® Timer

Input a time and the instant memory always returns the display to the programmed setting. This is the ideal timer to dedicate to a routinely timed test. Bright, extra-large, 1-inch-high digits count down at any set time from 99 minutes 59 seconds to zero. At zero a loud 1 minute alarm sounds. Designed specifically for routine tests, quality control requirements, and repetitive analysis. The unique memory feature encourages devoting this timer to one piece of laboratory equipment such as a water bath, oven, stirrer, or incubator. Accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Supplied: magnetic back, flip-open stand/clip, batteries. Size: 3 x 2¼ x 5⁄8 inches. Weight: 2 ounces.



Description	Cat. No.	Price
VWR® Traceable® Timer	33501-418	\$20.99



## VWR® Traceable® 100-Hour Mini-Alarm Timer/Stopwatch

### Versatile timer incorporates all lab timing

#### Memory

Counts down with an alarm and may be set to count up and alarm. It also has a memory. Set it once, press recall, and start counting down from the memory time. In the stopwatch mode it counts up from 1 second to 99 hours, 59 minutes, 59 seconds.

#### Countdown or count-up alarm

In the alarm mode it may be programmed to count down or up and alarm at any time from 1 second to 99 hours, 59 minutes, 59 seconds. Accuracy is 0.01%. The display shows the time remaining to alarm or elapsed time since alarming. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Individually numbered keys make setting time fast and easy. Extra-large, 3/8-inch-high LCD digits are readable from 8 feet. Extra-loud, high-decibel alarm is automatically silenced after 1 minute or may be turned off manually. TIME IS UP message is displayed when set time is reached. Unique thru-zero feature shows time elapsed since the alarm has sounded. Also shows time of day.

Supplied: magnetic back, flip-open stand/clip, opening for lanyard. Size: 2 3/4 x 2 3/4 x 1/2 inches. Weight: 1 1/2 ounces.

Description	Cat. No.	Price
VWR® Traceable® 100-Hour Mini-Alarm Timer/Stopwatch	62344-586	\$46.97

## VWR® Traceable® Memory Timer

Unique timer counts down with an alarm and remembers the setting. Program times from 24 hours to 1 minute in increments of 1 minute. The bright, crisp, 1/2-inch-high LCD digits read in hours, minutes, and seconds (seconds displayed during the last 10 minutes).

#### Forever memory

Unique memory returns the display to the previously programmed time at the touch of a key. Set the timer once and it remembers forever. Many users buy several, set the memory, and dedicate each to a test, water bath, or instrument.

Loud-beeping alarm sounds for 60 seconds or may be turned off manually. Three-key operation makes it extremely simple to use.

#### Easy operation

Memory Timer's quartz-crystal timing is accurate to 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: clip/stand, and magnet, silver-oxide battery. Size: 2 3/8-inch diameter by 1/2-inch. Weight: 1 ounce.



Description	Cat. No.	Price
VWR® Traceable® Memory Timer	62344-778	\$29.88

## VWR® Traceable® Alarm Timer/Stopwatch

### Numbered keys make it a breeze to set a countdown time

Remarkable timer counts down with an alarm and counts up with a time-out feature. Program it to count down from 99 minutes, 99 seconds to zero in any second increment. In the stopwatch mode, the unit counts up to 59 minutes, 59 seconds, and automatically rolls over to zero and continues timing. Large, 3/8-inch-high display and vivid LCD digits continuously show time and are readable from 8 feet. Loud, high-decibel alarm may be turned off manually or is automatically silenced after 1 minute. Individually numbered keys make setting time easy. Timer is accurate to 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnet, flip-open stand/clip, silver-oxide battery, opening for lanyard. Size: 2 1/2 x 2 1/4 x 1/2 inches. Weight: 1 1/2 ounces.



Description	Cat. No.	Price
VWR® Traceable® Alarm Timer/Stopwatch	62344-585	\$32.01

## VWR® Traceable® Lab-Top Timer



Lab-Top Timer is built expressly for bench use. LCD screen is designed for viewing at any angle. Versatile timing modes, extra-large keys, make this unit ideal for the lab.

Counts down from 24 hours to 1 second, in second increments, with an accuracy of 0.01%. Special memory chip allows programming an instant replay repeat time which appears on the display at the touch of a key. Memory time is locked in until changed.

Unit features count-up mode and time-of-day clock. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Traceable® Certificate, battery. Size: 3¼ x 3¼ x 1¾ inches. Weight: 4 ounces.

## VWR® Traceable® Fingertip Timer



Easy-to-use timer has a repeat memory function for repetitive tests. Three-key operation can be learned in less than 10 seconds. Everyone in the lab will enjoy using this always-at-your-fingertips timer. May be placed on incubators, refrigerators, and ovens with the magnet on the back.

Counts down from 99 minutes, 59 seconds in 1-second increments. Accuracy is 0.01%. Dedicate this unit to a specific test. Memory retains last programmed time, eliminating the need to re-enter test times. Alarm may be silenced manually or turns off automatically after 30 seconds.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 1¾ x 3½ x ½ inches. Weight: 1¼ ounce. Supplied: battery, Traceable® Certificate, magnet, and Velcro®.

Description	Cat. No.	Price
VWR® Traceable® Lab-Top Timer	62344-910	\$24.81

Description	Cat. No.	Price
VWR® Traceable® Fingertip Timer	61161-330	\$19.81

## VWR® Traceable® Advanced Memory Timer

Timer remembers the last time set, counts down, alarms, and counts up. Use it to count down/up from 24 hours to 1 second in increments of 1 second. One of the most versatile timers for the lab. The clock channel features time of day to the second with AM/PM indicators.

Timer signals duration of virtually every lab test, including drying, incubating, heating, and cooling times. Unit pays for itself by saving just one missed test result. The perfect unit to dedicate to a specific test or instrument.

Remarkable memory returns the display to the previously programmed countdown time at the touch of a key and recalls hours, minutes, and seconds. Unique thru-zero feature allows counting down, alarming, and counting up. A time-out mode stops the timer for off periods in both up and down timing.

The loud beeping alarm may be turned off manually or is silenced automatically after 1 minute. Visual alarm displays TIMES UP. Digits are ½-inch-high for ease in viewing. Quartz-crystal design is accurate to 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Handsome case is made of chemical-resistant ABS plastic. Supplied: magnet, flip-open stand/clip, replaceable battery. Size: 2¼ x 2¼ x ½-inch size. Weight: 1½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Advanced Memory Timer	23609-198	\$34.38



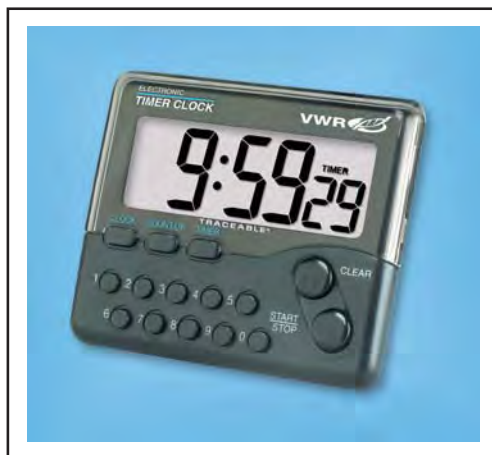
## VWR® Traceable® QC Timer

Ideal QC (quality control) countdown and alarm timer combines easy, 3-key operation with giant-size digits. Learn its operation in less than 10 seconds without ever reading the instructions. Quartz-crystal timing accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Documentation provides the accurate timing assurance demanded by government regulations, ISO 9000 requirements, and QC needs.

Times may be set up to 20 hours in any one-minute increment. At zero, a 1-minute alarm sounds. Three-quarter-inch-high digits are readable from 20 feet. Size: 3½ x 2 x ½ inches. Weight: 2 ounces. Supplied: battery, magnet/clip.



Description	Cat. No.	Price
VWR® Traceable® QC Timer	62344-902	\$20.33



## VWR® Traceable® Triple-Purpose Timer

At the press of a key, big-digit timer displays countdown alarm time, stopwatch (count-up) time, or time of day (AM/PM and 24-hour format). Accuracy is 0.01%. Full keyboard (0-9 keys) makes entering times exceptionally fast. High-decibel alarm sounds for 1 minute. Count down or up to 9 hours, 59 minutes, 59 seconds.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). For repetitive tests, the unit's memory automatically returns the display to the original programmed time. Three-quarter-inch-high digits may be read from 20 feet. Supplied: battery, magnet. Size: 3 x 2½ x 1 inches. Weight: 2½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Triple-Purpose Timer	62344-904	\$25.38



## VWR® Traceable® LCD Timer

This compact unit is a timer, stopwatch, and clock. Timer can be programmed to count down or count-up/stopwatch mode from 23 hours, 59 minutes, 59 seconds with 1-second resolution. Accuracy is 0.01%. At zero, a 1-minute alarm sounds and thru-zero timing automatically begins counting up, displaying time elapsed. Memory recall automatically returns timer to last programmed setting. Also features a time-of-day clock.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: magnet, stand/clip, battery. Size: 2½ x 2½ x ½ inches. Weight: 3 ounces.

Description	Cat. No.	Price
VWR® Traceable® LCD Timer	46610-060	\$23.27



Actual Size

## VWR® Traceable® Nano™ Timer

At the press of a key, timer displays countdown alarm time/stopwatch (count-up) time, and time of day (AM/PM and 24-hour format). Accuracy is 0.01%. High-decibel alarm sounds for 1 minute. Count down or up to 23 hours, 59 minutes, 59 seconds on the two timing channels.

For repetitive tests, the unit's two-channel memory automatically returns the display to the original programmed time. Three-eighths-inch-high digits may be read from 8 feet.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery, clip, stand, magnet. Size: 2½ x 2 x 7⁄8 inches. Weight: 2½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Nano™ Timer	21800-064	\$16.58



## VWR® Traceable® 99M/59S Timer

Timer counts down from 99 minutes, 59 seconds in second increments with 3-key ease and big-digit visibility. Automatic memory resets the display to the last programmed time—ideal for repetitive tests.

Quartz-crystal timing accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Three-quarter-inch-high digits are readable from 20 feet. Alarm sounds for 30 seconds. Size: 2½ x 2½ x ½ inches. Weight: 2 ounces. Supplied: battery, magnet, stand/clip, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® 99M/59S Timer	23609-196	\$24.07

## VWR® Traceable® Clip-It™ Timer

### Clip-It™ Timer counts down, alarms, and functions as a stopwatch

The handiest timer ever designed clips to your lab coat, belt, notebook, clipboard, or anywhere. You'll never lose your own personal timer.



### Six-digit LCD shows time remaining in hours, minutes, and seconds

Program it in the countdown mode, in 1 second increments, from 100 hours to 1 second. At zero, a loud-beeping alarm sounds for 60 seconds or may be silenced manually. In the stopwatch mode, it times from 1 second to 99 hours and then repeats. Also has a time-out feature in both up and down counting.

### Clip-It™ Timer is the perfect reminder

Notifies you when to read a color change, remove a sample from an oven, or go to a meeting. Big-digit, 1⁄3-inch-high display is easy to read. Five-key operation is quick and intuitive (no need to ever read the instructions). Quartz-crystal accuracy is 0.005%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Clip-It™ Timer has a magnet and silver-oxide battery. Size: 2 x 1½ x ¾ inches. Weight: ½ ounce. Patented.

Description	Cat. No.	Price
VWR® Traceable® Clip-It™ Timer	62379-606	\$20.86

## VWR® Traceable® Visual Alarm Timer (9999M)

Timer counts down from 9999 minutes in minute increments and has a countdown resolution of 1 second for times under 99 minutes. With the flip of a switch, select either an audible alarm, or bright flashing LED visual alarm. Automatic memory resets the display to the last programmed time—ideal for repetitive tests. Thru-zero feature allows counting down, alarming, then counting up. Accuracy: 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Three-eighths-inch high digits are readable from 8 feet. Size: 3 x 2¼ x ¾ inches. Weight: 3 ounces. Supplied: two batteries, an integrated magnet, stand/clip.



Description	Cat. No.	Price
VWR® Traceable® Visual Alarm Timer (9999M)	89038-756	\$12.09

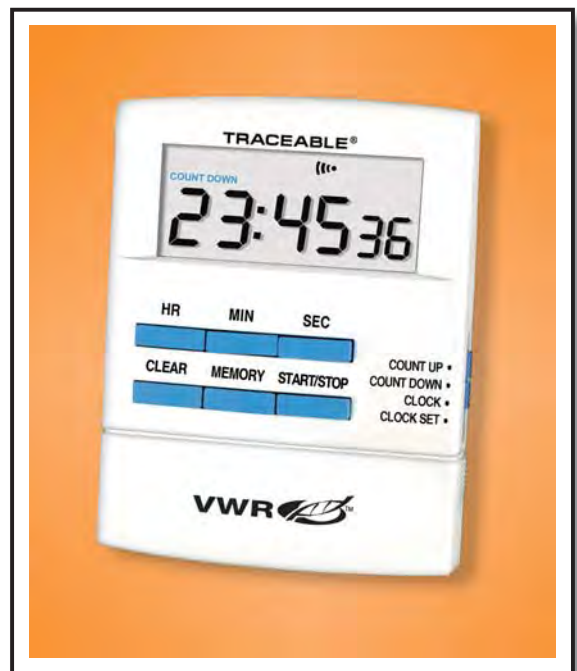
## VWR® Traceable® Talking Timer

Innovative countdown timer speaks in English. It counts down, talks, counts up, and tells time of day with Traceable® precision. Never again glance at your timer. During countdown, voice reporting frequency is every hour until 1 hour is reached, every 10 minutes until 10 minutes is reached, every minute until 1 minute is reached, every 10 seconds until 10 seconds remain, then every second. Also announces elapsed time since alarming.

Counts both up and down from 23 hours, 59 minutes, 59 seconds. Resolution is 1 second. Quartz-crystal timing accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Unique thru-zero feature allows counting down, alarming, and counting up. A time-out mode stops the timer for off periods in both up and down timing. Provides repeat functions of countdown alarm timing. Set it to count down for any time. When zero is reached, the timer alarms and begins to count down again from the programmed time. Repeat cycle continues automatically until stopped. Extra-large ½-inch-high display and vivid LCD digits continuously show the time remaining and are readable from 15 feet. In the clock mode it announces time of day. Purchase several units; each may be set to a different alarm sound. Six distinct alarm sounds indicate which test is completed.

Supplied: magnetic back, flip-open stand/clip, opening for lanyard, Traceable® Certificate. Size: 2½ x 3¼ x ½ inches. Weight: 2¼ ounces.



Description	Cat. No.	Price
VWR® Traceable® Talking Timer	62379-565	\$26.41



## VWR® Traceable® Digital Timer Plus

### Costs so little, everyone deserves one

The handiest timer ever designed clips to your lab coat, belt, notebook, clipboard, or anywhere. You'll never lose your own personal timer.

### Six-digit LCD shows time remaining in hours, minutes, seconds

Program it in the countdown mode, in 1 second increments, from 100 hours to 1 second. At zero, a loud-beeping alarm sounds for 60 seconds or may be silenced manually. In the stopwatch mode, it times from 1 second to 99 hours and then repeats. Accuracy is 0.005%. Also has a time-out feature in both up and down counting.

### Digital Timer Plus™ is the perfect reminder

Notifies you when to read a color change, remove a sample from an oven, or go to a meeting. Big-digit, 1/3-inch-high display is easy to read. Five-key operation is quick and intuitive (no need to ever read the instructions).

### Quartz-crystal accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: key-chain, magnet, battery. Size: 2 x 1 1/2 x 3/4 inches. Weight: 1/2 ounce. Patented.

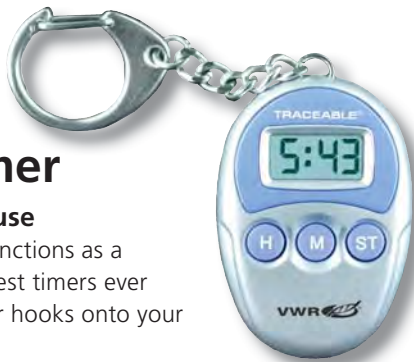


Description	Cat. No.	Price
VWR® Traceable® Digital Timer Plus	62379-604	\$34.02

## VWR® Traceable® Key-Chain Timer

### Unique timer is easy to use

Counts down, alarms, and functions as a stopwatch. One of the handiest timers ever designed—holds your keys or hooks onto your lab coat buttonhole.



Four-digit LCD always shows time remaining in hours and minutes. Program it in the countdown mode in minute increments from 20 hours to 1 minute. When zero is reached, an alarm sounds for 60 seconds, or it may be silenced manually. In the stopwatch mode, it times from 1 second to 20 minutes and then repeats itself. Also has a time-out feature in both up and down counting.

Big-digit, 1/3-inch-high display is easy to read. Three-key operation is fast and intuitive. Designed for rugged use. Quartz-crystal timing accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Key-Chain Timer has a rugged, chemical-resistant ABS housing. Supplied: battery. Size: 2 x 1 1/2 x 3/4 inches. Weight: 3/4 ounce.

Description	Cat. No.	Price
VWR® Traceable® Key-Chain Timer	61161-306	\$23.67

## VWR® Traceable® Pocket Timer



Four-digit LCD always shows the time remaining in hours and minutes. Program it in 1-minute increments from 20 hours to 1 minute. At zero, a beeping alarm sounds for 60 seconds or may be silenced manually. In the stopwatch mode, it times from 1 second to 20 minutes and then rolls over. Also has a timeout feature in both up and down counting.

Digits are 1/3-inch-high for ease in viewing. Three-key operation is fast. Resolution is 1 minute and quartz-crystal accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Timer has a rugged, chemical-resistant ABS housing. Supplied: key-chain, battery. Size: 2 x 1 1/8 x 3/8 inches. Weight: 1/2 ounce.

Description	Cat. No.	Price
VWR® Traceable® Pocket Timer	33500-104	\$29.13



## VWR® Traceable® Touch Timer

Four-digit LCD may be programmed to count down and alarm from 19 hours, 59 minutes to 1 minute in any minute increment. Two-key operation makes it extremely easy to use.

Loud-beeping alarm may be silenced manually or turns off automatically after 20 seconds. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Handy, postage stamp size designed to be used anywhere. Serves as the ideal lightweight reminder. Accuracy is 0.01%. Size: 1 x 1¾ x ¼ inches. Weight: ½ ounce.

Description	Cat. No.	Price
VWR® Traceable® Touch Timer	62368-035	\$18.57

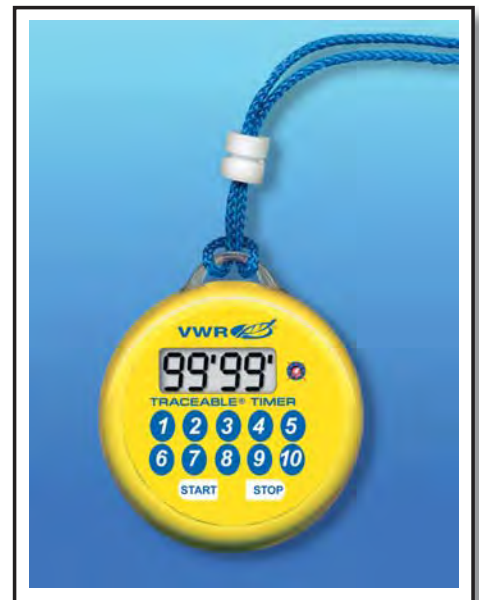
## VWR® Traceable® Water-Resistant, Flashing Timer

**Splash-proof, water-resistant timer is ideal for wet labs, wash-down areas, plants, and field use**

Times from 99 minutes, 59 seconds to zero with 1 second resolution. When zero is reached a bright red LED flashes as a visual sign and an audible alarm sounds for one minute.

Unit also features infinite timeouts. Accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: lanyard, suction cup, magnet, Velcro®, silver-oxide battery. Size: 3 inches diameter x ½-inch. Weight: 1½ ounce.

Description	Cat. No.	Price
VWR® Traceable® Water-Resistant, Flashing Timer	47732-426	\$21.67



## VWR® Traceable® Tie Timer

**Wear this countdown timer**

Know at a glance the time remaining with this timer on a lanyard. Extraordinarily lightweight, it's less than one ounce. Digits (½-inch-high) are readable even with your glasses off. Program it to count down and alarm from 24 hours to 1 second. Resolution is 1 second and accuracy is 0.01%. Touch-of-a-key operation permits instant-replay timing for repetitive testing. Memory never changes until you reprogram it. This feature is a real time-saver.

Also has a stopwatch (count-up) and time-of-day display. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Traceable® Certificate, 1-year battery. Size: 1½-inch dia. x 2¾-inch length.



Description	Cat. No.	Price
VWR® Traceable® Tie Timer	23609-194	\$27.39

## VWR® Traceable® Time-and-Number Printer

Time-and-Number Printer prints date, time, four-digit count-up number, six-digit count-up/down number, and/or messages. Designed specifically for use everywhere in the lab. Portable stamper is ideal for dating documents, time-tracking samples, consecutively numbering specimens, managing time, and printing in lab notebooks.

### Reduces errors

The microprocessor-based printer automatically advances date, time, and numbering. Eliminates the need to manually change information. Also reduces handwriting errors, copy mistakes, and misread data. Dependable battery operation ensures that power outages cannot affect it. Quartz-crystal design maintains an accuracy of 0.01%.

### Count-up/countdown numbering

Use the printer to make sequential-numbered labels for samples or tests. Numbering may be four-digit count-up or six-digit count-up/down. A freeze function allows multiple forms to be imprinted with the same tracking number. Easy to use, a single press of a key electronically activates the self-inking stamp head. Provides a clear, readable imprint every time. Exact information to be printed is shown on the liquid crystal display. Readout shows date, time, next number, and message. Messages: RCVD (received), CFMD (confirmed), REF (reference), FILE, OUT, IN, or PAID. Each message has its own separate, four-digit count-up counter.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Fulfills requirements of Federal Regulations CLIA 493.1107 by providing the date and time of specimen receipt into the laboratory. A security password code prevents unauthorized changing of time and date. Prints to the exact minute in either AM/PM or 24-hour format. Size: 4¼ x 3 x 2 inches. Weight: 8 ounces. Supplied: batteries.



Description	Cat. No.	Price
VWR® Traceable® Time-and-Number Printer	61161-304	\$155.61

## VWR® Eight-Channel Alarm Timer

The only timer manufactured with a continuously-adjustable alarm-volume control. Can be set from whisper-low at the lab bench to ear-piercingly loud for noisy plant areas. Alarms may be set to sound continuously until turned off manually or set to turn off automatically in 7 seconds or 1 minute.

### Eight channels

Three channels count down—each with a memory (memory allows automatic return to the previously programmed time at the press of a key). One channel counts down, and when zero is reached, alarms and starts counting up. The stopwatch channel counts up and alarms at any preset time. The 2 repeat channels automatically alarm at any programmed time interval (e.g., set it to continually sound an alarm every 37 min).

### 100-hour timing capacity

Clock channel displays time of day in AM/PM or 24-hour time. Each timing channel has a timing capacity of 99 hours, 59 minutes, 59 seconds.

### Brilliant display

Extra-large, easy-to-read, headline-size, ½-inch-high LED digits are bright and sharp. Display can be read from 25 feet away. Housed in an ABS plastic case. Size: 6½ x 4¼ x 3½ inches. Weight: 16 ounces. Unit operates on 115 VAC/60 Hz.



Description	Cat. No.	Price
VWR® Eight-Channel Alarm Timer	23609-192	\$182.81



## VWR® Compact Timer

Set this ruggedly-built, mechanical compact timer from 1 to 120 minutes. A loud, 5-second alarm signals elapsed time for all lab tests. Moving pointer always shows time remaining to zero. High-impact ABS plastic construction makes it resistant to lab chemicals and virtually indestructible. The speed-read dial is graduated with oversized markings for easy reading. Selecting time automatically winds the timer. May be viewed from above or stands upright on the lab bench. Powerful spring ensures 99% accuracy. Size: 2¾ x 2¾ x 2 inches. Weight: just 3⅜ ounces.

Description	Cat. No.	Price
VWR® Compact Timer	62344-440	\$49.17

## VWR® 60-Minute Interval Timer

### Interval Timer is adjustable

Adjustable from 0 to 60 minutes in 1-minute increments. Setting pointer to desired interval winds the time automatically. Alarm sounds at end of cycle. Indicating pointer always shows exact time remaining on easy-to-read dial. Sits on lab bench. Case is chemical resistant. Size: 3¾ x 3¾ x 2 inches. Weight: 3⅜ ounces.

Description	Cat. No.	Price
VWR® 60-Minute Interval Timer	23609-218	\$24.19



## VWR® Quick Timer™ & VWR® SX™ Timer

SX-Timer™ and Quick-Timer™ are adjustable from 1 to 60 minutes in 1-minute increments. Turning the pointer to the desired count-down setting automatically winds the timers. Indicating pointer always shows exact time remaining. Loud five-second alarm sounds at zero. Easy-to-read, and use. Case is chemical resistant ABS plastic. Supplied: lanyard, key-chain.

Description	Cat. No.	Price
VWR® Quick-Timer™ (blue/white, with magnet on back, diameter 2½ x 1 inches, weight: 3 oz.) (pictured right)	36934-148	\$11.83
VWR® SX-Timer™ (translucent blue/white, diameter 2¼ x 1 inches, weight 2¼ oz.) (pictured left)	36934-150	\$11.17

## VWR® Traceable® Stick-It™ Mini-Clock

Traceable® Stick-It™ Mini-Clock is perfect for each work area. Bright hands and white sweeping second hand are easy to read. Rugged gleaming metal case is O-ring sealed making it water-resistant/dustproof. Flat bottom permits standing on shelf, desk, or bench. Precise quartz-crystal accuracy is 0.013%.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). No winding is required. Size: 1½ inch diameter x 0.3 inch depth. Weight: 1 ounce. Supplied: Velcro®, double-backed tape, battery. Patented.



Description	Cat. No.	Price
VWR® Traceable® Stick-It™ Mini-Clock	89094-694	\$12.98

## VWR® Workstation Traceable® Radio-Controlled Clock

### World's most accurate clock for your workstation

Traceable® Radio Controlled Atomic Clock is accurate to 1/10,000 of a second. Resolution is 1 second. Receives a radio signal directly from the National Institute of Standards and Technology atomic clock (accurate to one hundred billionth of a second) in Boulder, Colorado.

Ideal for recording the receiving of samples, noting the exact time an event occurred, supporting documentation, providing a standard for a location's other clocks, maintaining ISO 9000 certification, and for the myriad of occasions when knowing the exact time is important.

Radio signal automatically adjusts for AM/PM, 24-hour time, day/date, daylight savings time, leap year, and leap seconds (earth rotation wobble corrections). To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Backlighting permits viewing in total darkness. Alarm volume increases until turned off. Temperature range is from 32 to 158°F and 0 to 50°C with a resolution 0.1° and an accuracy of ±1°C. LCD digits, ½-inch-high, are readable from over 15 feet. Battery operation eliminates electrical outage concerns and runs continuously for 1 year. Size: 2½ x 3 x 1½ inches. Weight: 4 ounces.



Description	Cat. No.	Price
VWR® Workstation Traceable® Radio-Controlled Clock	36934-140	\$22.00



## VWR® Traceable® GIANT-DIGITS™ Radio Atomic Clocks with Humidity/Temperature



View giant-size digits from anywhere. Never set these clocks, they automatically adjust for daylight saving, leap year, and even the earth's wobble in leap seconds. Maintains better than 1-second accuracy for 25,000 years. Radio signal from NIST's Colorado atomic clock automatically sets correct time/date.

Giant-Digits™ (4¾ inch digit height for 89087-394 model viewable from 200 feet), (2¼ inches digit height for 89087-396 model).

Desk-stand and wall-mount supplied. Simultaneously displays both ambient and remote °F/°C temperatures. Remote module may be placed outdoors, in store rooms, or anywhere up to 100 feet away.

Resolution is 1 second. Accuracy is 1/10,000 of a second. Temperature range is 23 to 122°F (-5 to 50°C). Resolution is 0.1° with an accuracy of ±1°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology).



Description	Cat. No.	Price
VWR® Traceable® GIANT-DIGITS™ Radio Atomic Clock with Ambient and Remote Temperature Size: 16½ x 10½ x 1¾ inches. Weight: 3¼ lbs. Batteries and remote temperature module supplied. Shows date and day, 12/24 hour time format. (upper picture)	89087-394	\$90.19
VWR® Traceable® GIANT-DIGITS™ Radio Atomic Clock with Ambient and Remote Temperature and Humidity Size: 11½ x 7¾ x 1 inches. Weight: 1½ lbs. Batteries, remote temperature/humidity module supplied. RH Range: 10 to 90% (ambient and remote) with a resolution: 1% RH. (lower picture)	89087-396	\$101.38

## VWR® Traceable® Digital Radio Atomic Wall Clock

Traceable® Digital Clock has 2¼ inch-high big digits for visibility from 75 feet

Accuracy is 1/10,000 of a second. Radio signal from NIST in Colorado automatically adjusts clock to precise time, daylight savings, leap year, and leap seconds (earth rotation wobble corrections). Display shows AM/PM or 24-hour time, month, date, day of the week, and ambient temperature (32 to 122°F and 0 to 50°C with 0.1° resolution). Large digits are 2¼ inches high for viewing from 75 feet.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology). Supplied: wall-mount/screw, batteries. Size: 8¾ x 9¼ x ¾ inches. Weight: 1½ pounds.



Description	Cat. No.	Price
VWR® Traceable® Digital Radio Atomic Wall Clock	47732-424	\$75.28

## VWR® Traceable® Analog Radio Atomic Wall Clock

Traceable® Clock automatically sets itself and is accurate to 1/10,000 of a second. Clock receives a radio signal directly from NIST's atomic clock in Boulder, Colorado. It adjusts for daylight saving time and leap seconds (earth rotation wobble corrections). Bright second sweep hand is highly visible.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: wall-mount/screw, battery. Diameter: 12 inches, depth: 1¼ inches. Weight: 1¾ lbs.



Description	Cat. No.	Price
VWR® Traceable® Analog Radio Atomic Wall Clock	47732-422	\$49.13



## VWR® Traceable® Calendar Thermometer Clock

This clock delivers time, room temperature, and calendar. Temperature displays degrees C or F to 0.5° (23 to 122°F and -5 to 50°C).

Extra-large LCD digits are 2⅞ inches high to provide perfect visibility. Time can be shown in AM/PM or 24-hour time. Calendar shows month, date, and day of the week.

Clock's quartz-crystal timing accuracy is 0.01%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology). Clock has a stylish, two-tone color face and a slim silhouette (only 1-inch depth). Size: 9¼ x 10 inches. Weight: 19 ounces. Supplied: two batteries, wall-mount/screw, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Calendar Thermometer Clock	62379-519	\$71.35

## VWR® Traceable® Thermometer/Clock/Humidity Monitor

### Sits on the bench or desk

Unique unit simultaneously displays time of day, temperature, and humidity. Clock displays AM/PM or 24-hour military time to the exact minute with 0.01% accuracy. Noting changes is easy with the triple display. Internal sensors make it ideal for use in hoods, storerooms, clean rooms, incubators, drying chambers, and environmental cabinets. Temperature range is 32.0 to 122.0°F and 0.0 to 50.0°C. Resolution is 0.1° and accuracy is ±1°C. Relative humidity range is 20 to 90%. Resolution is 1% RH and accuracy is ±5% RH mid-range, otherwise ±8%. At the touch of a key, memory recalls highest and lowest temperature and humidity readings. Permits monitoring conditions overnight, on weekends, or any time period.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Traceable® Certificate, 1-year battery, built-in stand, wall-mount/screw. Size: 4¼ x 2¼ x ½ inches. Weight: 2½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Thermometer/Clock/Humidity Monitor	62344-734	\$50.14





## VWR® Traceable® Clock/Thermometer/Humidity

Ultra-modern design is high-tech in appearance. Shows crisp readable dials with a low profile case. It's the prestige clock to place on any wall. At twenty feet, read time, temperature, and humidity. Triple display shows precise quartz-crystal timing with 0.01% accuracy, temperatures from -34 to 116°F and -37 to 47°C with ±1.5°C accuracy, and relative humidity from 8 to 92% with ±5% accuracy.

Bright orange, sweeping second hand provides superior visibility. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology). Low-profile slim design ABS plastic impact-resistant case: 12½ x 11 x 1-inch. Weight: 1<sup>5</sup>/<sub>8</sub> pounds. Clock dial diameter: 9 inches; temperature and humidity dial diameters: 3 inches. Supplied: battery, wall-mount/screw.



Description	Cat. No.	Price
VWR® Traceable® Clock/Thermometer/Humidity	46610-016	\$69.90

## VWR® Traceable® Indoor/Outdoor Clock

Clock tells time of day to the second and shows temperatures from -4 to 104°F and -20 to 40°C with ±1.5°C accuracy. O-ring sealed waterproof/dustproof ABS plastic impact-resistant case makes it ideal for wash-down areas, outdoors, and harsh environments. Quartz-crystal timing accuracy is 0.01%. Modern style clock design and bright blue sweep second hand may be read at fifteen feet.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology). Case diameter: 7 inches, dial diameter: 5 inches. Weight: 12 ounces. Supplied: battery, wall-mount/screw.



Description	Cat. No.	Price
VWR® Traceable® Indoor/Outdoor Clock	46610-018	\$61.49



## VWR® Traceable® Clock/Thermometer/Humidity

At a glance tell time, temperature, and humidity in the lab. Clock with 0.01% quartz-crystal timing accuracy. Contrasting dials display temperature from -20 to 55°C and 10 to 130°F and humidity from 0 to 100%.

Sweeping second hand provides superior visibility. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability, for time only, to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery, wall-mount/screw. Diameter: 12½ inches. Weight: 1 pound.

Description	Cat. No.	Price
VWR® Traceable® Clock/Thermometer/Humidity	61161-348	\$38.34



## VWR® Traceable® Wall Clock

Tell time of day to the second with this attractive, 12-inch diameter wall clock. A worthy addition to every lab. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Quartz-crystal timing accuracy is 0.01%. Supplied: water/dust resistant sealed housing, bright sweep second hand, Traceable® Certificate, battery, wall-mount/screw. Size: 12-inch diameter. Weight: 1 pound.



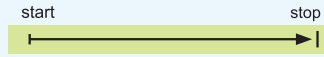
Description	Cat. No.	Price
VWR® Traceable® Wall Clock	61161-344	\$23.80

## STOPWATCH CHART

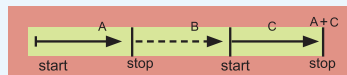
Cat. No.	Page No.	Traceable® Certificate Supplied	Accuracy	Timing Capacity	Resolution	Timing Functions (see chart on page 66)	Features
62379-515	66	Yes	0.001%	24 Hours	1/100 Second	A, B, C, D	Jumbo digit
62379-517	67	Yes	0.001%	10 Hours	1/100 Second	A, B, C, D, E, F, G, H, I	300 memories
62379-457	67	Yes	0.001%	24 Hours	1/100 Second	A, B, C, D	Extra-tough construction
62344-898	67	Yes	0.01%	24 Hours	1/100 Second	A, B, C, D	Extra-tough construction
62379-200	68	Yes	0.001%	10 Hours	1/100 Second	A, B, C, D, E, F, G, H, I	60 memories
62374-000	68	Yes	0.001%	10 Hours	1/100 Second	A, B, C, D, E, F, G, H, I	8 memories
62379-218	68	Yes	0.0005%	10 Hours	1/100 Second	A, B, C, D, E	High accuracy
62379-207	69	Yes	0.0005%	10 Hours	1/100 Second	A, B, C, D, E	Dual display, 8 memories
62379-036	69	Yes	0.0035%	24 Hours	1/100 Second	A, B, C, D	Big digits
62379-229	70	Yes	0.0005%	20 Hours	1/100 Second	A, B, C, D, E, F	500 memories
61161-350	70	Yes	0.01%	24 Hours	1/100 Second	A, B, C, D	Waterproof
62379-234	70	Yes	0.1%	24 Hours	1/100 Second	A, B, C, D	Disposable
62379-460	71	Yes	0.01%	24 Hours	1 Second	A, B, C, D	Water/shock-resistant
33501-422	71	Yes	0.003%	24 Hours	1/100 Second	A, B, C, D, E, F, G	500 memories
61161-308	72	Yes	0.01%	60 Minutes	1/100 Second	A, B, C, D, E, F, H	Pre-programmed countdown
61161-326	72	Yes	0.001%	10 Hours	1/100 Second	A, B, C, D, E	Bench top
23609-190	73	Yes	0.001%	999 Hours	1/1000 Second	A, B, C, D, E, H	12 different events

## NINE UNIQUE STOPWATCH FUNCTIONS

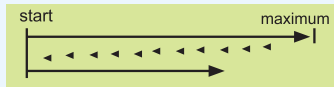
**A. Single Action Timing:** Pressing the start button begins timing, a second press stops the clock.



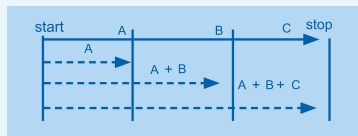
**B. Time-out/Time-in:** Records total elapsed time with any number of “time-outs”. Permits stopping the timer for “off” periods, holds the reading where stopped, and starts again from that point



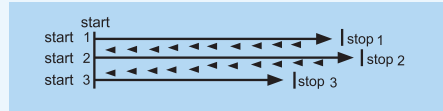
**C. Continuous Timing:** Digits offer a continuous display. When the maximum display is reached, digits rollover to zero and automatically begin timing again. Permits timing for hours, days, or weeks.



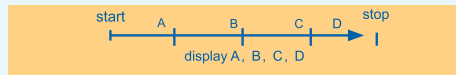
**D. Cumulative Split:** Freezes the display for partial event times while the internal clock continues to run and measure total elapsed time since starting the timer.



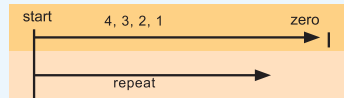
**E. Interval Split:** Yields a readout of each individual time increment of a connected series of events. Each press of the button displays the time interval since the previous press.



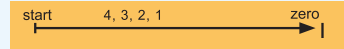
**F. Memories:** Capture and store up to six or eight separate times and display them while timing or after the event is over. Never look away from a lab test—even to take notes.



**G. Countdown I (repeat):** An alarm sounds at zero, program automatically repeats, counts down, and alarms again. It continues this sequence until stopped.



**H. Countdown II:** Allows setting unit to countdown. An alarm sounds at zero.



**I. Sample Counter:** Box on display shows sample number for each split taken.

1, 2, 3, 4 ...

## VWR® Traceable® Jumbo-Digit Stopwatch

### Traceable® Jumbo-Digit Stopwatch with handy clip

Large stopwatch digits, ½-inch high provide ease in reading. Times to 24 hours. Unit features single-action, time-out, cumulative-split, and continuous timing. Timing resolution is 1/100 of a second for the first 30 minutes. Unit continues timing to 23 hours, 59 minutes, 59 seconds with a 1-second resolution.

Accuracy is 0.001%. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Water-resistant, O-ring-sealed, and shock-resistant ABS plastic case has non-slip rubber sides—ideal for lab and plant use. As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. It also has a time-of-day alarm. Stopwatch is 3 x 2½ x 7/8 inches. Weight: 2½ ounces. Supplied: Velcro, Traceable® Certificate, battery, lanyard, clip.



Detachable Clip

Description	Cat. No.	Price
VWR® Traceable® Jumbo-Digit Stopwatch	62379-515	\$26.91



## VWR® Traceable® 300-Memory Stopwatch

Stopwatch times to 9 hours, 59 minutes, 59 seconds, 99 hundredths. Resolution is 1/100 of a second and accuracy is 0.001%. Provides stopwatch functions: single-action, time-in/-out, continuous-timing, cumulative-split, interval-split, 300-memories, and repetitive programmable countdown alarm times. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Three-line display simultaneously shows running time, cumulative-split, and interval-split. Unit recalls 300-memories and displays sample numbers 1 through 300. Can recall memories both during and after event timing. Interval split also shows longest, shortest, and average times. Provides repeat functions of countdown alarm timing. Set it to count down at any time from 10 hours

to 1 second. When zero is reached, alarm sounds and unit begins to count down again from the programmed time. This repeat cycle continues automatically until stopped. Display always shows running time remaining to zero and cycles counted from 1 to 300. Functions also include: pacer, stroke, and speed calculations.

Water-resistant, O-ring-sealed, and shock-resistant ABS plastic case has non-skid rubber sides—ideal for lab and plant use. As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. It also has a time-of-day alarm. Stopwatch is 3 x 2½ x 7⁄8 inches. Weight: 2½ ounces. Supplied: detachable clip, Velcro®, Traceable® Certificate, battery, lanyard.

Description	Cat. No.	Price
VWR® Traceable® 300-Memory Stopwatch	62379-517	\$54.94

## VWR® Traceable® Stopwatch/Chronograph

### Times to 24 hours

Workhorse LCD digital stopwatch reads times up to 24 hours. In the stopwatch mode, it provides single-action, time-out, cumulative-split, and continuous timing. Resolution is 0.01 second. Accuracy is 0.001% or 0.01%.

### Chronograph

As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. Also has a time-of-day alarm. Extra-tough ABS plastic shockproof construction makes the unit ideal for lab and plant use. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 2¾-inch diameter x 5⁄8-inch. Weight: 1½ ounces. Supplied: battery, Traceable® Certificate, lanyard.

Description	Accuracy	Cat. No.	Price
VWR® Traceable® Ultra™ Stopwatch/ Chronograph	0.001%	62379-457	\$23.07
VWR® Traceable® Stopwatch/ Chronograph	0.01%	62344-898	\$17.05



# Traceable® Stopwatches

## VWR® Traceable® 60-Memory Stopwatch

Three-line display simultaneously shows running time, cumulative split, and interval split. Sixty memories recall all splits, display sample numbers 1-60, and show interval split longest, shortest, and average times.

Stopwatch times to 9 hours, 59 minutes, 59 seconds, 99 hundredths. Accuracy is to 0.001%. Provides stopwatch functions of single action, time-in/-out, continuous timing, cumulative split, interval split, 60 memories, and programmable timing.

Provides repeat functions of countdown alarm timing. Set to count down any time from 10 hours to 1 second. When zero is reached, the timer alarms and begins to count down again from the programmed time. Repeat cycle continues until stopped.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). As a chronograph, the stopwatch displays time of day, date, and day of the week, and time-of-day alarm. Size: 2 1/8 x 2 5/8 x 3/4 inches. Weight: 2 ounces. Supplied: battery, Traceable® Certificate, lanyard.



## VWR® Traceable® Stopwatch/Repeat Timer

Universal stopwatch provides repeat function of countdown alarm timing. Set countdown time from 10 hours to 1/10 of a second. When zero is reached, timer alarms and repeats countdown from the programmed time. Repeat cycle automatically continues until stopped. Display count box shows how many times the cycle has been repeated. LCD screen continually displays time remaining to zero.

The ideal stopwatch to dedicate to an analysis that must be noted at routine intervals. Resolution is 0.01 second. Provides stopwatch functions of single-action, time-in/-out, cumulative-split, interval-split, eight memories, and continuous timing. Accuracy is 0.001%.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery, Traceable® Certificate, lanyard. ABS plastic shockproof housing is 2 3/8 x 2 3/8 x 1/2 inches. Weight: 1 3/4 ounces.



Description	Cat. No.	Price
VWR® Traceable® 60-Memory Stopwatch	62379-200	\$44.03

Description	Cat. No.	Price
VWR® Traceable® Stopwatch/Repeat Timer	62374-000	\$53.17

## VWR® Traceable® Digital Stopwatch

Precise, Traceable® timing for enzyme tests, viscosity measurements, animal studies, and other timed lab tests. Made for scientists in industrial, educational, hospital, and governmental labs who insist on the finest instrumentation. Engineered for ease of operation, accuracy, and reliability.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Quartz-crystal design is accurate to 0.0005% — over 100 times more accurate than other stopwatches.

### Ten-hour timing

Functions include single-action, time-out, interval-split, cumulative split, continuous roll-over timing, and countdown alarm timing. Resolution is 0.01 second. Times to 9 hours, 59 minutes, 59 seconds, and 99 hundredths. Vivid, 1/2-inch-high LCD digits are ideal for viewing in lab and field. Tough, water-resistant ABS plastic housing features tongue and groove craftsmanship and O-ring construction to seal out moisture, dust, and fumes. Size: 2 1/2 x 3 x 3/4 inches. Weight: 2 1/2 ounces. Supplied: battery, Traceable® Certificate, lanyard.

Description	Cat. No.	Price
VWR® Traceable® Digital Stopwatch	62379-218	\$80.17



## VWR® Traceable® Dual-Display Digital Stopwatch

Precise, Traceable® timing for enzyme tests, viscosity measurements, animal studies, and all timed lab tests. Made for scientists in industrial, educational, hospital, and governmental labs who insist on the finest instrumentation. Engineered for ease of operation, accuracy, and reliability. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Quartz-crystal accuracy

Quartz-crystal design is accurate to 0.0005%—over 100 times more accurate than other stopwatches. Functions include single-action, time-out, interval-split, cumulative split, continuous roll-over timing, and countdown alarm timing. Resolution is 0.01 second. Times to 9 hours, 59 minutes, 59 seconds, and 99 hundredths. Dual display shows cumulative and interval split. Features eight recallable memories, plus fastest and slowest lap times. Timer provides repeat function of countdown alarm timing. Set countdown time from 10 hours to 1 second. When zero is reached, timer alarms and repeats countdown from the programmed time. Repeat cycle automatically continues until stopped. Display count box shows how many times the cycle has been repeated. LCD screen continually displays time remaining to zero.

### Rugged, durable, water-resistant

Tough, water-resistant ABS plastic case features tongue-and-groove craftsmanship and O-ring construction to seal out moisture, dust, and fumes. Size: 2½ x 3 x ¾ inches. Weight: 2½ ounces. Supplied: battery, Traceable® Certificate, lanyard.



Description	Cat. No.	Price
VWR® Traceable® Dual-Display Digital Stopwatch	62379-207	\$102.75

## VWR® Traceable® Big-Digit Stopwatch/Chronograph

Digital stopwatch reads time up to 24 hours. Accuracy is 0.0035%. Utility unit has complete stopwatch functions and full chronograph features. In the stopwatch mode it provides single-action, time-out, cumulative split, and continuous timing. Resolution is to 0.01 second. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

The extra-large display is ¾-inch for easy reading. Times to 29 minutes, 59 seconds, 99 hundredths, the unit automatically goes into an expanded range and times up to 23 hours, 59 minutes, and 59 seconds. As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. Also has a time-of-day alarm.

Extra-tough ABS plastic shockproof construction makes the unit ideal for lab and plant use. Size: 2¾ x 5⅝ inches. Weight: 1½ ounces. Supplied: battery, Traceable® Certificate, lanyard.



Description	Cat. No.	Price
VWR® Traceable® Big-Digit Stopwatch/Chronograph	62379-036	\$39.39

# Traceable® Stopwatches

## VWR® Traceable® Decimal Stopwatch

Precise, Traceable® timing for enzyme tests, viscosity measurements, animal studies, and all timed lab tests. Made for scientists in industrial, educational, hospital, and governmental labs who insist on the finest instrumentation. Engineered for ease of operation, accuracy, and reliability.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Quartz-crystal design is accurate to 0.0005%—over 100 times more accurate than other stopwatches. Four timing formats/resolution are: hr/min/sec; 1/100 second; 1/1000 min; 1/100,000 hr. Maximum readouts are 19.999999 hours, 1199.999 minutes, 71999.99 seconds, or 19 hr/59 min/59 sec/99 hundredths. Stopwatch functions include single-action, time-out, interval-split, cumulative split, and continuous roll-over timing. Times to 19 hours, 59 minutes, 59 seconds, and 99 hundredths. Triple display shows cumulative splits, interval splits, and running time. Features 500 recallable memories displaying the lap, split, and running time. Memory feature also displays the fastest, slowest, and average lap time. The unit displays time of day, date, day of the week and features a time-of-day alarm. Additional features include countdown alarm, countdown then countup alarm, countdown repeat, pacer, and stroke.

### Rugged, durable, water-resistant

Tough, water-resistant ABS plastic case features tongue and groove craftsmanship and O-ring construction to seal out moisture, dust, and fumes. Size: 2½ x 3 x ¾ inches. Weight: 2½ ounces. Supplied: lanyard, Traceable® Certificate.



Description	Cat. No.	Price
VWR® Traceable® Decimal Stopwatch	62379-229	\$127.23

## VWR® Traceable® Waterproof/ Shockproof Stopwatch

General-purpose stopwatch times to 24 hours. Features include: single-action, time-out, cumulative-split, and continuous timing. Timing resolution is 1/100 of a second for the first 30 minutes, then continues timing to 23 hours, 59 minutes, 59 seconds, with a 1-second resolution.

### Waterproof to three atmospheres

O-ring-sealed and shock-proof ABS plastic case is ideal for lab and plant use. Unit is waterproof to three atmospheres. Tactile-feel, click switches provide a positive action. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM date, and day of the week. Also has a time-of-day alarm. Accuracy is 0.01%. Digits are ¼-inch-high. Size: 2½ x 2¾ x ½ inches. Weight: 1 ounce. Supplied: battery, Traceable® Certificate, lanyard.



Description	Cat. No.	Price
VWR® Traceable® Waterproof/Shockproof Stopwatch	61161-350	\$18.54

## VWR® Traceable® Three-Key Stopwatch

### The first disposable stopwatch

Three-Key Stopwatch is so inexpensive that it's the first disposable stopwatch. Appropriate for easy-duty, occasional-use needs. Wear it around your neck on the lanyard.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Times to 24 hours with a resolution of 1/100 of a second for 30 minutes and 1 second thereafter. Functions are single-action, time-out, cumulative-split, and continuous roll over timing. It also displays time and date. Provides a sound confirmation each time a key is pressed. Accuracy: 0.1%. Supplied: Traceable® Certificate, battery, lanyard. Size: 2½-inch diameter x ½-inch. Weight: 7⁄8 ounce.



Description	Cat. No.	Price
VWR® Traceable® Three-Key Stopwatch	62379-234	\$15.85

## VWR® Traceable® 500 Memory Stopwatch

Stopwatch times to 23 hours, 59 minutes, 59 seconds, 99 hundredths. Accuracy is 0.003%. Provides stopwatch functions: single-action, time-in/-out, continuous-timing, cumulative-split, interval-split, 500 memories, and programmable countdown alarm times. Three-line display simultaneously shows running time, cumulative-split, and interval-split. Unit recalls 500 memories and displays sample numbers 1 through 500. Can recall memories both during and after event timing. Interval split also shows longest, shortest, and average times.

Provides four different timing modes: countdown and alarm, countdown, alarm count up, and repeat countdown and alarm. Set it to count down at any time from 23 hours to 1 second. When zero is reached, the timer alarms for 10 seconds. This repeat cycle continues automatically until stopped. Display always shows time set and running time remaining to zero. A pacer function is also included. Water-resistant, O-ring-sealed, and shock-resistant ABS plastic case has non-skid rubber sides, ideal for lab and plant use. As a chronograph, the stopwatch displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. It also has a time-of-day alarm. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 3¼ x 2½ x ½ inches. Weight: 2 ounces. Supplied: Traceable® Certificate, battery, Velcro®, lanyard.



Description	Cat. No.	Price
VWR® Traceable® 500 Memory Stopwatch	33501-422	\$47.50



## VWR® Traceable® Water-/Shock-Resistant Stopwatch

General-purpose stopwatch times to 24 hours. Features include: single-action, time-out, cumulative-split, and continuous timing. Timing resolution is 1/100 of a second for the first 30 minutes, then continues timing to 23 hours, 59 minutes, 59 seconds, with a 1-second resolution.

As a chronograph, the unit displays time of day in hours, minutes, and seconds, AM/PM, date, and day of the week. Also has a time-of-day alarm. Tactile-feel, click switches provide a positive action. Accuracy is 0.01%. Digits are ¼-inch-high.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery, lanyard. Size: 2⅞ x 2⅜ x ½ inches. Weight: 1 ounce.

Description	Cat. No.	Price
VWR® Traceable® Water-/Shock-Resistant Stopwatch	62379-460	\$18.10



## VWR® Traceable® Countdown Stopwatch

Unique stopwatch provides countdown and alarm timing in pre-programmed increments of 1, 2, 3, 5, 10, 12, 15, 20, 25, 30, 35, 40, 45, 50, 55, and 60 minutes. Display continually shows running time remaining to zero. When zero is reached, timer sounds an alarm for 5 seconds. Accuracy is 0.01%. Set it to count down at any time from 99 hours to 1 second. When zero is reached, the timer alarms and begins to count down again from the programmed time. Repeat cycle continues automatically until stopped. The ideal stopwatch to dedicate to an analysis that must be noted at routine intervals. Stopwatch mode times up to 10 hours with 1/100-second resolution. Functions include single-action, time-in/-out, cumulative/interval-split, 8 recallable memories, and continuous timing.

The dual display timer mode can be used in three ways: Two different countdown times simultaneously, two independent countdown alarm timers, and two independent count up timers. This unit also has a pacer. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Extra-tough ABS plastic shockproof construction is perfect for use in the lab or field. Diameter: 2½ inches, depth: ⅝-inch. Weight: 1½ ounces. Supplied: battery, Traceable® Certificate, lanyard.



Description	Cat. No.	Price
VWR® Traceable® Countdown Stopwatch	61161-308	\$40.52

## VWR® Traceable® Digital Bench Top Timer

The perfect size—unit has a large-screen LCD and a small, lab-bench footprint. Times up from 0.01 second to 9 hours, 59 minutes, 59 seconds, and 99 hundredths of a second. Switchable between cumulative and interval-split, the unit also allows an infinite number of time-outs. Oversize keys make it easy to use. Three 4mm sockets (and supplied test leads) allow external triggering of the Start/Stop and Split/Lap/Reset functions. Digital display is ¾-inch-high and is readable from 20 feet.

Unit features precise, quartz-crystal Traceable® timing for enzyme tests, viscosity measurements, animal studies, and all timed lab tests. Accurate to 0.001% with resolution to 0.01 second. Engineered for ease of operation, accuracy, and reliability.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Fulfills ISO 9000 needs, lab certification requirements, and governmental demands. Portable design permits the unit to be moved easily. Attractive, high-impact ABS plastic housing is designed for hard laboratory use. Supplied: battery, Traceable® Certificate, three test leads. Size: 4 x 4¼ x 1¾ inches. Weight: 7 ounces.



Description	Cat. No.	Price
VWR® Traceable® Digital Bench Top Timer	61161-326	\$121.37



# Traceable® Stopwatches—Controllers Chart



## VWR® Traceable® Bench Timer

### Lab's new timing standard—Traceable® Bench Timer

Times from 0.001 second to 999 hours. Precise timing and an eight-digit, ½-inch-high, bright-intensity LED display make it the choice for all industrial and biomedical tests.

### Four timing modes

Reads in four different formats: 99 hours, 59 minutes, 59 seconds, 99 hundredths; 99999.999 seconds; 9999.9999 minutes; and 999.99999 hours. Ultra-high stability and sealed quartz-crystal provide precision timing immune to AC line fluctuations. If the power fails, a 9-volt backup battery continues timing until power is restored. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Fulfills ISO 9000 requirements. Reads to 0.001 second and is accurate to 0.001%.

### Twelve timing channels

Unit features four timing modes: single-action, time-in/-out, cumulative-split, and interval-split. Up to 12 different events may be timed simultaneously. An audible up-alarm may be set to signal on each channel. The Bench Timer is housed in an attractive, high-impact ABS plastic case designed for hard laboratory use. Supplied: Traceable® Certificate, battery. For use with 120 VAC. Size: 6¾ x 4¾ x 3½ inches. Weight: 1¼ pounds.

Description	Cat. No.	Price
VWR® Traceable® Bench Timer	23609-190	\$336.21

## CONTROLLER CHART

Cat. No.	Page No.	Traceable® Certificate Supplied	Accuracy	Switching Programs	Amps	Features
61161-312	74	No	N/A	96/Day	15	4 analog controlled outlets and 4 non-controlled outlets
61161-314	74	Yes	0.01%	84/Week	15	4 digital controlled outlets and 4 non-controlled outlets
61161-343	75	Yes	0.01%	196/Week	15	Random on/off
23609-188	75	Yes	0.01%	1568/Week	15	Controller, timer/stopwatch and calculator
23609-184	76	No	N/A	96/Day	15	Analog 24-hour controller
23609-186	76	No	N/A	84/Week	15	Analog 7-day controller
36934-170	76	Yes	0.01%	N/A	15	Counts up and turns equipment off
36934-172	76	Yes	0.01%	N/A	15	Continuously cycles equipment on/off for two different time periods
61161-300	77	Yes	±1°C	3/Day	15	Turns equipment on/off based on temperature
62379-551	77	Yes	±5% RH	N/A	15	Turns equipment on/off based on humidity



## VWR® 24-Hour Controller & VWR® Traceable® 7-Day Controller

Units combine a controller and an eight-outlet strip in a single package. Controllers can turn on chemical, water, or air pumps as part of a sampling process; warm up instruments at preset times; and automate testing, heating, mixing, or even the feeding of animals.

### Features time-controlled and manual outlets

Four of the outlets are time-controlled and four are manual. An override permits equipment to be switched on or off instantly without disturbing the program. This feature allows use of equipment without ever removing the plug. Safety features include a lighted on/off switch and a push-to-reset circuit breaker. Unit is UL-listed and is rated to 15 amps, 1000 watts at 125 VAC. Controller is tested and components are burned-in to eliminate the possibility of field failure.

### 24-Hour Controller

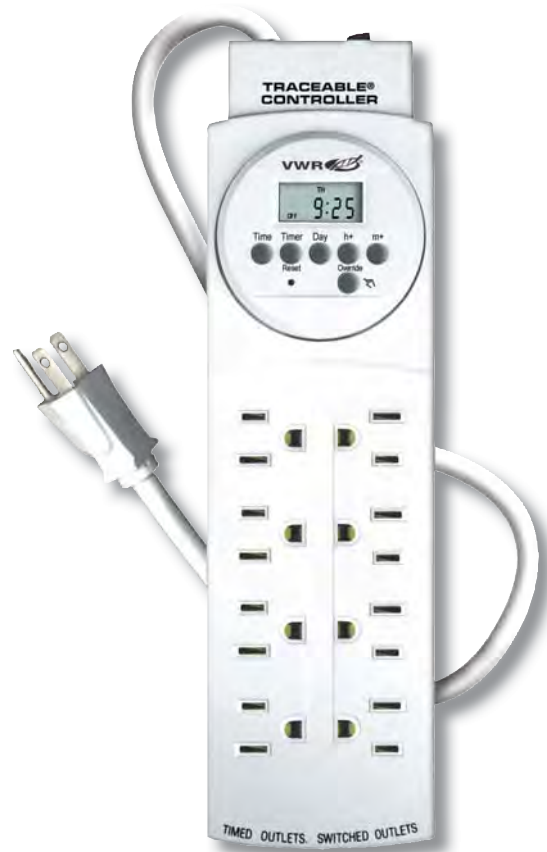
The 24-hour electromechanical controller has index pins, which are raised or lowered to set trip times. Pins constantly display all time settings; a single glance verifies an entire program. May be set in any 15-minute increment. Program repeats itself every day. Unit is not Traceable to NIST.

### 7-Day Traceable® Controller

Controller will turn equipment on and off in intervals as short as one minute or as long as 168 hours. Set 84 on/off switchings per week with up to 12 different switchings per day. Turn an instrument on today and off a week later. The repeat mode allows programming the same cycle each day for 365 days, scheduling a weekly program cycle for 52 weeks, jumping weekends, or skipping any selected days.

Meets the most critical experimental requirements and quality control needs. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Accuracy is 0.01%.

The memory chip and the display are powered by an internal nicad battery for program backup in the event of an electrical outage. Bright, ½-inch-high LCD shows the exact time of day complete with indicator, day of the week, and the on/off status of the program. Size: 9½ x 2¾ x 1½ inches. Weight: 1 pound. Supplied: rugged plastic case and 4-foot cord with a three-pronged, grounded plug.



Description	Cat. No.	Price
VWR® 24-Hour Electromechanical Controller (above)	61161-312	\$49.09
VWR® Traceable® 7-Day Controller (below)	61161-314	\$63.99

## VWR® Traceable® Outlet Controller

Versatile and economical controller may be programmed to turn equipment on and off at any minute of any day. A fail-safe memory permits programming 14 different switchings per day. They may be allocated over four separate weekly programs for up to 196 switchings per week. Random function automatically turns the controller on and off at random intervals.

### Easy to program

Schedule an entire week with the press of a few keys located on the front panel.

### Set intervals from 1 minute to 168 hours

The Outlet Controller will turn equipment on and off in intervals as short as 1 minute or as long as 168 hours. Turn an instrument on today and off a week later. The AM/PM day programs allow repeating the same cycle every day of the week, weekdays only, weekends only, or any selected days. A manual override permits equipment to be switched on or off without disturbing the program. Program and clock times are maintained by a backup battery in the event of an electrical outage. Brilliant, ½-inch-high LCD shows the time of day, day, and event number.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). CSA-and NTRL-C rated unit controls equipment to 125 VAC, 50/60 Hz, 15 amps, 1850 watts with timing accuracy of 0.01%. Supplied: two batteries. High-impact ABS plastic housing is 2 x 4 x 3½ inches. Weight: 5½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Outlet Controller	61161-343	\$49.57

## VWR® Traceable® Lab Controller

### Controls any appliance plugged into the back of controller

In the time-of-day mode, it may be programmed for up to 224 on/off switchings per day or up to 1568 switchings per week. In the countdown mode, it turns on/off to the second. In the repeat mode, it continually cycles equipment on/off at any two unique time intervals desired. A press of a key manually overrides the automatic settings.

### Three unique timing modes

Three independent timing channels may be used to countdown and alarm, count-up, or countdown repeat (repetitively alarms at a specific time interval). Times from 1 second to 100 hours. Alarms sound and flash until manually stopped or may be set to automatically turn off. Adjustable volume control permits loud to whisper-quiet alarms.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Calculator channel has metric converter

The metric converter changes weights, liquid measurements, and temperatures from metric to U.S. or vice versa. The calculator feature adds, subtracts, multiplies, and divides on a six-digit display. The clock displays the day of the week and time of day to the exact second.



<b>Power</b>	125 VAC, 50/60 Hz, 3-pronged grounded plug
<b>Switching Capability</b>	125 VAC, 50/60 Hz, 15 amps, 1875 watts
<b>Timing Accuracy</b>	0.01%
<b>Cycle Duration</b>	minimum 1 sec, maximum 168 hr
<b>On/Off Programs</b>	1568 per week, 224 per day
<b>Display</b>	6-digit, ½ inch-high LED
<b>Case</b>	Impact-resistant ABS plastic
<b>Size</b>	6½ x 4¾ x 3½ inches
<b>Weight</b>	2 pounds

Description	Cat. No.	Price
VWR® Traceable® Lab Controller	23609-188	\$251.78



## VWR® Traceable® Walkaway™ Count-up Controllers

**Model 1:** Walkaway™ Turn-off Controller counts up and turns any piece of equipment off at the end of a set time period. Programmable in three interval settings: .01 second to 99.99 seconds; 1 minute to 99 minutes; or 1 hour to 99 hours.

**Model 2:** Walkaway™ Repeat Turn-on/Turn-off Controller counts up and turns any piece of equipment on for a programmed time and off for a different programmed time. Repeat feature automatically continues cycling on and off programmed times until manually stopped. Programmable for separate on and off timing periods in three interval settings: 1 second to 99 seconds; 1 minute to 99 minutes; and 1 hour to 99 hours.

### Switch equipment on/off instantly with manual override

Controllers perform reproducible stirring, heating, or pumping times. Use for timed shutdown or repeated on/off timing. A manual pause switch overrides the program without disturbing it, and permits equipment to be switched off instantly. Supplied internal nicad battery maintains programs in the event of a power outage. Intuitive operation permits setting a program in less than five seconds. Automatic operation allows walking away from the equipment.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### LED indicates status of attached equipment

Unit's timing accuracy is 0.01%. Backlit LCD digit height is 1/2-inch. Three-pronged, grounded receptacle relay turns on/off apparatus to 120 VAC, 15 amps, 1800 watts, 1/3 horsepower. Red LED indicates the on/off status of attached equipment. High-impact ABS case: 6 x 2 3/4 x 3 1/4 inches. Weight: 12 ounces.



Description	Cat. No.	Price
VWR® Traceable® Walkaway™ Turn-off Controller (pictured above) (patented)	36934-170	\$117.08
VWR® Traceable® Walkaway™ Repeat Turn-on/off Controller (pictured below) (patented)	36934-172	\$118.68

## VWR® Hour/Day Dial Controller

Automatic mechanical units turn on and off any piece of equipment. Use them to turn on chemical, water, and air pumps as part of a sampling process. Automate testing, heating, mixing, or even feeding of animals. Easy-to-set controllers are ready to use out of the box, program in less than a minute, and plug into a wall outlet. They have all of the flexibility and simplicity desired for a lab's routine needs.

### Index pin displays all time settings

Unique index pin memory permits programming the unit to exact time requirements. Pins constantly display all of the time settings. UL listing allows use with electrical equipment to 125 VAC, 15 amps, 1875 watts, and 1/3 horsepower. A single glance verifies an entire program. If a change is necessary, it takes only a second to raise or lower a pin.

### Simple, easy programming

Twenty-four-hour unit may be set in 15-minute increments, 7-Day Controller in any number of 2-hour increments. Both automatically repeat each cycle daily or weekly. The 7-day unit may be programmed to skip weekends or any days. Using the manual override, equipment can be switched on/off immediately without unplugging and without disturbing the program. Rated to 15 amps. Size: 3 1/4 x 2 3/4 x 2 inches. Weight: 5 ounces.



Description	Cat. No.	Price
VWR® 24-Hour Dial Controller (pictured right)	23609-184	\$40.68
VWR® 7-Day Dial Controller (pictured left)	23609-186	\$40.68

## VWR® Traceable® Temperature Controller

### Turn equipment on/off at any temperature

Controller turns any piece of equipment on or off when temperature rises above high set point or falls below low set point. Wide measurement range of  $-4$  to  $140^{\circ}\text{F}$  and  $-20$  to  $60^{\circ}\text{C}$ , and setting range of  $32$  to  $140^{\circ}\text{F}$  ( $0$  to  $60^{\circ}\text{C}$ ) permits measuring, and maintaining temperatures above or below ambient. Control heating elements, cooling blocks, hot plates, heating mantles, cooling systems, or incubators to an accuracy of  $\pm 1^{\circ}\text{C}$ . Controller may be set in  $1^{\circ}$  increments. Display reads in  $^{\circ}\text{F}$  and  $^{\circ}\text{C}$  with a  $0.1^{\circ}$  resolution. Unit accepts standard, three-pronged plug and controls equipment rated to 1800 watts, 15 amps. Brilliant,  $\frac{1}{2}$ -inch-high LCD shows the temperature and time of day to the exact second. Red LED status light indicates on/off mode of attached equipment. Uses the same microchip and software that control sophisticated plant operations. May also be programmed to turn equipment on and off at any minute of any day. Memory permits programming three different pairs of on/off time switchings per day. Chip and display are powered by two batteries. Settings are maintained for 1 year in the event of electrical outage.



### Learn to operate in seconds

Simple commands are a joy to use. Display walks you through steps. Set high and low temperatures or schedule timer on/off settings in just seconds with press of a few keys. Manual override permits equipment to be switched on or off instantly without disturbing temperature or timer settings.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability for temperature only to standards provided by NIST (National Institute of Standards and Technology). Controller and relay:  $2\frac{3}{4} \times 5\frac{1}{2} \times 1\frac{1}{4}$  inches. Weight: 1 pound. May be used with equipment to 115 VAC, 1800 watts, 15 amps. Temperature sensor cable is  $3\frac{1}{2}$  feet in length. Supplied: batteries.

Description	Cat. No.	Price
VWR® Traceable® Temperature Controller	61161-300	\$153.99

## VWR® Traceable® Humidity Controller

Humidity outlet switch turns any piece of equipment on or off. Program higher-ON/lower-OFF or lower-ON/higher-OFF at any set point from 30 to 90% RH in 1% RH increments. Use for turning humidifiers, dehumidifiers, or alarms on or off. Three-key operation is extremely easy and fast.

### Battery backup

A manual override permits equipment to be switched on or off instantly without disturbing the program. Rechargeable nicad battery maintains operation for days in the event of an electrical outage. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

LCD ( $\frac{1}{2}$ -inch-high digits) displays relative humidity and ON/OFF message to show status of attached equipment. Accuracy is  $\pm 5\%$  RH. Three-pronged grounded receptacle turns apparatus on/off to 125 VAC, 15 amps, 1800 watts,  $\frac{1}{3}$  horsepower. High-impact ABS plastic case:  $4\frac{1}{8} \times 2\frac{3}{8} \times 1\frac{1}{2}$  inches. Weight:  $4\frac{1}{2}$  ounces.



Description	Cat. No.	Price
VWR® Traceable® Humidity Controller	62379-551	\$123.68



## VWR® Traceable® Memory-Card Humidity/Temperature/Dew Point

**NEW**



Traceable® Memory-Card Humidity/Temperature/Dew Point is a stand-alone unit with data logging capabilities. It records readings from once a minute up to once every 720 minutes on a removable standard SD memory card. Memory card reader (supplied) plugs into any USB computer port for an instant report. Text report includes date/time of day and readings of sensors, report may be sent to any spreadsheet or database. Unit monitors cabinets, incubators, clean rooms, store rooms, labs, hoods, and critical areas. Unit captures 5.9 million readings with the supplied 256 mb removable SD memory card.

Temperature range: 0 to 50.0°C with 0.1° resolution. Temperature accuracy: ±1°C.

Humidity range: 0.0 to 90.0%RH. Resolution: 0.1. Humidity accuracy: ±5%RH at 25°C from 20 to 85%RH; ±7%RH elsewhere. Dew point range: -20.0 to 50.0°C with 0.1° resolution.

Minimum/Maximum feature displays highest/lowest readings for any time period.

Alarm features sounds and flashes a bright red LED when temperature, humidity, and/or dew point rise above or fall below user-set trip points, alarm sets in 0.1 increments. Unique 4-line display simultaneously shows ambient temperature, humidity, dew point and time-of-day. Operates using supplied batteries or supplied AC adaptor (batteries last up to one year with no data capture and up to one month with sampling rate of one per minute).

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 4¼ x 3½ x 1¼ inches. Weight: 7 ounces. Housing: high-impact, chemical-resistant ABS plastic. Supplied: 256 mb SD memory card, USB memory card reader, magnetic mounting strips, Velcro®, wall mount, bench stand, batteries, adaptor, and Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Memory-Card Humidity/Temperature/ Dew Point	89369-158	\$229.00

## Humidity Chart

Cat. No.	Page No.	Traceable® Certificate Supplied	Relative Humidity Range	Resolution	Accuracy	Temperature Range	Resolution	Accuracy	Features
89369-158	78	Yes	0.0 to 90.0%RH	0.1%RH	±5%RH	32.0 to 122.0°F	0.1°	±1°C	Removable Memory-Card
35519-041	79	Yes	5.00 to 95.00%RH	0.01%RH	±1.5%RH	-40.00 to 220.0°F	0.01°	±0.4°C	Response time of 10 seconds
35519-020	79	Yes	10.00 to 95.00%RH	0.01%RH	±1.5%RH	-40.00 to 220.0°F	0.01°	±0.4°C	Also reads dew point
61161-382	80	Yes	10.0 to 95.0%RH	0.01%RH	±3%RH	32.0 to 122.0°F	0.01°	±1°C	Computer output
23609-226	80	Yes	10 to 95%RH	0.01%RH	±3%RH	-328 to 2431°F	0.1°	±1°C	Hard-copy results
61161-380	81	Yes	10.0 to 95.0%RH	0.1%RH	±2.5%RH	-4.0 to 140.0°F	0.1°	±1°C	Recorder output
35519-050	81	Yes	10.0 to 95.0%RH	0.1%RH	±2%RH	0.0 to 199.9°F	0.1°	±1°C	Computer output
33500-098	81	Yes	10.0 to 95.0%RH	0.1%RH	±2.0%RH	0.0 to 199.9°F	0.1°	±1°C	Dew point and alarm
15551-258	82	Yes	25 to 90%RH	1%RH	±2%RH	-4 to 140°F	0.1°	±1°C	Receives radio-signal from remote sensors
35519-043	82	Yes	10.0 to 95.0%RH	0.01%RH	±1.5%RH	32.0 to 122.0°F	0.01°	±0.4°C	Simple point-and-read technology
35519-049	83	Yes	20 to 98%RH	1%RH	±3.5%RH	32.0 to 122.0°F	0.1°	±1°C	Pen shape
12777-834	83	Yes	0 to 100.0%RH	0.1%RH	±3%RH	-4.0 to 122°F	0.1°	±1°C	Dew point, min/max
35519-047	84	Yes	25 to 95%RH	1%RH	±2%RH	32 to 122°F	1°	±1°C	Dual min/max memories
35519-045	84	Yes	25 to 95%RH	1%RH	±2%RH	32 to 122°F	1°	±1°C	Compact size
35519-046	84	Yes	25 to 95%RH	1%RH	±2%RH	32 to 122°F	0.1°	±1°C	Sharp display
35519-044	84	Yes	25 to 95%RH	1%RH	±2%RH	32 to 122°F	0.1°	±1°C	RH/temperature at a glance
61161-378	85	Yes	25 to 95%RH	1%RH	±2%RH	-58 to 158°F	1°	±1°C	Big digits
35519-048	85	Yes	25 to 95%RH	1%RH	±2%RH	-58 to 158°F	0.1°	±1°C	External temperature probe
21800-066	86	Yes	20 to 99%RH	1%RH	±5%RH	-58.0 to 158.0°F	0.1°	±1°C	Remote humidity sensor
36934-164	86	Yes	1 to 99%RH	0.1%RH	±4%RH	-40 to 158°F	0.1°	±1°C	Dew point and Wet-bulb monitor
15551-014	87	No	0 to 100%RH	1%RH	±2.5%RH	-40 to 122°F	1°	±1.5°C	No maintenance required

## VWR® Traceable® Humidity/Temperature/Dew Point Meter

**Traceable unit displays humidity to 0.01%, use for QC, ISO 9000, and R/D**

Traceable® Digital Hygrometer/Thermometer/Dew Point instrument, by using a special breed of artificial intelligence, provides a response time of under 10 seconds with a resolution of 0.01% RH, 0.01°F/°C, and 0.01 dew point/frost point °F/°C. It samples once per second. Fuzzy logic algorithm pinpoints the exact answer almost instantly.

### Fast response with high accuracy

Direct-reading instrument has an accuracy of ±1.5% RH, 0.01 RH resolution and reads from 5 to 95%RH. Results are reported in both °F and °C from -40.00 to 220.0°F (-40.00 to 104.0°C) temperature, and from -40.00 to 140.0°F (-40.00 to 60.00°C) dew point/frost point. Temperature resolution is 0.01° with an accuracy of ±0.4°C.

### Certified Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Clean room and food applications

Fulfills federal CLIA requirements and is ideal for hoods, clean rooms, food storage, process control, incubators, desiccators, drug manufacturing, environmental chambers, corrosion analysis, and inside/outside air monitoring. Four-digit LCD can be read from 10 feet. Rugged handheld unit is designed for years of service.

### Hi/Lo memories, programmable alarms, and data output

Memory recalls both minimum and maximum readings in dew point/frost point, temperature, and humidity at any time. High and low alarms can be programmed in dew point/frost point, temperature, and humidity. When an out-of-range condition is sensed, an alarm sounds and the display flashes. Computer output permits data to be captured, transferred, stored, and printed. Size: 5½ x 3½ x 1¼ inches. Weight: 12 ounces. Probe length is 7 inches. Cable length is 72 inches. Supplied: probe, battery, computer output, Traceable® Certificate, and ABS plastic carrying case. AC adaptor (not supplied) is available.



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Humidity/Temperature/ Dew Point Meter Fast response model. Range: 5.00 to 95.00%RH, response time of 10 seconds and probe diameter of 0.4 inches.	35519-041	\$628.48
VWR® Traceable® Humidity/Temperature/ Dew Point Meter Universal model. Range: 10.00 to 95.00%RH, response time of 30 seconds to 3½ minutes, and probe diameter of 0.7 inches.	35519-020	\$464.20
<b>Accessories</b>		
Cables, Converter, and Communication Software Captures readings to a PC Computer for 35519-041 or 35519-020 (complete description on page 88)	33500-092	\$391.20
Easy-Use™ Accessory Adaptor 115 VAC	89030-250	\$29.57



Computer Output



Wireless Capable  
(see page 89)

## VWR® Traceable® Humidity/Thermometer

### Hygrometer/Dew Point/Thermometer with data logger and computer output

Unit simultaneously displays humidity or dew point and temperature. One of the newest and fastest humidity sensors ever developed displays full-range humidity changes in 5-30 seconds. It records wide humidity variations on a second-to-second basis. Monitor labs, clean rooms, food processing, and all humidity-sensitive manufacturing areas with this high-resolution unit. Relative humidity resolution is 0.01%, accuracy is  $\pm 3\%$  RH, and range is 10.00 to 95.00% RH. Dew Point is a calculated measurement, resolution is 0.01°, accuracy is sum of humidity and temperature. Range is  $-13.50$  to  $120.1^\circ\text{F}$  and  $-25.30$  to  $48.90^\circ\text{C}$ . Temperature resolution is 0.01°, accuracy is  $\pm 1^\circ\text{C}$ , and range is  $32.00$  to  $122.0^\circ\text{F}$  and  $0.00$  to  $50.00^\circ\text{C}$ .

### Memories, data logger, computer output

Memory recalls minimum/maximum readings. HOLD key freezes display for reading later. Data logger captures 1000 readings manually at the push of a key or automatically when set between 1 to 3600 seconds. Computer output allows unit to be connected to a computer for downloading data logger results or constant monitoring. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Jumbo-size display is 1 $\frac{3}{8}$ -inch-high. Housing is impact-resistant ABS plastic. Supplied: probe ( $\frac{2}{3}$ -inch diameter x 8 inch), 40-inch cable, battery, and Traceable® Certificate. Size: 7 x 2 $\frac{3}{4}$  x 1 $\frac{1}{8}$  inch. Weight: 9 $\frac{1}{2}$  ounces.

Description	Cat. No.	Price
VWR® Traceable® Humidity/Thermometer	61161-382	\$279.80
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46

## VWR® Traceable® Printing Hygrometer/Thermometer

### Printing Hygrometer/Thermometer provides permanent hard-copy results

Provides a permanent record by printing current humidity/temperature/time/date and maximum/minimum readings, plus the time/date they occurred. Triple display with  $\frac{3}{8}$ -inch-high LCD digits continuously and simultaneously shows humidity, temperature 1, and temperature 2. Perfect dependable and reliable unit to monitor relative humidity and temperature in the lab, plant, and field. Meets federal requirements for CLIA specification 93.1207. Printer provides hard copy for today's stringent QC documentation.

### Use anywhere

Ideal for use in hoods, clean rooms, food storage areas, drug manufacturing, all air analysis, and environmental chambers. Automatically prints the current humidity/temperature 1, temperature 2, dewpoint, date, and time of day at any programmed interval or at the press of a key. The printer may be programmed to automatically and repeatedly print in any increment from 6 seconds to 59 minutes, 59 seconds.

Fast-response, solid-state sensors detect changes in less than 10 seconds. Relative humidity range is 10 to 95% with a resolution is 0.1% and an accuracy of  $\pm 3\%$  RH mid-range to  $\pm 5\%$  RH elsewhere. T1 temperature range is from  $-20$  to  $60^\circ\text{C}$  ( $-4$  to  $140^\circ\text{F}$ ), resolution of 0.1°, accuracy  $\pm 1^\circ\text{C}$  ( $\pm 1.8^\circ\text{F}$ ). T2 Type-K thermocouple temperature range is from  $-200$  to  $1333^\circ\text{C}$  ( $-328$  to  $2431^\circ\text{F}$ ), accuracy  $\pm(0.2\%$  of the reading plus  $1.8^\circ\text{C}$ ), resolution of 0.1°C (from  $-200$  to  $999.9^\circ\text{C}$ ) and 0.1°F (from  $-328$  to  $999.9^\circ\text{F}$ ) otherwise 1°. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: Humidity/T1 temperature probe, T2 Type-K probe, paper, probe holder/stand, carrying case, batteries. Accessory adaptor for continuous AC operation is available. Humidity/T1 probe is  $\frac{3}{4}$ -inch diameter x 6 $\frac{1}{4}$  inches, 4-foot cable, T2 probe is 0.06-inch-diameter, 4-foot cable. Size: 7 $\frac{1}{2}$  x 3 x 1 $\frac{1}{2}$  inches. Weight: 10 ounces.



Description	Cat. No.	Price
VWR® Traceable® Printing Hygrometer/Thermometer	23609-226	\$562.29



## VWR® Traceable® Memory Hygrometer/Thermometer

### Maintains accuracy with do-it-yourself calibration

Traceable® Memory Hygrometer/Thermometer measures from 10.0 to 95.0% relative humidity and temperature from 0.0 to 199.9°F and -18.0 to 93.0°C. Simultaneously displays both temperature and relative humidity on its dual 1½-inch high LCD. Precision thermistor offers a temperature accuracy of ±1°C between 0 to 40°C, otherwise ±2°C, and a resolution of 0.1°. An audible click confirms each key entry. See listing for dew point model specifications.

### Microprocessor-based design provides unparalleled accuracy

Resistive polymer film sensor provides humidity readings with an accuracy of ±2% mid-range to ±4% elsewhere. Humidity resolution is 0.1% relative humidity. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). At the touch of a key, recalls the Min/Max humidity and temperature readings captured during any time period. A special HOLD key permits freezing the display to capture readings.

### Computer output

Unit is equipped with an output receptacle for transferring data to a computer. ABS plastic housing is both lightweight (10¾ ounces) and rugged for extreme field or lab use. Supplied: probe/cable, Traceable® Certificate, hard plastic carrying case, battery. Size: 7½ x 2¾ x 1¼ inches. Probe: 8½ inches x ⅔-inch diameter with a 3-foot cable.



Calibration Standard



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Memory Hygrometer/Thermometer	35519-050	\$155.03
VWR® Traceable® Memory Hygrometer/Thermometer—Identical to Cat. No. 35519-050 with accuracy of ±2.0%RH; with Dew Point Display (Range 0.0 to 50.0°C with a resolution of 0.1° and an accuracy of ±2°C; and with programmable audible alarm.)	33500-098	\$327.02
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
33% Calibration Standard with calibration instructions	33500-100	\$51.40
75% Calibration Standard with calibration instructions	33500-102	\$51.40

## VWR® Traceable® Humidity/Temperature Meter

Digital display permits instant readings of relative humidity and temperature (°F/°C). It is ideal to monitor conditions in chambers, clean rooms, food processing, scientific labs, and all humidity-sensitive manufacturing operations. Memory captures 99 data points which can be recalled on command. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Humidity range is 10.0 to 95.0% RH and temperature range is -4.0 to 140.0°F (-20.0 to 60.0°C). Resolution is 0.1 for both readings. Accuracy is ±2.5% RH mid-range to ±5% RH elsewhere. Response time is 30 seconds to 5 minutes. Data HOLD switch freezes the display to capture a reading. Large, bright, ½-inch-high, four-digit liquid crystal display can be read from 10 feet away. Rugged handheld unit is completely portable and designed for years of dependable and reliable service.

### Instantly updates readings

Battery powers the unit for 1 year of intermittent use or 100 hours of continuous readings. Precision thin-film capacitance sensor updates the display three times per second. Supplied complete with Traceable® Certificate, battery, tripod mounting hole, and hard carrying case. Size: 2½ x 10½ x 1 inches. Weight: 7 ounces.

Description	Cat. No.	Price
VWR® Traceable® Humidity/Temperature Meter	61161-380	\$236.21
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46





## VWR® Traceable® Radio-Signal Remote Humidity/Thermometer



### Displays humidity and temperature from 100 feet away

Traceable® Radio-Signal Remote Humidity Meter/Thermometer receives a radio signal from the remote wireless sensors. It eliminates the cable. Place the main unit at your desk or bench. Place the remote sensor module in labs, ducts, and storage facilities—even outdoors. Remote sensor sends humidity and temperature signals to the main digital display. Transmits on a frequency of 433 MHz. Range is 65 to 100 feet, depending on the location or number of walls.

### Traceable to NIST for accuracy

Relative humidity range is 25 to 90% with a resolution of 1% and an accuracy of  $\pm 2\%$  RH mid-range to  $\pm 4\%$  RH elsewhere. Switchable thermometer range is  $-4$  to  $140^\circ\text{F}$  and  $-20$  to  $60^\circ\text{C}$ , with a resolution of  $0.1^\circ$  and an accuracy of  $\pm 1^\circ\text{C}$ . To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Displays up to three modules

Main unit can receive and display data from up to three different remote sensor modules. Data is transmitted every 30 seconds. Display's trend indicators show if humidity and temperature are rising or falling. Minimum and maximum memory display allows monitoring of conditions over short or long periods, including overnight or weekends. An alarm may be set in increments of 1% RH and  $1^\circ$ . The alarm sounds when the humidity or temperature exceeds the high and low set points. Jumbo digits ( $1\frac{3}{8}$  inches-high) may be read from 25 feet. Housing is high-impact, chemical-resistant ABS plastic. Supplied: flip-open stand, wall brackets, Velcro®, one main unit ( $4\frac{1}{4} \times 4\frac{1}{2} \times \frac{3}{4}$  inches, weight: 6 ounces), one remote sensor module ( $2\frac{1}{3} \times 3\frac{1}{2} \times \frac{3}{4}$  inches, weight: 3 ounces), internal humidity sensor, internal temperature sensor, batteries, and Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Radio-Signal Remote Humidity Meter/Thermometer	15551-258	\$83.39
VWR® Additional Traceable® Humidity/Thermometer Remote Sensor Module	15551-126	\$42.49

## VWR® Traceable® General-Purpose Hygrometer/Thermometer

Perfect quality-control unit displays accurate answers for every air measurement. Self-contained, the humidity and temperature sensors are built-in. Easy-to-operate unit features a DATA HOLD key allowing readings to be captured and noted.

### Traceable to NIST for accuracy

General-purpose unit has a relative humidity range of 10.00 to 95.00% with a resolution of 0.01% and an accuracy of  $\pm 1.5\%$  RH. Temperature range is  $32$  to  $122^\circ\text{F}$  or  $0$  to  $50^\circ\text{C}$  with a resolution of  $0.01^\circ$  and an accuracy of  $\pm 0.4^\circ\text{C}$  at tested points. Response time is 30 seconds to  $3\frac{1}{2}$  minutes. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: battery and Traceable® Certificate. High-impact ABS plastic unit measures  $2\frac{3}{4} \times 8 \times 1\frac{1}{2}$  inches. Weight: 8 ounces.



Description	Cat. No.	Price
VWR® Traceable® General-Purpose Hygrometer/Thermometer	35519-043	\$222.38

## VWR® Traceable® Humidity/Temperature Pen

### Humidity/Temperature Pen with memory makes it easy to monitor any location

Pen continuously and simultaneously displays both RH and °F/°C with dual-recall memories. Handy pocket clip makes it easy to carry. Memory displays highest and lowest humidity/temperature readings achieved overnight or during any time period. Three-quarter-inch-high LCD can be read at a glance. Meets Federal Government CLIA requirement 493.1252. Pocket pen has fast-response, solid-state sensors which respond in less than 6 seconds. Display is updated every second. Temperature range is 32.0 to 122.0°F (0.0 to 50.0°C) with a resolution of 0.1° and an accuracy of ±1°C. Relative humidity display is 20 to 95%. Resolution is 1% and accuracy is ±3.5% RH midrange to ±5.5% RH elsewhere.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: clip, Traceable® Certificate, and battery. Housing is high-impact, chemical-resistant ABS plastic. Size: 5½ x 7⁄8 x 2⁄3 inches. Weight: 1¼ ounces.



Description	Cat. No.	Price
VWR® Traceable® Humidity/Temperature Pen	35519-049	\$66.81

## VWR® Traceable® Pocket Hygrometer/Dew Point/Thermometer

### Ignores condensation

Compact design features an electronic capacitance polymer film sensor not affected by condensation. Unit may be used in 100% humidity. Relative humidity range is 0 to 100.0% with a resolution of 0.1% and an accuracy of ±3% RH mid-range to ±4% RH elsewhere. Both dew point and temperature ranges are -20.0 to 50.0°C and -4.0 to 122°F with a resolution of 0.1° and an accuracy of ±1°C. Full range response is 30 to 60 seconds.

### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). At the press of a key, unit recalls minimum/maximum readings. HOLD key freezes the display to record a reading. Dual display shows relative humidity with either dew point or temperature on a ¾-inch-high LCD. Size: 6½ x 2 x 2⁄3 inches. Weight: 3 ounces. Supplied: Traceable® Certificate and batteries.



Description	Cat. No.	Price
VWR® Traceable® Pocket Dew Point/Hygrometer/Thermometer	12777-834	\$105.88



## VWR® Traceable® Digital Humidity/Temperature Meter

### Digital Relative Humidity/Temperature Meter with Minimum/Maximum Memory

Routine measurements, monitoring round-the-clock, quality-control needs, and critical experimental requirements are features of this humidity/temperature meter. Unique instrument shows the exact air conditions in labs, hoods, clean rooms, coolers, stockrooms, incubators, environmental chambers, and chemical storage areas.

### Memories store Min/Max readings

Continuously and simultaneously displays relative humidity and temperature in °F/°C with dual-recall memories. Minimum and maximum memories may be displayed or cleared at any time with the touch of a key. Monitors conditions overnight, on weekends, or for any time period. Temperature range is 32 to 122°F and 0 to 50°C with a resolution of 1° and accuracy of ±1°C. Humidity range is 25 to 95%, resolution is 1% RH, and accuracy is ±2% RH mid-range to ±4% RH elsewhere. Fast-response solid-state sensors show changes in less than 30 seconds. Display is updated once per second.

### Fulfills CLIA requirement

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Extra-large, easy-to-view 5/8-inch-high digits can be read at a glance. Meets federal requirements for CLIA specification 493.1252 for monitoring temperature and humidity.

Self-contained, stable, accurate unit requires no adjustment or maintenance. Case is chemical- and shock-resistant ABS plastic. Supplied: Traceable® Certificate, wall mount, bench stand, switch to read °F/°C, fast-response solid-state sensors, and two batteries. Size: 2 5/8 x 3 7/8 x 5/8 inches. Weight: 2 1/2 ounces.



Description	Cat. No.	Price
VWR® Traceable® Humidity/Temperature Meter with Dual Min/Max Memories	35519-047	\$83.46
VWR® Traceable® Digital Humidity Meter	35519-045	\$70.33
VWR® Traceable® Digital Humidity/Temperature Meter Features identical to 35519-047 but without memories. Size: 3 1/4 x 7 x 3/4 inches. Displays temperature to 0.1°.	35519-046	\$78.64



## VWR® Traceable® Hygrometer/Thermometer

### RH/Temperature at a glance

Traceable® Hygrometer/Thermometer provides readings instantly. It is ideal for constantly monitoring labs, fume hoods, walk-ins, plant areas, and storage facilities. Large, easy-to-read 1/2-inch-high LCD digits can be read from 15 feet. Unit reads 25 to 95% relative humidity and temperature from 32 to 122°F and 0 to 50°C. Resolution is 1% RH and 0.1°. Accuracy is ±2% RH mid-range otherwise ±4% RH. Temperature accuracy is ±1°C (0 to 40°C) otherwise 2°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Bench stand and wall mount

Self-contained, stable, and accurate unit requires no adjustment or maintenance. Supplied: wall-mount screw, bench stand, Traceable® Certificate, battery. Size: 3 1/2 x 5 x 7/8 inches. Weight: 6 ounces.

Description	Cat. No.	Price
VWR® Traceable® Hygrometer/Thermometer	35519-044	\$65.77

## VWR® Traceable® Jumbo Humidity/Temperature Meter

### Ambient and probe temperatures

Unit continuously and simultaneously displays ambient relative humidity and (internal probe and external probe) temperatures in °F or °C, with dual-recall memories. External thermometer probe is supplied with a 10-foot cable. Both sensor and cable perform accurately when under water.

### Quick-response sensor

External probe range is -58 to 158°F and -50 to 70°C. Ambient internal probe range is 32 to 122°F and 0 to 50°C. Resolution is 1° and accuracy is ±1°C. Humidity range is 25 to 95%, resolution is 1% RH, and accuracy is ±2% RH mid-range to ±4% RH elsewhere. Fast-response, solid-state sensors show changes in less than 30 seconds. Display is updated once per second. Minimum and maximum memories may be displayed or cleared at any time with the touch of a key. They permit monitoring conditions overnight, on weekends, or for any time period. Jumbo 1½-inch display may be read from as far away as 35 feet.

### Fulfills CLIA requirements

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Meets federal requirements for CLIA specification 493.1207 for monitoring temperature and humidity. Self-contained, stable, accurate unit requires no adjustment or maintenance. Case is chemical- and shock-resistant ABS plastic. Supplied: flip-open stand, wall mount, batteries. Size: 4¼ x 4 x ¾ inches. Weight: 5¾ ounces.



Description	Cat. No.	Price
VWR® Traceable® Jumbo Humidity/Temperature Meter	61161-378	\$72.26

## VWR® Traceable® Memory Humidity/Temperature Meter

### Memory Humidity/Temperature Monitor with temperature probe

Memory unit constantly monitors and remembers high and low readings. Probe and cable may be placed under water.

### Remembers Min/Max readings

Display simultaneously shows probe temperature, ambient temperature, and ambient humidity. Minimum and maximum memory readings may be recalled or cleared with the touch of a key. Humidity range is 25 to 95% RH with a resolution of 1% and an accuracy of ±2% RH mid-range to ±4% RH elsewhere. Ambient temperature range is 32 to 122°F and 0 to 50°C with a resolution of 1°. External temperature sensor displays from -58.0 to 158.0°F and -50.0 to 70.0°C with a resolution of 0.1°. Temperature accuracy is ±1°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Displays ambient and probe temperatures

Use it to record standard lab conditions every day. Memory unit is ideal to constantly monitor an area or dedicate to one test. Bright LCD digits are ½-inch-high. Handsome design is housed in a rugged ABS plastic case. Supplied: stand, wall mount, internal humidity sensor, external/internal temperature sensors, 10-foot cable, Traceable® Certificate, and batteries. Size: 6 x 3¾ x ¾ inches. Weight: 6 ounces.



Description	Cat. No.	Price
VWR® Traceable® Memory Humidity/Temperature Meter	35519-048	\$122.85



## VWR® Traceable® Remote Alarm RH/ Temperature Monitor

Unique instrument features a remote temperature/humidity sensor with a 7-foot cable. It is ideal for routine measurements, monitoring round-the-clock, all quality-control needs, and critical experimental requirements. Place the sensor in hoods, clean rooms, coolers, stockrooms, incubators, environmental chambers, desiccators, and chemical storage areas. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Minimum and maximum memory

Triple display simultaneously shows minimum/maximum and current humidity, or minimum/maximum and current temperature. Minimum and maximum memory feature for both temperature and humidity permits monitoring conditions overnight, on weekends, or any time period. Humidity range is 20 to 99% with a resolution of 1%. Accuracy is ±5% RH midrange. Temperature range: -58.0 to 158.0°F and -50.0 to 70.0°C. Resolution: 0.1°. Accuracy: ±1°C.

### High and low alarm

Alarm may be set in 1% RH and 1° increments. Alarm sounds when reading rises above or falls below set points. Supplied: flip-open stand, slot for wall mounting, external humidity/temperature sensor, battery, and Traceable® Certificate. Easy-view, ½-inch-high digits may be read from 10-feet. Housing is high-impact, chemical-resistant ABS plastic. Size: 4¼ x 2¾ x ¾ inches. Weight: 4 ounces.



Humidity/Temperature sensor

Description	Cat. No.	Price
VWR® Traceable® Remote Alarm RH/Temperature Monitor	21800-066	\$69.93

## VWR® Traceable® Dew Point/ Wet-Bulb/Humidity/Thermometer

Traceable® unit shows current, minimum, and maximum displays and includes a settable high/low alarm for all four readings (dew point, wet-bulb, humidity, temperature). Alarm may be set in 0.1 increments. It sounds for one minute and red LED flashes until readings return to non-alarm condition. Range is 1 to 99% relative humidity with a resolution of 0.1% and an accuracy of ±4% between 20 to 80% RH. Temperature range is -40 to 70°C and -40 to 158°F with a resolution of 0.1° (below 100) and an accuracy of ±1°C.

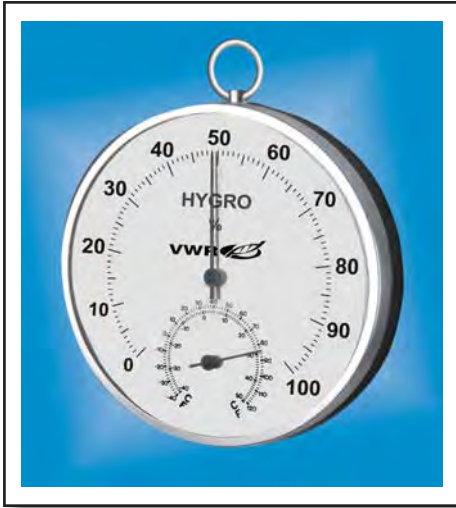
### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Meets federal requirements for CLIA specification 493.1207 for monitoring temperature and humidity. LCD digits are 1-inch-high. Supplied: batteries and Traceable® Certificate. High-impact, chemical-resistant ABS plastic housing, with plastic built-in stand and wall mount. Size: 4½ x 4½ x 1 inches. Weight: 4¼ ounces.



Description	Cat. No.	Price
VWR® Traceable® Dew Point/Wet-Bulb/Humidity/Temperature Alarm	36934-164	\$55.68

# Traceable® Humidity/Pressure



## VWR® Dial Hygrometer/Thermometer

Dial provides humidity and temperature readings in an easy-to-read format. Ideal for constantly monitoring labs, fume hoods, walk-ins, plant areas, and storage facilities. Large, analog readout displays 0 to 100%RH, 1%RH resolution, and accuracy  $\pm 2.5\%$  RH at 50% RH. Dial also displays temperatures from  $-40$  to  $122^{\circ}\text{F}$  ( $-40$  to  $50^{\circ}\text{C}$ ),  $1^{\circ}$  resolution, and accuracy  $\pm 1.5^{\circ}\text{C}$ .

### No maintenance required

Self-contained, stable, accurate unit requires no adjustment, maintenance, or battery. Supplied: wall mount screw. Size: 6-inch diameter x 1 inch. Weight: 8 ounces.

Description	Cat. No.	Price
VWR® Dial Hygrometer/Thermometer	15551-014	\$121.86

## VWR® Traceable® Pressure/Vacuum Gauges



Displays answer in eight different units. Meter is accurate to 1% full-scale plus 1 digit. Jumbo-size digits are  $\frac{3}{8}$ -inch-high. Computer output allows it to be connected to a computer or data logger for monitoring and keeping results. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

At the touch of a key the unit may be zeroed. Memory key recalls highest and lowest readings. A DATA HOLD key freezes the display to capture readings. Transducer has  $\frac{1}{4}$ -inch NPT male-threaded end. Cable is 40 inches. Supplied: Traceable® Certificate, transducer, battery, computer output. Size: 7 x 3 x  $1\frac{1}{2}$  inches. Weight:  $9\frac{1}{2}$  ounces.

Cat. No.	23609-220	23609-222
psi range (resolution)	-14.7 to 725 (1)	-14.70 to 29.0 (0.02)
bar range (resolution)	-1.0 to 50 (0.05)	-1.000 to 2.000 (0.002)
Meter/H <sub>2</sub> O (resolution)	-10 to 509.5 (0.5)	-10.00 to 20.40 (0.02)
Atmospheres range (resolution)	-1.0 to 49.35 (0.05)	-1.000 to 1.974 (0.002)
mm/Hg range (resolution)	-736 to 37500 (50)	-736 to 1500 (2)
inch/Hg range (resolution)	-29 to 1476 (1)	-29 to 59.05 (0.05)
inch/H <sub>2</sub> O range (resolution)	-394 to 20050 (20)	-394 to 802 (1)
Kg/cm <sup>2</sup> range (resolution)	-1 to 50.95 (0.05)	-1.000 to 2.040 (0.002)
Price	\$583.25	\$465.36



Wireless Capable  
(see page 89)



Computer Output

Description	Cat. No.	Price
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46



## Data Acquisition System

Powerful, new software technology allows up to eight unique Traceable® meters to simultaneously capture data and stream it directly (or via e-mail) to any iPhone®, Blackberry®, or computer. Easily keeps track of results for thermometers, hygrometers, barometers, light meters, anemometers, manometers, dissolved oxygen, conductivity, and more. Every minute—or any pre-set time increment—data is captured and stored. Readings are saved to a file that can be viewed, printed as-is, or merged in a report or spreadsheet format. Data continues to be collected in the background even when user works on other software programs. Networking server/client capability allows data to be monitored on a remote workstation. 24/7 audible/visual alarms remind user to check on data. This significant technology breakthrough easily installs in less than two minutes—the cable is simply connect to the meter and to a USB port (or serial port) and data capturing begins. Designed to work with Windows® 98/Me/NT/2000/XP/Vista/Windows 7.

Supplied with software: CD, 6-foot cable (USB, serial, and meter connections). Multiple extensions expand cable length to 300 feet.



Use this software with the following products:

Product Cat. No.	Product Description	Page No.	Data Acquisition System Cat. No.	Price
23609-220	VWR® Traceable® Pressure/Vacuum Gauge	87	61161-386	\$131.75
21800-014	VWR® Traceable® Dual-Display Light Meter	107	61161-386	\$131.75
21800-016	VWR® Traceable® Ultraviolet Light Meter	107	61161-386	\$131.75
33500-082/088	VWR® Traceable® Manometer/Pressure/Vacuum Gauges	90	89140-204	\$162.58
61220-601	VWR® Traceable® Digital Thermometer	21	89030-266	\$223.69
61220-670	VWR® Traceable® Digital Thermometer	21	89030-266	\$223.69
77776-716	VWR® Traceable® Memory Wide-Range Thermometer	41	89140-174	\$96.79
35519-020	VWR® Traceable® Humidity/Temperature/Dew Point Meter	79	33500-092	\$391.20
35519-041	VWR® Traceable® Humidity/Temperature/Dew Point Meter	79	33500-092	\$391.20
35519-043	VWR® Traceable® General-Purpose Hygrometer/Thermometer	82	89140-174	\$96.79
23609-228	VWR® Traceable® RTD Platinum Thermometer	44	61161-386	\$131.75
23226-656	VWR® Traceable® Double Thermometer	41	61161-386	\$131.75
21800-012	VWR® Traceable® Memory Hygrometer/Thermometer	101	89140-204	\$162.58
61161-382	VWR® Traceable® Humidity/Thermometer	80	61161-386	\$131.75
21800-020	VWR® Traceable® Moisture Meter	110	61161-386	\$131.75
21800-018	VWR® Traceable® Infrared Digital Thermometer	35	61161-386	\$131.75
21800-022	VWR® Traceable® Dissolved Oxygen Meter	105	61161-386	\$131.75
21800-024	VWR® Traceable® Hot Wire Anemometer/Thermometer	93	61161-386	\$131.75
33500-096	VWR® Traceable® Anemometer/Thermometer	92	89140-174	\$96.79
89094-958	VWR® Traceable® Expanded Range Conductivity Meter	99	89140-204	\$162.58
33500-098	VWR® Traceable® Memory Hygrometer/Thermometer	81	89140-204	\$162.58

## Data Logger

### Accessory Data Logger

Complete DAS-4™ System captures and stores up to 8000 bytes (over 1000 readings). Readings may be taken at intervals from 1 second to 99 hours. Stored readings may be downloaded to any PC and viewed. Can be read as-is or imported to spreadsheets, databases, and statistical programs. Includes Windows CD, and a 3-foot cable (supplied USB, serial, and instrument connections). Cable plugs into instrument and computer. Four alkaline batteries supplied. Size: 5 x 3 x 1 inches. Weight: 7 ounces. For use with Traceable® Meters featuring computer output. Use with Traceable® meters and **21800-018** and **23226-656**.

Description	Cat. No.	Price
VWR® Data Logger	21800-026	\$493.54

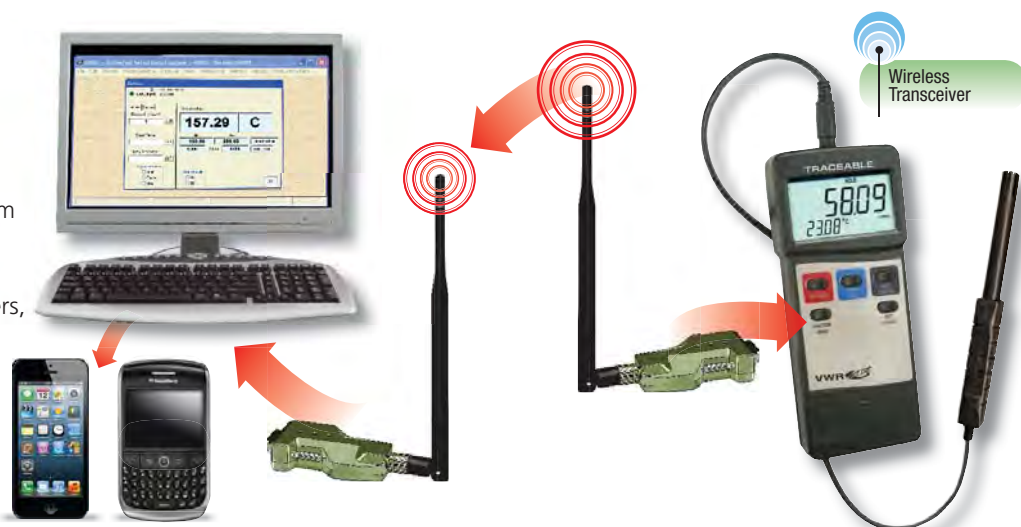




## Universal Wireless Radio-Signal Transceivers

Wireless radio transceivers send results from Traceable® instruments to a computer 300 feet away, without cables. Send readings from Traceable® thermometers, hygrometers, barometers, light meters, anemometers, manometers, dissolved oxygen meters, conductivity meters and more directly to your computer. Audible/visual notification alarms are sent instantly. Supplied: both serial and USB user selectable connections for the

computer. Works with Windows® 98/Me/NT/2000/XP/Vista/Windows 7. Plug and play units are preconfigured for out-of-the-box use, no software is used. Entire setup takes less than two minutes. Units work where there is other wireless equipment, in harsh industrial areas with electrical noise, and indoor or outdoor locations. Signal penetrates walls. Supplied complete with power supply, antennas, serial and USB connections.



Description	Cat. No.	Price
VWR® Universal Wireless Radio-Signal Transceivers	89140-200	\$432.50

Use the VWR® Universal Wireless Radio-Signal Transceivers with the following Products:

Product Cat. No.	Product Description	Page No.	Data Acquisition System Cat. No.	Price
23609-220	VWR® Traceable® Pressure/Vacuum Gauge	87	61161-386	\$131.75
21800-014	VWR® Traceable® Dual-Display Light Meter	107	61161-386	\$131.75
21800-016	VWR® Traceable® Ultraviolet Light Meter	107	61161-386	\$131.75
33500-082/088	VWR® Traceable® Manometer/Pressure/Vacuum Gauges	90	89140-204	\$162.58
61220-601	VWR® Traceable® Digital Thermometer	21	89030-266	\$223.69
61220-670	VWR® Traceable® Digital Thermometer	21	89030-266	\$223.69
77776-716	VWR® Traceable® Memory Wide-Range Thermometer	41	89140-174	\$96.79
35519-020	VWR® Traceable® Humidity/Temperature/Dew Point Meter	79	33500-092	\$391.20
35519-041	VWR® Traceable® Humidity/Temperature/Dew Point Meter	79	33500-092	\$391.20
35519-043	VWR® Traceable® General-Purpose Hygrometer/Thermometer	82	89140-174	\$96.79
23609-228	VWR® Traceable® RTD Platinum Thermometer	44	61161-386	\$131.75
23226-656	VWR® Traceable® Double Thermometer	41	61161-386	\$131.75
21800-012	VWR® Traceable® Memory Hygrometer/Thermometer	101	89140-204	\$162.58
61161-382	VWR® Traceable® Humidity/Thermometer	80	61161-386	\$131.75
21800-020	VWR® Traceable® Moisture Meter	110	61161-386	\$131.75
21800-018	VWR® Traceable® Infrared Digital Thermometer	35	61161-386	\$131.75
21800-022	VWR® Traceable® Dissolved Oxygen Meter	105	61161-386	\$131.75
21800-024	VWR® Traceable® Hot Wire Anemometer/Thermometer	93	61161-386	\$131.75
33500-096	VWR® Traceable® Anemometer/Thermometer	92	89140-174	\$96.79
89094-958	VWR® Traceable® Expanded Range Conductivity Meter	99	89140-204	\$162.58
33500-098	VWR® Traceable® Memory Hygrometer/Thermometer	81	89140-204	\$162.58



## VWR® Traceable® Manometer/Pressure/Vacuum Gauges

Manometer displays gauge and differential pressure/vacuum in eleven different units. Response time is 0.5 second. Hose fittings on the unit permit using hose/tubing with inside diameters from to 1/16 to 3/16 inches. Large 5/8-inch-high digits are visible from six feet.

At the touch of a key unit may be zeroed or any pressure may set to zero. Differential feature permits reading the difference of the pressure or vacuum between two sources. Memory feature recalls highest and lowest reading over any time period. A count-up timer displays up to 99 hours, 59 minutes, 59 seconds. A DATA HOLD key freezes the display to capture readings. Brilliant backlighting permits reading even in dark areas. Computer output permits all units to be connected to a computer for monitoring and storing unlimited results. Accuracy is ±0.3% of full scale between 0 to 50°C. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Printing model

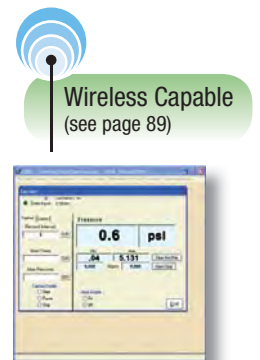
Data logging feature permits automatically capturing and storing up to 12,000 readings, including date and time, at intervals as short 1 second or as long as 2 hours. Printing model allows the user to manually capture and store up to 99 readings, including date and time at the press of a key. Printer provides a hard copy for today's stringent quality-control documentation. Printer model prints samples number, current reading, date, and time. Printer allows both manual memories and data logger memories to be printed without the need for a computer. Computer output allows manual memories, data logger memories, and current programmable capturing to be streamed to a pc computer. Printing/data logging model supplied: hose/tubing, batteries, ABS plastic carrying case, computer output, 6-foot computer cable, software CD, Traceable® Certificate, and paper roll. Size: 2 3/4 x 8 x 1 3/4 inches. Weight: 12 ounces.

### Non-printing model

Non-printing model supplied: hose/tubing, battery, computer output, Traceable® Certificate, and ABS plastic carrying case. Computer output allows current programmable capturing to be streamed to a pc computer (computer cable and software not supplied). Size: 2 3/4 x 7 1/8 x 1 1/8 inches. Weight: 5 ounces.



Cat. No. (Non-Printing)	33500-082	33500-084	33500-086	33500-088
Price	\$207.19	\$207.19	\$207.19	\$207.19
Cat. No. (Printing/Datalogging)	89094-722			89094-728
Price	\$428.25			\$428.25
Maximum Allowed PSI	20	30	60	150
PSI Range	-5.000 to 5.000	-15.00 to 15.00	-30.00 to 30.00	-100.0 to 100.0
PSI Resolution	0.003	0.01	0.02	0.1
mbar Range	-345.0 to 345.0	-1034 to 1034	-2068 to 2068	-6895 to 6895
mbar Resolution	0.2	1	2	4
bar Range	-0.3450 to 0.3450	-1.034 to 1.034	-2.068 to 2.068	-6.895 to 6.895
bar Resolution	0.001	0.001	0.002	0.004
cm/H <sub>2</sub> O Range	-351.0 to 351.0	-1055 to 1055	-2109 to 2109	-7031 to 7031
cm/H <sub>2</sub> O Resolution	0.2	1	2	4
inch/H <sub>2</sub> O Range	-138.0 to 138.0	-415.0 to 415.0	-830.0 to 830.0	-2768 to 2768
inch/H <sub>2</sub> O Resolution	0.1	0.3	0.5	2
feet/H <sub>2</sub> O Range	-12.00 to 12.00	-35.00 to 35.00	-69.00 to 69.00	-231.0 to 231.0
feet/H <sub>2</sub> O Resolution	0.01	0.02	0.04	0.2
mm/Hg Range	-259.0 to 259.0	-776.0 to 776.0	-1551 to 1551	-5171 to 5171
mm/Hg Resolution	0.2	0.5	1	3
inch/Hg Range	-10.00 to 10.00	-31.00 to 31.00	-61.00 to 61.00	-204.00 to 204.00
inch/Hg Resolution	0.01	0.03	0.1	1.0
kg/cm <sup>2</sup> Range	-0.350 to 0.350	-1.060 to 1.060	-2.110 to 2.110	-7.030 to 7.030
kg/cm <sup>2</sup> Resolution	0.001	0.001	0.002	0.004
oz/inch <sup>2</sup> Range	-80.00 to 80.00	-240.0 to 240.0	-480.0 to 480.0	-1600 to 1600
oz/inch <sup>2</sup> Resolution	0.05	0.2	0.3	1
kPa Range	-34.50 to 34.50	-103.0 to 103.0	-207.0 to 207.0	-690.0 to 690.0
kPa Resolution	0.02	0.1	0.2	0.4<



Computer Output for 33500-082 & 33500-088 (see page 88)

## VWR® Traceable® Anemometer Pens with Temperature, Humidity, Dew Point, and Barometric Pressure

Three units provide for airflow/temperature; airflow/temperature/humidity/dew point; and airflow/temperature/humidity/dew point/barometric pressure.

### Easy to use rugged design

Simple operation eliminates the need to refer to instructions. Designed for intuitive, easy operation by everyone. Tough ABS plastic housing with O-ring seal and membrane keypad keep out dust and dirt, assuring a long life in severe lab or harsh plant environments. HOLD key freezes the reading on the display. High contrast 3/8-inch-high LCD digits are easy to read. At the press of a key, unit recalls minimum/ maximum readings.

### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Rugged ABS plastic case is 1½ diameter x 8¼ inches; Weight: 6 ounces. Supplied: key-chain carabiner, Traceable® Certificate, and four batteries.



Cat. No.	89094-730	89094-732	89094-734
<b>Description</b>	<b>VWR® Traceable® Anemometer/Thermometer Pen</b>	<b>VWR® Traceable® Anemometer/Thermometer/Hygrometer/Dew Point Pen</b>	<b>VWR® Traceable® Anemometer/Thermometer/Hygrometer/Dew Point/Barometer Pen</b>
<b>Air Flow Range</b>	0.4 to 30.0 m/s 1.4 to 108.0 km/hr 80 to 5910 ft/min 0.9 to 67.0 mile/hr 0.8 to 58.3 knots	0.4 to 30.0 m/s 1.4 to 108.0 km/hr 80 to 5910 ft/min 0.9 to 67.0 mile/hr 0.8 to 58.3 knots	0.4 to 30.0 m/s 1.4 to 108.0 km/hr 80 to 5910 ft/min 0.9 to 67.0 mile/hr 0.8 to 58.3 knots
<b>Resolution</b>	0.1 m/s 0.1 km/hr 1 ft/min 0.1 mile/hr 0.1 knots	0.1 m/s 0.1 km/hr 1 ft/min 0.1 mile/hr 0.1 knots	0.1 m/s 0.1 km/hr 1 ft/min 0.1 mile/hr 0.1 knots
<b>Accuracy</b>	±3% full scale under 20 m/s ±4% full scale over 20 m/s	±3% full scale under 20 m/s ±4% full scale over 20 m/s	±3% full scale under 20 m/s ±4% full scale over 20 m/s
<b>Temperature Range</b>	32.0 to 122.0°F (0.0 to 50.0°C)	32.0 to 122.0°F (0.0 to 50.0°C)	32.0 to 122.0°F (0.0 to 50.0°C)
<b>Resolution</b>	0.1°	0.1°	0.1°
<b>Accuracy</b>	±0.8°C	±0.8°C	±0.8°C
<b>Humidity Range</b>	--	10.0 to 95.0%	10.0 to 95.0%
<b>Resolution</b>	--	0.1%	0.1%
<b>Accuracy</b>	--	±3 of reading + 1	±3 of reading + 1
<b>Dew Point Range</b>	--	-13.5 to 120.1°F (-25.3 to 48.9°C)	-13.5 to 120.1°F (-25.3 to 48.9°C)
<b>Resolution</b>	--	0.1°	0.1°
<b>Barometric Pressure Range</b>	--	--	10.0 to 1100 hPa 7.5 to 825.0 mmHg 0.29 to 32.48 inHg
<b>Resolution</b>	--	--	0.1 and 1 hPa/0.1 mmHg/0.01 inHg
<b>Accuracy</b>	--	--	±4 hPa
<b>Price</b>	<b>\$104.17</b>	<b>\$125.25</b>	<b>\$263.14</b>



## VWR® Traceable® Micro-Anemometer/Thermometer



### Ultra compact micro-design is small in size and big in features

Unit measures air velocity in five user selectable values: meters per minute, feet per second, miles per hour, kilometers per hour, and knots. It also displays: maximum airflow measured, temperature in °F and °C. Measurements are lightning fast with reading updates 2 times per second.

### Easy to use rugged design

Simple one-key operation eliminates the need to refer to directions. Tough ABS plastic housing and water-resistant design keeps out moisture, dust, and dirt, assuring a long life in severe lab, harsh plant or outdoor environments. High contrast LCD digits are over 1/3-inch-high and easy to read. Electro-luminescent backlight allows the display to be read in total darkness.

### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Rugged ABS plastic case is 2¼ x 4 x ¾ inches; Weight: 2 ounces. Supplied: Traceable® Certificate, lanyard, long-life lithium battery.

<b>Air Flow Range</b>	0.0 to 30.0 m/s, 0.0 to 5860 ft/min, 0.0 to 65.0 mile/hr, 0.0 to 90.0 km/hr, 0.0 to 55.0 knots
<b>Resolution</b>	0.1 m/s, 0.3 km/hr, 19 ft/sec, 0.2 mile/hr, 0.2 knots
<b>Accuracy</b>	±5% full scale
<b>Temperature Range</b>	-10.0 to 45.0°C 14.0 to 113.0°F
<b>Resolution</b>	0.2°
<b>Accuracy</b>	±2°C

Description	Cat. No.	Price
VWR® Traceable® Micro-Anemometer/Thermometer	89094-736	\$67.36

## VWR® Traceable® Anemometer/Thermometer

One-hand operation anemometer displays air velocity and temperature simultaneously. Ease of operation in hoods or outdoors makes this an ideal instrument. Unit is engineered for years of reliable service even in severe lab, harsh plant, or outdoor environments.

Ranges are: 0.40 to 30.00 meters per second with a resolution of 0.01 meter, 1.4 to 108.0 kilometers per hour with a resolution of 0.1 kilometer, 80 to 5900 feet per minute with a resolution of 1 foot, 0.9 to 67.0 miles per hour with a resolution of 0.1 mile, 0.8 to 58.0 knots (nautical miles per hour) with a resolution of 0.1 knot, and -10.0 to 50.0°C and 14.0 to 122°F with a resolution of 0.1 degree. Anemometer accuracy is ±3% of full scale and thermometer accuracy is ±1°C. To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology).

Reading is updated instantaneously. A memory key allows the unit to recall the highest and lowest readings achieved. A HOLD key freezes the display at the current reading, ideal for capturing a reading in a difficult location. An AVERAGE key allows from 2 to 8 readings to be averaged automatically. Rugged case is chemical-shock-resistant ABS plastic. Extra-large LCD digits are 1/2-inch-high and can be read from 10 feet. Supplied: Traceable® Certificate, battery, hard plastic carrying case, and instructions. Unit is 7¼ x 3 x 1¾ inches. Weight: 7¾ ounces.



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Anemometer/Thermometer	33500-096	\$180.71
Data Acquisition System (complete description on page 88)	89140-174	\$96.79

Air Velocity	Resolution
0.40 to 30.0 meters per second	0.01 m/sec.
1.4 to 108.0 kilometers per hour	0.1 km/hr
80 to 5900 feet per minute	1 ft/min
0.9 to 67.0 miles per hour	0.1 m/h
0.8 to 58.0 knots (nautical miles per hour)	0.1 knots
10.0 to 50.0°C (14.0 to 122.0°F)	0.1° °C and °F

## VWR® Traceable® Hot Wire Anemometer/Thermometer



Hot Wire Anemometer with two miniature glass-bead thermistors provides greater precision at low air velocities. Telescope probe expands from 9½ inches to 3 feet for use in hard-to-reach places. No moving parts eliminate friction errors caused by rotating vanes. It's ideal for clean rooms and environmental tests.

### Displays air speed in five ranges

Features five measuring ranges in air velocity: 0.2 to 20.0 meters per second (resolution 0.1), 0.7 to 72.0 kilometers per hour (resolution 0.1), 40 to 3940 feet per minute (resolution 1), 0.5 to 44.7 miles per hour (resolution 0.1), and 0.4 to 38.8 knots (nautical miles per hour) (resolution 0.1). Accuracy is ±(1% full scale plus 1 digit). Unit also displays temperature in °F and °C from 32.0 to 122.0°F and 0.0 to 50.0°C with a resolution of 0.1°. Accuracy is ±0.8°C (1.5°F).

### Downloads data to computer or data logger

Computer output allows anemometer to be connected to a computer or data logger for monitoring results. Memory function recalls the highest and lowest readings. A Data HOLD key freezes the display to capture readings. Displays simultaneously shows air speed and temperature. To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: dual thermistors probe, 40-inch cable, Traceable® Certificate, 6 batteries, and computer output. Size: 7 x 3 x 1¼ inches. Weight: 9½ ounces.



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Hot Wire Anemometer/Thermometer	21800-024	\$453.72
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46

## VWR® Traceable® Digital Anemometer/Thermometer

Traceable® Anemometer measures air velocity/temperature in hoods and outside environments with ease and accuracy. Use it to display even slight gas movement in ducts. Designed for heavy use in lab, plant, and field, it is built to take a beating and still give years of reliable readings.

Ranges are: 0.4 to 30.0 meters per second with a resolution of 0.1 m, 1.4 to 108.0 kilometers per hour with a resolution of 0.1 km, 80 to 5910 feet per minute with a resolution of 10 ft, and 0.8 to 53.3 knots (nautical miles per hour) with a resolution of 0.1 knots, and 0.0 to 60.0°C and 32.0 to 140.0°F with a resolution of 0.1°. Anemometer accuracy is ±(2% + 1-digit). Temperature accuracy is ±1°C.

### Traceable to NIST

The extraordinary low-friction, precision, ball bearing design provides a vane which rotates freely in both low and high velocities. To assure accuracy a serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). A HOLD switch freezes the display at the current reading. Ideal for capturing a reading in a difficult location. Engineered for years of reliable service even in severe lab or harsh plant environments. Rugged case is chemical-/shock-resistant ABS plastic and has a handy built-in, flip-open bench stand for easy monitoring. LCD is ¾-inch-high and can be read from 15 feet. Supplied: battery, hard plastic carrying case, and Traceable® Certificate. Handle: 2½ inches long. Wind vane: 2¾ inch diameter, and 4-foot cable. Size: 6¼ x 3 x 1¼ inches. Weight: 1 pound.



Air Velocity	Resolution
0.4 to 30.0 meters per second	0.1 m/sec.
1.4 to 108.0 kilometers per hour	0.1 km/hr
80 to 5910 feet per minute	10 ft/min
0.8 to 53.3 knots (nautical miles per hour)	0.1 knots
32.0 to 140.0°F (0.0 to 60.0°C)	°C and °F 0.1°

Description	Cat. No.	Price
VWR® Traceable® Digital Anemometer with Thermometer	33500-090	\$251.78



## VWR® Enviro-Meter™

Handheld Enviro-Meter™ provides an anemometer, humidity meter, light meter, and two thermometers all in one unit. Lightweight and compact case permits one-handed operation. Features a hold key that captures a reading for ease in recording a result. Min/Max key displays highest and lowest reading over any time period. Anemometer displays air velocity ranges: 80 to 5910 feet per minute (resolution 1), 0.4 to 30.0 meters per second (resolution 0.1), 1.4 to 108.0 kilometers per hour (resolution 0.1), 0.9 to 67.0 miles per hour (resolution 0.1), and 0.8 to 58.3 knots (resolution 0.1). Accuracy is: under 20 meters per second  $\pm 3\%$  of full scale readings and over 20 meters per second  $\pm 4\%$  full scale reading.

Relative humidity range is 10.0 to 95.0% (resolution 0.1% RH). Accuracy is: under 70%  $\pm 4\%$  RH and over 70%  $\pm (4\%$  of the reading plus 1.2% RH). Light ranges are 0 to 20,000 lux (resolution 1) and 0 to 2000 foot candles (resolution 1). Accuracy is  $\pm 5\%$  of the reading and  $\pm 8$  digits.

Internal ambient thermometer sensor range is 32.0 to 122°F and 0.0 to 50.0°C (resolution 0.1°). Accuracy is  $\pm 1.2^\circ$  C. External thermometer range is -148.0 to 2372°F and -100.0 to 1300°C (resolution 0.1°). Accuracy is  $\pm (1\%$  of the reading plus 1°C). Comes ready to use with fast-response, Type-K beaded external thermometer probe with cable length of 4-feet, wrist strap, and battery. Size: 6½ x 2¼ x 1¼ inches. Weight: 6 ounces.

Description	Cat. No.	Price
VWR® Enviro-Meter™	46610-028	\$192.93

## VWR® Traceable® Handheld Barometer

**Barometer, altimeter, thermometer, stopwatch, compass, and time-of-day clock—all in the palm of your hand!**

Handheld Digital Barometer measures altitude, temperature, and barometric pressure. Also has a stopwatch/time-of-day clock, compass and graphically displays the barometric pressure trend. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Measures barometric pressure from 8.85 to 32.45 inches of mercury (inHg) with a resolution of 0.01 inHg and from 300 to 1100 millibars (mbar) with a resolution of 1 mbar. Accuracy is  $\pm 8$  mbar at tested points.

Barometric pressure trend shows current reading and previous 2, 4, 6, 8, 10, and 12 hours in bar-chart format. Barometric pressure reading is updated every 15 minutes.

### Altimeter

Measures altitude from -700 to 9000 meters (-2296 to 29520 feet) with a resolution of 0.1 from -500 to 999.9, 1 otherwise. Altitude is displayed in meters or feet. Reading is updated every 2 seconds. Features a minimum/maximum memory. Altitude trend shows present reading and previous 12 hours. May also be manually adjusted to a known altitude.

### Thermometer, stopwatch/timer, clock, and compass

Thermometer displays from -10 to 60°C/14 to 140°F; resolution is 0.1°. Accuracy is  $\pm 1.5^\circ$ C. Temperature display is updated every minute. Stopwatch times events from 1 second to 23 hrs, 59 min, 59 sec. Alarm timer counts down from 23 hrs, 59 mins, 59 secs to 1 second. Resolution is 1 second. Clock displays time of day, date, month, and day of week. Clock also features 12/24 hour format and alarm. Compass feature displays real time direction in whole circle bearing, or compass bearing. Rugged shock-resistant case, compact size 3¾ x 2¾ x ¾-inches, and light weight 3½ ounces make this the perfect portable unit. Supplied: lanyard, Traceable® Certificate, and batteries.



Description	Cat. No.	Price
VWR® Traceable® Handheld Barometer	61161-398	\$234.11



## VWR® Traceable® Digital Hygrometer/Thermometer/Barometer/Dew Point Pen

### Measures temperature, humidity, barometric pressure, and dew point

Relative humidity range is 10.0 to 95.0% with a resolution of 0.1% and an accuracy of  $\pm 3\%$  RH mid-range to  $\pm 4\%$  RH elsewhere. Temperature range is 32.0 to 122.0°F and 0.0 to 50.0°C with a resolution of 0.1° and an accuracy of  $\pm 1^\circ\text{C}$ . Dew point range is 13.5 to 120.1°F and  $-25.3$  to 48.9°C with a resolution of 0.1°.

Barometer measures pressure in 3 different units: Inches of mercury (inHg) from 0.29 to 32.48 with a resolution of 0.01, millibars (hPa) from 10.0 to 1100 with a resolution of 0.1 and 1 hPa, and millimeters of mercury (mmHg) from 7.5 to 825.0 with a resolution of 0.1 mmHg. Accuracy is  $\pm 4$  hPa. User selectable dual display shows humidity/temperature, humidity/dew point, barometer/temperature, or barometer/humidity.

### Lightweight and compact

Compact design features an electronic capacitance polymer film sensor not affected by condensation. Tough ABS plastic housing and water-resistant design with O-ring seal and membrane keypad assure a long life in severe lab or harsh plant environments. HOLD key freezes the reading on the display. High contrast 3/8-inch-high LCD digits are easy to read. At the press of a key, unit recalls minimum/maximum readings.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 1½ inch diameter x 8 inches. Weight: 5 ounces. Supplied: key-chain carabiner, Traceable® Certificate, and batteries.

Description	Cat. No.	Price
VWR® Traceable® Digital Hygrometer/Thermometer/Barometer/Dew Point Pen	89094-760	\$157.81

## VWR® Traceable® Workstation Digital Barometer

### Innovative barometer stands on the bench

Workstation digital barometer measures atmospheric pressure, graphically displays the barometric trend, and reports temperature and time. Ideal for recording ambient changes in the lab, monitoring conditions affecting sample analysis, and assisting in the prediction of weather changes.

Barometer measures pressure from 23.62 to 31.01 inches of mercury (inHg) with a resolution of 0.03 inHg, and from 800 to 1050 millibars (mbar) with a resolution of 1 mbar. Accuracy is  $\pm 0.4$  inHg ( $\pm 12$  mbars between 900 to 1050 mbar). Graphic barometric trend shows present reading and previous 1, 3, 6, and 12-hour readings in a bar chart format. Adjustable altitude compensation is from  $-300$  to 1200 meters and  $-900$  to 3600 feet.

Temperature range is 15 to 158°F and  $-9.5$  to 70°C with a resolution 0.5° and an accuracy of  $\pm 1^\circ\text{C}$  between 0 and 50°C. Clock shows time in AM/PM and 24-hour formats. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Accurate forecasting indicators show weather conditions for the next 12-hours using symbols for sunny, cloudy, rainy, and partly cloudy. Supplied: Traceable® Certificate and batteries. Size: 4 x 4 x 2¼ inches. Weight: 4 ounces.



Description	Cat. No.	Price
VWR® Traceable® Workstation Digital Barometer	36934-162	\$27.17

# Wireless Weather System

## VWR® Wireless Weather System

Weather System is a complete professional weather station. Perfect for industrial plants, labs, schools, and others needing to monitor conditions, forecast weather, and check environmental air parameters. Minimum/maximum readings may be displayed for all measurements.

Displays temperature, humidity, dew point, heat index, barometric pressure/pressure bar graph, weather forecast, wind direction/speed, wind-chill, rainfall amount, and atomic clock/calendar/moon phase. Programmable alarms for all measurements signal out-of-range conditions. Minimum/maximum readings may be displayed for all measurements.

Data logger holds up to 291 days of data. Data output permits linking to a computer for storing all information, making a permanent weather database, generating analysis, and studying trends. The main unit receives a radio signal from the remote wireless sensors. System eliminates all cables. Place the main unit anywhere. Unit Size: 7½ x 5¾ x 1½ inches, display is 6 x 3½ inches. Supplied: all equipment, all sensors, AC adapter, and 4 backup batteries (eliminates concerns about power outages).



Description	Cat. No.	Price
VWR® Wireless Weather System	23609-224	\$543.99



## VWR® Traceable® Precision Dial Barometer

Traceable® Precision Barometer's triple scales provide a sensitive measure of atmospheric pressure from 954 to 1073 millibars, 28.1 to 31.7 inches of mercury, and 715 to 805 millimeters of mercury with a resolution of 0.5 mbar, 0.05 inHg, and 0.5 mmHg. Accuracy is ±0.5% of reading.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Housing is rugged corrosion-proof, nickel-chrome. Adjustable pointer may be set to indicate changes. Complete with altitude adjustment screw (use at locations as high as 1000 meters), desk stand, and wall mount. Size: 4½ inches diameter by 1½ inches. Weight: 1 pound.

Description	Cat. No.	Price
VWR® Traceable® Precision Dial Barometer	15551-024	\$121.52



## VWR® Traceable® Bench Conductivity Meter

### Turns on, insert probe, read results

Fulfill all official lab analysis regulations for CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, ISO, and Federal/State regulations. Simply turn on, insert probe into solution, and read accurate results. Unit automatically encompasses all ranges and selects the most appropriate for the current reading. Disable the auto-range function when user-defined ranges are desired. Control allows user to store four calibration points using solution standards. Ranges are: 0.01 to 200,000 microsiemens (micromhos), 0.001 to 20.000 megohms, 0.1 to 20,000 dissolved solids/parts per million, 2.0 to 42.0 salinity (oceanographic units). Accuracy is  $\pm 0.3\% + 1$  digit.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). State-of-the-art microcomputer processor and unique software program allow four calibration points to ensure complete accuracy over the entire range. Readings are displayed in conductivity (microsiemens/micromhos), resistivity (megohms), total dissolved solids (milligrams per liter), salinity (oceanographic units), concentration (user specified units), and temperature (Celsius/Fahrenheit). K factor may be adjusted to match each probe. Specifically designed to measure conductivity in water analysis, biology, chromatography, food, and PC board rinsing.

### Computer output

Computer output may be downloaded to a data logger or computer for analyzing or reporting at a later time. Makes hard copy results a breeze—no more, hand-scrawled notes to decipher. Supplied probe contains platinum electrodes and a solid-state thermistor for automatic/manual temperature compensation. Readings are automatically referenced to the international standard of 25°C. Temperature compensation is automatic (2% per °C), user-designated (0.000 to 5.000% per °C), or absolute. Exclusive temperature compensation disable function fulfills USP-NF (United States Pharmacopoeia, National Formulary, 645 Conductivity Measurement) requirement.

ABS plastic housing withstands the roughest lab environments. Unit comes with 115 VAC adapter, probe replatinizing current, a probe holder arm, battery, and Traceable® Certificate. Supplied glass probe is 5¼ x ½ inches diameter with a cable length of 59 inches. Size: 8¼ x 6 x 3½ inches. Weight: 1½ pounds.



Ranges in Micromhos (microsiemens)	0.01 to 20.00
	0.1 to 200.0
	1 to 2000
	10 to 20000
	100 to 200000
Ranges in Megohms	0.001 to 2.000
	0.01 to 20.00
Ranges in Dissolved Solids/ Parts Per Million	0.1 to 20.00
	1 to 200
	10 to 2000
	100 to 20000
Accuracy	$\pm 0.3\% + 1$ digit

Description	Cat. No.	Price
VWR® Traceable® Bench Conductivity Meter	61161-362	\$1,342.59
Replacement Conductivity Probe Glass, K=1, Probe range is from 0.05 to 200,000 micromhos.	23226-504	\$260.46
Accessory Conductivity Probe Unbreakable Epoxy, K=1 Probe range is from 1.0 to 200,000 micromhos.	89030-238	\$210.84



## VWR® Traceable® Portable Conductivity Meter

### Quick answers, accurate results on demand

In an instant, Portable Conductivity Meter automatically selects the proper range and displays the exact answer. This auto-ranging feature may be turned off to accommodate user-entered ranges. All special calibration data is saved even when unit is turned off. Fulfills all government measurement requirements plus CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, ISO, and Federal/State regulations. Range in microsiemens (micromhos) is 0.01 to 200,000, in megohms is 0.001 to 20.000, range in dissolved solids/parts per million is 0.1 to 20,000, and in salinity is 2.0 to 42.0 (oceanographic units). Accuracy is  $\pm 0.3\%$  +1 digit.

### Four calibration points

Four unique calibration points may be entered into memory utilizing solution standards. Settings are stored even when the unit is off. Results are displayed in conductivity (microsiemens) and (micromhos), resistivity (megohms), dissolved solids (parts per million), concentration (user-specified units), salinity (oceanographic units), and temperature ( $^{\circ}\text{F}/^{\circ}\text{C}$ ).

Instant-response probe contains platinum electrodes that deliver highly accurate readings. Internal solid-state thermistor (for automatic/manual temperature compensation) permits all readings to be referenced to the international standard of  $25^{\circ}\text{C}$ . Temperature compensation is automatic (2% per  $^{\circ}\text{C}$ ), user-designated (0.000 to 5.000% per  $^{\circ}\text{C}$ ), or absolute. K-factor may be adjusted to match each probe. Exclusive temperature compensation disable function fulfills USP-NF (United States Pharmacopoeia, National Formulary, 645 Conductivity Measurement) requirement.

Use to check the purity of water from stills and demineralizers, to analyze seawater, and to make up solutions. Simply turn on, insert probe, and read—easiest unit ever designed for routine analysis, quality control, and research. Operator technique does not affect readings. Tough, chemical-resistant ABS plastic housing assures a long life in severe lab or harsh plant environments. Large  $\frac{1}{2}$ -inch-high LCD digits are easy to read. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Permanent hard copy record

Recorder jack allows continuous monitoring and a permanent record. Arrow keys allow unit to be calibrated to solution standards. Glass probe:  $5\frac{1}{4} \times \frac{1}{2}$  inches in diameter with a cable length of 59 inches. Unit Size:  $3\frac{3}{4} \times 6\frac{3}{4} \times 1\frac{1}{2}$  inches. Weight: 16 ounces. Supplied: glass probe, Traceable® Certificate, and battery.

Range	
<b>Micromhos (Microsiemens)</b>	0.01 to 20.000 0.1 to 200 1 to 2000 10 to 20000 100 to 200000
<b>Megohms</b>	0.001 to 2.000 0.01 to 20.00
<b>Dissolved Solids/Parts Per Million</b>	0.1 to 20.0 1 to 200 10 to 2000 100 to 20000
<b>Meter Accuracy</b> 0.1 to 1999 Micromhos	$\pm 0.3\%$ +1 digit

Description	Cat. No.	Price
VWR® Traceable® Portable Conductivity Meter	23226-505	\$1,162.32
Replacement Conductivity Probe Glass, K=1, Probe range: 0.05 to 200,000 micromhos.	23226-504	\$260.46
Accessory Conductivity Probe Unbreakable Epoxy, K=1 Probe range: 1.0 to 200,000 micromhos.	89030-238	\$210.84

## VWR® Traceable® Expanded-Range Conductivity Meter

### Accurate answers in five seconds

Conductivity meter automatically selects the proper range and displays the exact answer with ease. Unit fulfills CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, ISO, and Federal/State regulations.

### Perfect water tester

Use this meter to check the purity of water from stills, deionizers, and reverse osmosis, to test laboratory glassware rinsing, to measure total dissolved solids, and to make solutions. Specifically designed to measure conductivity in water analysis, biology, chromatography, food, electronics, dairies, and PC board rinsing. Perfect for all labs wanting to maintain accreditation. Unit is 100% compatible with all accreditation analysis requirements.

Simply turn on, insert probe, and simultaneously read result and temperature. Easiest unit ever designed for routine analysis and quality control. Elimination of operator technique permits everyone in the lab to report identical readings. Tough, chemical-resistant ABS plastic housing assures a long life in severe lab or harsh plant environments. Large ½-inch-high LCD is easy to read.

Unit permits auto-range or user selected five unique ranges. Complete range is 0.00 to 200,000 microsiemens (micromhos) and 0.0 to 100,000 dissolved solids/parts per million. Accuracy is ± (1% of full scale +1 digit). Switchable temperature range is 0.0 to 80.0°C (32.0 to 176.0°F) with a resolution of 0.1° and an accuracy of 0.6°C. Backlit dual display shows answer and temperature simultaneously. Memory stores up to five unique calibration settings, one in each range. Arrow keys allow fast calibration to solution standards. All calibration data is saved even when unit is turned off. Instant-response glass probe contains platinum electrodes for precise readings. Solid-state thermistor (for automatic/manual temperature compensation) permits all readings to be referenced to the international standard of 25°C. Automatic (2% per °C) temperature compensation or user may set temperature coefficient from 0.000 to 10.000% per °C. Temperature compensation disable function fulfills USP-NF (United States Pharmacopoeia, National Formulary, 645 Conductivity Measurement) requirement. K-factor may be adjusted to match each probe. Total dissolved solids factor is adjustable from 0.4 to 1.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). HOLD key freezes the reading on the display. Computer output permits connecting to a computer. Probe is 6 x ½ inches in diameter with a cable length of 39¾ inches. Size: 2¾ x 6¾ x 1⅞ inches. Weight: 6½ ounces. Probe, batteries, and rigid carrying care are supplied.



Computer Output



Wireless Capable  
(see page 89)

Description	Cat. No.	Price
VWR® Traceable® Expanded-Range Conductivity Meter	89094-958	\$307.96
VWR® Data Acquisition System Software (complete description on page 88)	89140-204	\$162.58

Range	
<b>Microsiemens (micromhos)</b>	0.00 to 19.99 0.0 to 199.9 0 to 1999
<b>Millisiemens (millimhos)</b>	0 to 19.99 0 to 199.9
<b>Dissolved Solids</b>	0.00 to 9.99 ppm 0.0 to 99.9 ppm 0 to 999 ppm 0 to 9.99 ppt 0 to 99.9 ppt
<b>Accuracy</b>	±1% +1 digit

## VWR® Traceable® Conductivity/Total Dissolved Solids/Salinity Meter Pens

Three units provide for conductivity, conductivity/total dissolved solids, and salinity. Pen fulfills CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, ISO, and Federal/State regulations.

### Easy to use and waterproof

Simply turn on, insert, and simultaneously read result and temperature. Easiest unit ever designed for routine analysis and quality control. Eliminates operator technique errors. Chemical-resistant, waterproof ABS plastic housing assures a long life in severe lab or harsh plant environments. Large ½-inch-high LCD digits are easy to read. Dual display shows reading and temperature. HOLD key freezes the reading on the display.

### Calibration using solution standards

Arrow keys allow fast setting to calibration standards. Calibration data is saved even when unit is turned off. Instant-response probe and solid-state thermistor provide precise readings. Temperature compensation permits readings to be automatically referenced to the international standard of 25°C or user may set a programmable temperature coefficient. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Waterproof unit is 6½ x 1½ x 1¼ inches, Weight: 2¼ ounces.



Cat. No.	89094-762	89094-764	89094-766
Description	VWR® Traceable® Conductivity Meter	VWR® Traceable® Conductivity Total Dissolved Solids Meter	VWR® Traceable® Salinity Meter
Conductivity Range	0 to 1999 microsiemens 0 to 19.99 millisiemens	0 to 1999 microsiemens/0 to 19.99 millisiemens	–
Dissolved Solid Range	–	0 to 1999 parts per million 0 to 19.99 parts per thousand	–
Salinity Range (NaCl)	–	–	0.00 to 1.00%; 1.01 to 7.00%
Resolution	1 microsiemen/0.01 millisiemen	1 microsiemen/0.01 millisiemen/1 part per million	0.01%
Accuracy	±1% full scale + 1 digit	±1% full scale + 1 digit	±2% full scale + 1 digit
Settable Temp. Coefficient	0.0 to 4.0% per °C	0.0 to 4.0% per °C	–
Automatic Temp Compensation	20° and 25°	20° and 25°	25°
Use with Calibration Standards	400 microsiemens to 19.99 millisiemens	400 microsiemens to 19.99 millisiemens 400 ppm to 19.99 ppt	0.20 to 7.00%
Price	<b>\$62.18</b>	<b>\$68.98</b>	<b>\$71.40</b>

## VWR® Traceable® Conductivity Meter

### Traceable® Conductivity for pure water

To assure accuracy, a certificate is provided to indicate instrument traceability to standards provided by NIST (National Institute of Standards and Technology). Use to verify the purity of water from stills, deionizing, and reverse osmosis equipment. Range in microsiemens (micromhos) is 0.1 to 200.0, in megohms is 2.00 to 20.00. Accuracy is ±0.4% full scale. Adjustment permits calibration to solution standards. Ideal for routine analysis, quality control, and research. Eliminates operator technique errors. Probe contains platinum electrodes and a solid-state thermistor (for automatic temperature compensation). Readings are automatically referenced to the international standard of 25°C. Supplied: electronic calibration plug for 10 microsiemens (micromhos) glass probe (5½ x ½-inch diameter), 59-inch cable. Size: 3¼ x 4½ x 1½ inches. Weight: 8¾ ounces.



Description	Cat. No.	Price
VWR® Traceable® Conductivity Meter with probe	23226-501	<b>\$480.17</b>

## VWR® Traceable® Dual-Display Conductivity Meter

Two displays simultaneously show conductivity readings and temperature measurements. Measures conductivity in three ranges: 0.1-199.9 microsiemens (micromhos) (0.1 microsiemen resolution), 0.001-1.999 millisiemens (millimhos) (0.001 millisiemen resolution), and 0.01-19.99 millisiemens (millimhos) (0.01 millisiemen resolution). Accuracy is  $\pm(2\%$  of full scale plus 1 digit). Solid-state thermistor (for automatic/ manual temperature compensation) permits all readings to be referenced to the international standard of 25°C. Automatic (2% per °C) temperature compensation or user may set temperature coefficient from 0.0 to 5.0% per °C. Resolution is 0.1 and accuracy is  $\pm 0.8^\circ\text{C}$ . To assure accuracy an individually serial-numbered Traceable® Certificate is provided to indicate instrument traceability to NIST (National Institute of Standards and Technology) from an ISO 17025 calibration laboratory.

### Calibrate using solution standards

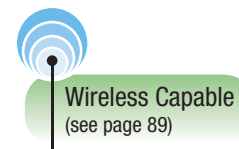
Keys adjust probe's K (constant) factor and permit calibration to solution standards. Jumbo-size digits are 1 $\frac{3}{8}$  inches high. Computer output allows connection to a computer or data logger for monitoring and storing results. At the touch of a key, the instrument recalls highest, lowest, and average readings. A data HOLD key freezes the display to capture readings. Unit is supplied with epoxy probe (cable length is 40 inches), Traceable® Certificate, 9-volt alkaline battery, and computer output. Size: 7 x 3 x 1 $\frac{1}{4}$  inches. Weight: 9 $\frac{1}{2}$  ounces.



Description	Cat. No.	Price
VWR® Traceable® Dual-Display Conductivity Meter	21800-012	\$450.71
VWR® Data Acquisition System Software (complete description on page 88)	61161-386	\$131.75



Computer Output



## VWR® Traceable® Pure H<sub>2</sub>O Tester

### Meets all lab certification requirements

Specifically designed to test water from stills, demineralizers, deionizers, and reverse osmosis equipment. Meets all lab certification requirements for pure water analysis for CAP, ASTM, NCCLS, USP, and ACS. Single-purpose unit complies with all accreditation analysis requirements. Designed for labs obligated to maintain a periodic check of water purity. To assure accuracy, a Traceable® Certificate is provided to indicate instrument traceability to standards provided by NIST (National Institute of Standards and Technology) from an ISO 17025 calibration laboratory.

### Accurate readings in an instant

Range is 0.1 to 20,000 microsiemens (micromhos) (from pure to raw water). Accuracy is  $\pm 0.4\%$  of full scale. Simple operation eliminates errors and ensures everyone reports identical results. Supplied probe (cable length of 40 inches) provides an instant response. Internal, solid-state thermometer ensures all readings are automatically referenced to the international standard of 25°C. Size: 6 $\frac{1}{4}$  x 3 $\frac{1}{2}$  x 1 $\frac{1}{3}$  inches. Weight: 11 ounces. Supplied: carrying case, instructions, probe, battery, Traceable® Certificate.

Description	Cat. No.	Price
VWR® Traceable® Pure H <sub>2</sub> O Tester	23609-216	\$273.67



## VWR® Traceable® Conductivity Standards Certified Reference Material (CRM), ISO Guide 34

### Use Standards with all meters

Traceable® Conductivity Standards, a Certified Reference Material, are 100% compatible with all makes of instruments and probes. Traceable® Conductivity Standards are the most accurate available. Accuracy at 25°C is ( $\pm 0.25$  microsiemens for 1, 5, 10 microsiemen solution or  $\pm 0.25\%$  for other solutions) or the uncertainty shown on the certificate, whichever is greater. Each bottle is labeled for calibrating conductivity (microsiemens/micromhos), resistivity (ohms), and dissolved solids (parts per million).

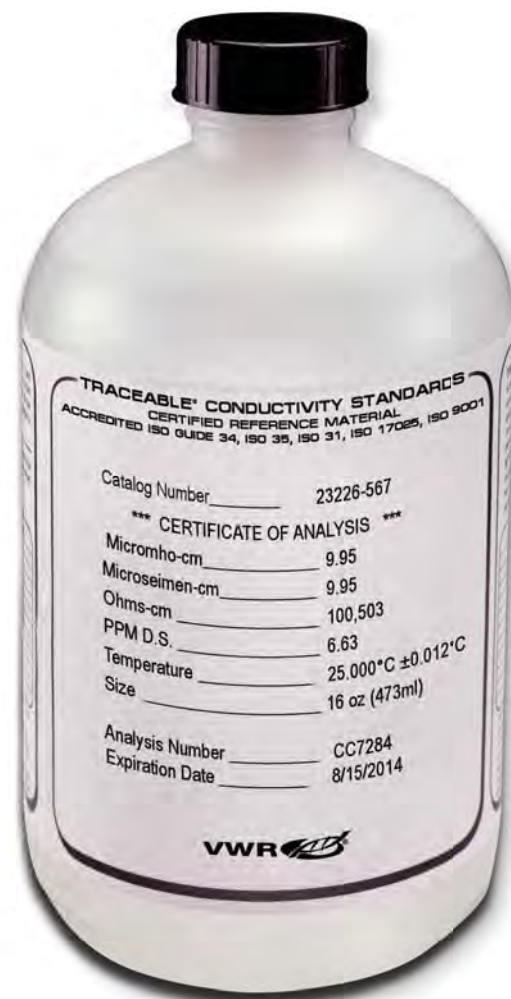
### Meets test requirements

This certified reference material meets test requirements for Federal, State, and local agencies, CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, and ISO. Traceable® Certified Reference Material complies with and is essential for use in these official methods: AOAC 973.40, EPA 120.1, Standard Method 2510 (APHA, AWWA, WEF), ISO 7888, DIN 38404, ASTM D1125, USGS I-1780, USP 645, and for A2LA/NVLAP accreditations/ISO 9000 certifications. Material may be used to calibrate all conductivity meters and to determine all conductivity cell constants.

### A2LA accreditation ISO 17025 and ISO Guide 34 plus ISO 9001

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology) and/or a National Standards Laboratory. A2LA accredited certification provides the highest achievable level of quality assurance, documentation, and accuracy. Certified Reference Materials are produced in an A2LA accredited ISO 17025 calibration laboratory by an A2LA accredited ISO Guide 34 reference material producer. Additional accreditations include ISO 31 (certificate content) and ISO 35 (statistical analysis), plus ISO 9001 (certified quality manufacturer).

Each bottle is supplied with step-by-step calibration instructions, individual temperature compensation chart, traceability information, and Traceable® Certificate. Supplied in a 16-ounce bottle.



Cat. No.	Price	Cat. No. Individually Tested	Price	Microsiemens/ Micromhos	Megohms	TDS / PPM
36934-134	\$67.18	36934-136	\$116.82	1	1	0.66
12777-828	\$73.03	46610-040	\$118.38	5	0.2	3.3
23226-567	\$28.20	46610-030	\$88.42	10	0.1	6.6
23226-589	\$28.20	46610-032	\$88.42	100	0.01	66
23226-603	\$33.76	46610-034	\$88.42	1000	0.001	666
62344-936	\$26.33	46610-042	\$88.42	1413	0.00071	933
23226-625	\$28.20	46610-036	\$88.42	10000	0.0001	6666
23226-647	\$33.76	46610-038	\$88.42	100000	0.00001	66666
89030-246	\$26.32	89030-260	\$88.26	150000	0.000006	100000
89030-248	\$26.32	89030-262	\$88.26	200000	0.000005	133333

Above listings are nominal values. A certificate of analysis is provided for actual lot values.

## VWR® Traceable® One-Shot™ Conductivity Standard (CRM) Certified Reference Material, ISO Guide 34

Single-use conductivity standards calibrate all conductivity meters and probes for maximum accuracy. One-Shots™ eliminate concern about external container contamination. Calibration is made in the standard's vial. Container fits all probes. Extra-large opening (1¾-inches diameter) and extra-large, 3½-inches depth allow probe calibration to take place in the standard's polyethylene container. One-Shot™ Traceable® standards accommodate all conductivity probes and are ideal for lab or field conditions.

### Use Standards with all meters

Traceable® Conductivity Standards, a Certified Reference Material, are 100% compatible with all makes of instruments and probes. Traceable® Conductivity Standards are the most accurate available. Accuracy at 25°C is ( $\pm 0.25$  microsiemens for 1, 5, 10 microsiemen solution or  $\pm 0.25\%$  for other solutions) or the uncertainty shown on the certificate, whichever is greater. Each container is labeled for calibrating conductivity (microsiemens/micromhos), resistivity (ohms), and dissolved solids (parts per million).

### Meets test requirements

This certified reference material meets test requirements for Federal, State, and local agencies, CAP, ASTM, NCCLS, CLSI, ACS, CLIA, AOAC, EPA, APHA, AWWA, WEF, USGS, USP, and ISO. Traceable® Certified Reference Material complies with and is essential for use in these official methods: AOAC 973.40, EPA 120.1, Standard Method 2510 (APHA, AWWA, WEF), ISO 7888, DIN 38404, ASTM D1125, USGS I-1780, USP 645, and for A2LA/NVLAP accreditations/ISO 9000 certifications. Material may be used to calibrate all conductivity meters and to determine all conductivity cell constants.

### A2LA accreditation ISO 17025 and ISO Guide 34

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology) and/or a National Standards Laboratory. A2LA accredited certification provides the highest achievable level of quality assurance, documentation, and accuracy. Certified Reference Materials are produced in our A2LA accredited ISO 17025 calibration laboratory by an A2LA accredited ISO Guide 34 reference material producer. Additional accreditations include ISO 31 (certificate content) and ISO 35 (statistical analysis), plus ISO 9001 (certified quality manufacturer). Each container is supplied with step-by-step calibration instructions, individual temperature compensation chart, traceability information, and Traceable® Certificate. Supplied as a pack of six. Each One-Shot™ contains 100 milliliters.



Cat. No.	Quantity	Microsiemens/ Micromhos	Megohms	TDS / PPM	Price
12777-832	Pk./ 6	5	0.2	3.3	\$92.94
23226-650	Pk./ 6	10	0.1	6.6	\$41.46
23226-651	Pk./ 6	100	0.01	66	\$41.46
23226-652	Pk./ 6	1000	0.001	666	\$41.46
62344-938	Pk./ 6	1413	0.00071	933	\$10.99
23226-653	Pk./ 6	10000	0.0001	6666	\$41.46
23226-654	Pk./ 6	100000	0.00001	66666	\$41.46
89140-190	Pk./ 6	150000	0.000006	100000	\$32.41
89140-192	Pk./ 6	200000	0.000005	133333	\$32.41
61161-356	Pk./ 6	Assortment (one each of the above, except 12777-832, 89140-190, 89140-192)			\$37.37

Above listings are nominal values. A certificate of analysis is provided for actual lot values.



## VWR® Traceable® pH Standards, Certified Reference Material

**NEW**

### The MOST accurate pH Standards available anywhere

Traceable® pH Standards, Certified Reference Materials, are 100% compatible with all instruments and probes. Accuracy for the Traceable® Buffer at 25°C is  $\pm 0.010$  pH—the most precise available. Certified Reference Materials meet Federal/State/local agencies' strictest mandates and deliver exact calibration results for any pH meter.

### Certification documentation supplied for every Traceable® Certified Reference Material

A2LA ISO 17025 (Calibration Laboratory) and ISO Guide 34 (Certified Reference Material Producer) provide highest achievable levels of product production, documentation, and accuracy. Additional accreditations include ISO 31 (content) and ISO 35 (statistical analysis). ISO 9001 ensures that world-class product standards for Materials are always met.

Select values are manufactured to IUPAC (International Union of Pure and Applied Chemistry) formulation. All Certified Reference Materials feature resistance to temperature changes and long-term buffer stability. To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology) and/or a National Standards Laboratory.

Each 16 ounce bottle is supplied with an individual temperature compensation chart, traceability information, and Traceable® Certificate.



Size	Catalog No.	pH Value	Unit	Price
16 fluid ounce (473 ml) Bottle	89140-176	4.005	1 each	\$15.43
	89140-178	7.000	1 each	\$15.43
	89204-746	7.416	1 each	\$15.13
	89140-180	10.012	1 each	\$15.43
100 ml One-Shot™ (6/pack)	89140-182	4.005	6/pack	\$17.47
	89140-184	7.000	6/pack	\$17.47
	89204-748	7.416	6/pack	\$17.16
	89140-186	10.012	6/pack	\$17.47



# Traceable® Conductivity/Oxygen Meter

## VWR® Redi-Stor™ Conductivity Probe Storage Solution

Redi-Stor™ is the ideal solution for storing conductivity probes. It preserves cleanliness, eliminates growths found when storing in water only, and maintains the probe for immediate use with no conditioning.



Description	Cat. No.	Price
VWR® Redi-Stor™ Conductivity Probe Storage Solution	62344-940	\$33.24



## VWR® pH/Conductivity Universal Flow-Thru Adapter

Flow-through adapter is universally designed to accept all 1/2-inch (12.7 mm) diameter conductivity probes and pH electrodes. Allows constant monitoring of flowing fluids with a standard dip probe. Two O-rings provide a secure, leakproof seal.

Connectors accept tubing with a 1/16, 3/32, 1/32 and 1/8-inch inside diameter. Cell volume depends on the positioning of the probe (approximately 2 to 4 ml). Flow rate may be from 0.001 to 50 milliliters per minute. Constructed of PTFE (universally chemically inert), it may be in constant use at temperatures from -100 to 500°F. Size: 1-inch diameter x 2 1/4 inches.

Description	Cat. No.	Price
VWR® pH/Conductivity Universal Flow-Thru Adapter	61161-358	\$95.96

## VWR® Traceable® Dissolved Oxygen Meter

Simultaneously displays oxygen concentration and temperature. Computer output allows it to be connected to a computer or data logger for monitoring and keeping results. Jumbo-size digits are 1 3/8 inches high. At the touch of a button the instrument recalls highest, lowest, and average readings. A DATA HOLD key freezes the display to capture readings.

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: probe, 40-inch cable, two replacement probe heads, electrolyte solution, 9-volt alkaline battery, computer output, carrying case, Traceable® Certificate. Size: 7 x 3 x 1 1/4 inches. Weight: 9 1/2 ounces.

Description	Cat. No.	Price
VWR® Traceable® Dissolved Oxygen Meter	21800-022	\$569.02
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46

Description	Range	Resolution	Accuracy
Dissolved oxygen measurement	0.00 to 20.00 mg/L	0.1 mg/L	±0.4 mg/L
DO measurement % air saturation	0.00 to 100% air saturation	0.1%	±0.7% mg/L
Temperature measurement	32.0 to 140°F/0.0 to 60°C	0.1°	±1.5°F/0.8°C
Automatic temperature compensation	mg/l mode: 0.0 to 60.0°C, % air mode: 0.0 to 60.0°C		
Salinity compensation	0 to 39%		
Altitude compensation	0 to 3900 m		



Wireless Capable  
(see page 89)

Computer Output



## VWR® Traceable® Light Meter Pen

### Dual range and easy operation

Meter reads from 0 to 1,860 foot-candles with a resolution of 0.1, and from 0 to 20,000 Lux with a resolution of 1. Accuracy is  $\pm 5\%$  of reading plus 5. Simple operation eliminates the need to refer to instructions. Designed for intuitive, easy operation by everyone. Tough, ABS plastic housing with O-ring seal and membrane keypad keep out dust and dirt, assuring a long life in severe lab or harsh plant environments. HOLD key freezes the reading on the display. High contrast  $\frac{3}{8}$ -inch-high LCD digits are easy to read.

### Traceable to NIST

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Rugged ABS plastic case is  $1\frac{1}{2}$  diameter x 8 inches; Weight: 5 ounces. Supplied: Traceable® Certificate and four batteries.

Description	Cat. No.	Price
VWR® Traceable® Light Meter Pen	89094-706	\$104.17

## VWR® Traceable® Dual-Range Light Meter

Dual-Range Meter reads both lux and foot-candles on a large  $\frac{1}{2}$ -inch-high display. An analog output of 0.1 millivolt per digit allows readings to be captured by a recorder. Precision selenium photovoltaic cells and microprocessor provide for a fast-response sampling rate of 0.4 seconds and an automatic zero adjustment. Display update rate may be set to 1 or 2 seconds. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). HOLD key freezes the display to capture readings. Precise photodiode and color-correction filter provide cosine- and color-corrected measurements.

### Readings in lux and foot-candles

Dual-Range Meter measures lux in three ranges: 0 to 1999 (1 lux resolution), 2000 to 19,990 (10 lux resolution), and 20,000 to 50,000 (100 lux resolution). Readings in foot-candles: 0 to 199.9 (0.1 Fc resolution), 200 to 1999 (1 Fc resolution), 2000 to 5000 (10 Fc resolution). For accuracy see chart. Unit is supplied with 2 inch diameter photocell, 40-inch cable, Traceable® Certificate, 9-volt alkaline battery, and recorder output. Size:  $6\frac{1}{2}$  x 3 x  $1\frac{1}{2}$  inches. Weight: 10 ounces.

Description	Cat. No.	Price
VWR® Traceable® Dual-Range Light Meter	62344-944	\$135.66
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46



Range	Resolution	Accuracy
Lux	0 to 1999 lux	1 lux
	2000 to 19,999 lux	10 lux
	20,000 to 50,000 lux	100 lux
Foot-Candles	0 to 199.9 Fc	0.1 Fc
	200 to 1999 Fc	1 Fc
	2000 to 5000 Fc	10 Fc

## VWR® Traceable® Dual-Display Light Meter

Dual displays show lux or foot-candles, or percent differential from a reference point, and the selected light source (daylight, tungsten, fluorescent, or mercury). Traceable® light meter has computer output that allows it to be connected to a computer or data logger for monitoring and keeping results. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Readings in lux and foot-candles

Dual-Display Meter measures lux in three ranges: 0 to 1999 (1 lux resolution), 2000 to 19,990 (10 lux resolution), and 20,000 to 50,000 (100 lux resolution). Readings in foot-candles: 0 to 199.9 (0.1 Fc resolution), 200 to 1,999 (1 Fc resolution), 2,000 to 5,000 (10 Fc resolution). For accuracy see chart. Unit has zero reference settings for all light sources.

Unit recalls highest, lowest, and average readings at the touch of a key. HOLD key freezes the display to capture readings. Precise photodiode and color-correction filter provide cosine- and color-corrected measurements. Jumbo-sized digits are 1 3/8 inches high. Supplied: 2-inch diameter photocell, Traceable® Certificate, battery, and computer output. Probe: 2-inch diameter photo cell/40-inch cable length. Size: 7 x 3 x 1 1/4 inches. Weight: 9 1/2 ounces.



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Dual-Display Light Meter	21800-014	\$233.46
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46

Range	Resolution	Accuracy
Lux	0 to 1999 lux	1 lux
	2000 to 19,999 lux	10 lux
	20,000 to 50,000 lux	100 lux
Foot-Candles	0 to 199.9 Fc	0.1 Fc
	200 to 1999 Fc	1 Fc
	2000 to 5000 Fc	10 Fc

## VWR® Traceable® Ultraviolet Light Meter

Light meter has an UV wavelength range of 320 to 390 nm. Traceable® Ultraviolet Light Meter measures on three different ranges from 0 to 199.9  $\mu\text{W}/\text{cm}^2$  (resolution 0.1  $\mu\text{W}/\text{cm}^2$ ), 1.999  $\text{mW}/\text{cm}^2$  (resolution 0.001  $\text{mW}/\text{cm}^2$ ), and 19.99  $\text{mW}/\text{cm}^2$  (resolution 0.01  $\text{mW}/\text{cm}^2$ ). Accuracy is  $\pm(2\%$  of full scale plus 2 digits).

### Connect to computer or data logger

Traceable® Light Meter has computer output that allows it to be connected to a computer or data logger for monitoring and keeping results. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

### Cosine- and color-correct measurements

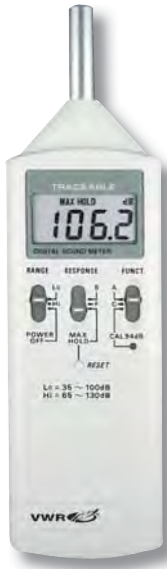
Unit recalls highest, lowest, and average readings at the touch of a key. HOLD key freezes the display to capture readings. Precise photodiode and color-correction filter provide cosine- and color-corrected measurements. Supplied: 3/4-inch diameter photocell (40-inch cable), Traceable® Certificate, alkaline battery, computer output, carrying case. Size: 7 x 3 x 1 1/4 inches. Weight: 9 1/2 ounces.



Computer Output

Description	Cat. No.	Price
VWR® Traceable® Ultraviolet Light Meter	21800-016	\$664.33
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46

Range	Resolution	Accuracy
0 to 199.9 $\mu\text{W}/\text{cm}^2$	0.1 $\mu\text{W}/\text{cm}^2$	$\pm 4 \mu\text{W}/\text{cm}^2 + 1 \mu\text{W}/\text{cm}^2$
200 to 1.999 $\text{mW}/\text{cm}^2$	0.001 $\text{mW}/\text{cm}^2$	$\pm 0.04 \text{mW}/\text{cm}^2 + 0.01 \text{mW}/\text{cm}^2$
2.00 to 19.99 $\text{mW}/\text{cm}^2$	0.01 $\text{mW}/\text{cm}^2$	$\pm 0.4 \text{mW}/\text{cm}^2 + 0.1 \text{mW}/\text{cm}^2$



## VWR® Traceable® Sound Level Meter

### Three-decibel ranges

Features three-decibel ranges for greater precision: low (35.0 to 80.0 dB), medium (50.0 to 100.0 dB), and high (80.0 to 130.0 dB). Resolution is 0.1 dB and accuracy is  $\pm 2$  dB. Unit provides weightings for both A (frequencies for 500 to 10 kilohertz) and C (frequencies from 30 to 10 kilohertz) to meet IEC 651 Type-2 standards.

### Adjustable response time

Response time may be set to fast (0.2 seconds) or slow (1.5 seconds). A handy memory data-hold function stores the highest reading achieved for later display. It fulfills OSHA requirements. Unit uses a 1/2-inch condenser microphone. A recorder jack permits capturing readings (AC and DC 10 mV/dB). Use the threaded tripod insert for long-term measurements. To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Unit is supplied with 9-volt alkaline battery and carrying case. Size: 10 x 3 x 1 inches. Weight: 9½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Sound Level Meter	12777-836	\$267.31

## VWR® Traceable® Analog Sound Meter

Easy-to-operate, Traceable® Analog Sound Meter provides fast readings on a color-coded scale. It quickly indicates over and under decibel readings. Measures from 54 to 126 decibels in seven ranges 60, 70, 80, 90, 100, 110, 120 dB. Switch permits weightings for either A (frequencies from 500 hertz to 10 kilohertz) or C (frequencies from 30 hertz to 10 kilohertz). Accuracy is  $\pm 3$ dB. Features include: analog output for connecting to chart recorders, maximum key for locking on highest reading for peak sounds, and switch for selecting fast or slow response.

To assure accuracy an individually serial numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Unit is supplied with 9-volt alkaline battery, low battery checker, threaded insert for tripod, and Traceable® Certificate. Size: 2½ x 7 x 1½ inches. Weight: 5½ ounces.

Description	Cat. No.	Price
VWR® Traceable® Analog Sound Meter	46610-044	\$87.75



## VWR® Traceable® Touchless/Contact Digital Tachometer

Labs use this high-accuracy unit to check speeds of centrifuges, motors, or stirrers. Five digit LCD is 1/2-inch high. Tachometer takes only three seconds for most readings. A unique memory feature permits recalling the highest, lowest, and last reading. Unit is extremely easy to use; operation may be learned in one minute. One end of the unit provides contact readings with a rotating spindle. The other end makes touchless readings using a beam of light. The light may be held as far away as twelve inches. The light beam reflects off self-adhesive tabs to provide readings of 0.1 to 99,999 revolutions per minute (RPM). The contact end of the instrument measures speeds of 0.1 to 19,999 revolutions per minute, 0.05 to 1999.9 meters per minute, and 0.2 to 6560 feet per minute. Resolution in all modes is 0.1 below 1000 and 1 above 1000. For accuracy see chart. Utilizes a precision quartz crystal for an accurate time base. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Description	Cat. No.	Price
VWR® Traceable® Touchless/Contact Tachometer	23609-214	\$376.11

Range	Resolution	Accuracy
0 to 999.9 RPM	0.1 RPM	$\pm 0.05\%$ of reading + 0.1 RPM
1000.00 to 99999 RPM	1 RPM	$\pm 0.05\%$ of reading + 1 RPM

Supplied: batteries, Traceable® Certificate, rugged ABS plastic housing, self-adhesive reflecting tabs, internal light, cone for RPM, wheel for RPM, wheel for surface speeds, carrying case. Size: 2½ x 8½ x 1½. Weight: 10½ ounces.





## VWR® Traceable® Digital Laser Tachometer

Touchless, no contact operation is safe and easy. Tachometer measures revolutions per minute with laser pin-point accuracy anywhere from two to seventy-eight inches away from any rotating object. Labs and plants use this high accuracy unit to read speeds of centrifuges, motors, and stirrers. Five digit LCD is a highly visible 3/8-inch-high. Laser beam reflects off self-adhesive tabs to give readings of 10 to 99,999 revolutions per minute. Resolution is 0.1 below 1000 and 1 above. Accuracy is ±1 RPM or 0.05%.

### Traceable to NIST for accuracy

Utilizes a precision quartz crystal for an accurate time base. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Takes only a second for most readings. Memory feature permits recalling last reading at any time.

Supplied: Traceable® Certificate, four alkaline batteries, rugged ABS plastic case, self-adhesive reflecting tabs, internal light, carrying case. Size: 3 x 8¼ x 1½ inches. Weight: 9¾ ounces.

Description	Cat. No.	Price
VWR® Traceable® Digital Laser Tachometer	23609-212	\$349.70

## VWR® Traceable® Tachometer with Red LED Pointer

**Touchless handheld point-and-shoot tachometer targets a rotating object and provides instant precision results**

Optical no-contact measurements are made by placing a piece of reflective tape on the rotating object. Red LED light locks on the self-adhesive reflective tape (24" supplied) and counts rotations. In two seconds it provides rock solid answers from 10 to 99,999 revolutions per minute (RPM). Five-digit resolution is 0.001, 0.01, 0.1, or 1 depending on the revolutions displayed.

### Quartz crystal accuracy

Unit is designed to measure centrifuges, pumps, rollers, shafts, gears, motors, and moving surfaces. For accuracy see chart. HOLD key freezes results. Precision quartz crystal insures stable and repeatable results. LCD digits are ½-inch-high and may be read from 10 feet. Low battery condition is indicated on the display. Impact-resistant ABS housing protects the unit.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied with battery. Size: 4¾ x 1¾ x 1¼ inches. Weight: 4 ounces.

Description	Cat. No.	Price
VWR® Traceable® Tachometer with Red LED Pointer	46610-048	\$144.73

Range	Resolution	Accuracy
0 to 9.999 RPM	0.001 RPM	±0.04% of reading + 0.02 RPM
10 to 99.99 RPM	0.001 RPM	±0.04% of reading + 0.02 RPM
100.00 to 999.99 RPM	0.01 RPM	±0.04% of reading + 0.2 RPM
1000.00 to 9999.99 RPM	0.1 RPM	±0.04% of reading + 2 RPM
10000 to 99999 RPM	1 RPM	±0.04% of reading + 22 RPM





## VWR® Traceable® Contact Tachometer

**Any rotating surface may be touched by the cone convex tip, funnel concave tip, or speed wheel for instant results**

Tachometer displays revolutions per minute (RPM) from 10.000 to 99,999 (resolution 0.001, 0.01, 0.1, 1). In addition, it reports results in feet per minute 3.0000 to 30,000, yards per minute 1.000 to 10,000, and meters per minute 1.000 to 9999.9 (resolution for all three is 0.0001, 0.001, 0.01, 0.1 depending on the revolutions displayed).

Unit is designed to measure centrifuges, pumps, rollers, shafts, gears, motors, and moving surfaces. For accuracy, see chart. HOLD key freezes reading. Precision quartz crystal insures stable and repeatable results. Short sampling time provides answers in two seconds. LCD digits are ½-inch-high and may be read from 10 feet. Low battery condition is indicated on the display. Impact resistant ABS plastic housing protects the unit.

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied with a 9-volt battery. Size: 4¾ x 1¾ x 1¼ inches. Weight: 4 ounces.



Description	Cat. No.	Price
VWR® Traceable® Contact Tachometer	46610-046	\$130.25

Range	Resolution	Accuracy
0 to 99.999 RPM	0.001 RPM	±0.04% of reading + 0.01 RPM
100.00 to 999.99 RPM	0.01 RPM	±0.04% of reading + 0.1 RPM
1000.0 to 9999.9 RPM	0.1 RPM	±0.04% of reading + 1 RPM
10000 to 99999 RPM	1 RPM	±0.04% of reading + 10 RPM

## VWR® Traceable® Moisture Meter

**Meter's memory contains nine material groups and calibrations**

Traceable® Moisture Meter displays material, wood, wood product, and paper moisture content 9.0 to 30.0% with a resolution of 0.1% and an accuracy of ±(4% of the reading plus 5 digits). Memory contains nine material groups such as fiberboard, construction material, and calibrations for 150 types of wood. Applications include foods, grains, chemicals, pharmaceuticals, cosmetics, sludge, soil, and automotive liners. For all other products, user establishes reference moisture readings. Once programmed, the meter reports directly in percent moisture. Simply touch a material to measure moisture. Takes only seconds. Unit provides for automatic and manual temperature compensation.

**Traceable to NIST for accuracy**

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology). Computer output allows it to be connected to a computer or data logger for monitoring and capturing results. At the touch of a key the instrument recalls highest, lowest, and average readings. HOLD key freezes the display to capture readings. Stores results on a computer or data logger. Jumbo-size digits are 1⅜ inches high. Supplied: probe, ten spare pins, Traceable® Certificate, battery, and computer output. Size: 7 x 3 x 1¼ inches. Weight: 9½ ounces.



Description	Cat. No.	Price
VWR® Traceable® Moisture Meter	21800-020	\$364.85
Data Acquisition System (complete description on page 88)	61161-386	\$131.75
Data Logger (see complete description on page 88)	21800-026	\$493.54
Easy-Use™ Accessory Adaptor 115 VAC	61161-384	\$53.46



Computer Output

## VWR® Traceable® Digital Auto-Range Multimeter

Designed specifically for checking the electrical functions of scientific equipment in laboratories. Perfect unit to test batteries, fuses, recorder outputs, cables, wall plugs, probes, printed circuit boards, and complex electronic instrumentation. Save money and time by solving problems and eliminating costly repairs. Unit ranges are from 1 millivolt to 400 volts AC/DC and 0.1 to 2,000,000 ohms. Accuracy is 2 units, or 2% of the reading. The multimeter instantly displays the correct answer by automatically selecting the proper range. Four-digit,  $\frac{3}{8}$ -inch-high LCD shows the exact resistance or voltage unit and indicates negative polarity with a minus sign.

To assure accuracy an individually serial-numbered Traceable® Certificate is supplied to indicate traceability to standards provided by NIST (National Institute of Standards and Technology).

Features an audible beep for checking continuity, ensuring instant detection of shorts/opens in probes, cables, or circuit boards. Sampling rate is twice a second. Intuitive operation makes instructions almost unnecessary.

Supplied: case, batteries, pair of needle probes, pair of alligator probes, instructions.  
Size: 2 $\frac{1}{8}$  x 4 $\frac{1}{4}$  x  $\frac{1}{2}$  inches. Weight: 3 ounces.



Description	Cat. No.	Price
VWR® Traceable® Digital Auto-Range Multimeter	23609-210	\$40.63

## VWR® Traceable® Battery Tester

Traceable® Battery Tester checks alkaline, carbon, silver-oxide, mercury, nickel-cadmium, and other batteries. Tests battery voltages from 1.35 to 12 volts on 13 ranges. Accuracy is  $\pm 5\%$ .

### Traceable to NIST for accuracy

Simple color-coded scale immediately indicates battery condition. Individually serial-numbered Traceable® Certificate is provided to indicate traceability to standards provided by NIST (National Institute of Standards and Technology).

### Actually tests the battery

Provides true resistive load readings equal to real-world usage. Tests batteries under actual operating conditions. Twenty-six precision resistors provide true representative loads for all batteries. Superior to voltmeters that provide no-load values.

### Requires no internal battery

Pays for itself by eliminating battery replacements. Self-powered; requires no internal battery. Checks any battery in one second.

### Accurate and long-lasting

Gold-plated printed circuit board and silver-plated switches ensure both accuracy and a long life. Small (3 $\frac{1}{2}$  x 2 $\frac{1}{2}$  x 1-inch) and lightweight (3 oz) unit comes with two test leads (27 $\frac{1}{2}$ -inch-long cables), Traceable® Certificate, and instructions.



Description	Cat. No.	Price
VWR® Traceable® Battery Tester	62379-529	\$30.89

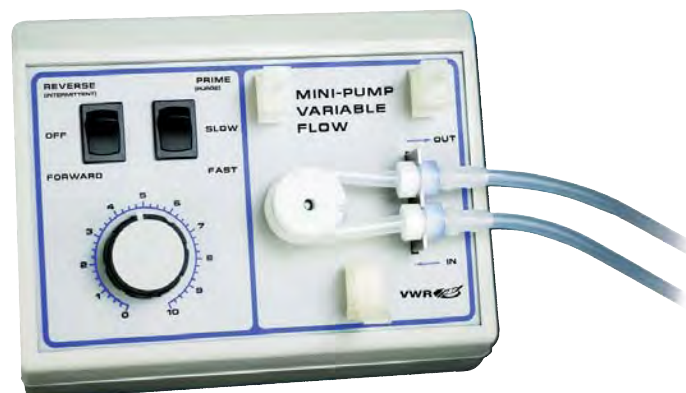
## VWR® Variable-Speed Peristaltic Pump

Compact, variable-flow, bi-directional, self-priming, peristaltic pumps offer precise flow deliveries. Ideal for use with conductivity flow-thru cells, liquid chromatography, collecting fractions, pH/circulating fluids or buffers in baths, and moving corrosive materials. They provide outstanding flow control and flexibility for transferring and dosing liquids. Fluid contacts only the tubing for contamination-free pumping.

Flow rates are from 0.005 milliliters per minute to 600 milliliters per minute. Variable-speed flow control and five different tubing sizes provide fine resolution with a wide flow range. The revolution of one roller delivers a precisely measured volume specific to the tubing size and motor speed. May be used with up to 120 feet of tubing for remote sampling.

Tubing may be used with fluid temperatures from -80 to 500°F (-62 to 260°C). Use with food, pharmaceuticals, and other critical solutions. The tubing may be sterilized by autoclave. Unit pumps liquids and gases. Pumping dry does not harm the pump. Pump has a purge/prime switch for high-speed emptying/filling. It also reverses at the touch of a switch for ease in draining tubing. Three rollers reduce flow pulsation, prevent siphoning, and eliminate the need for check valves. There are no valves to clog, no seals to leak. The 120 VAC CSA-approved wall power supply ensures that a safe 12 volts drive the pump motor. Comes with a battery connector for portable use with any 9 or 12-volt battery. Pump draws so little power it will run for five months on a car battery.

Supplied with silicone tubing, and polypropylene fittings/nipples, 115 VAC wall power supply, and an accessory battery connector (battery not supplied). Packaged in a chemical-resistant ABS plastic case. Size: 6 $\frac{5}{8}$  x 4 $\frac{3}{4}$  x 4 $\frac{1}{2}$  inches. Weight: 1 $\frac{1}{4}$  pounds. One-year warranty.



Description	Cat. No.	Price
VWR® Variable-Speed Peristaltic Pump Ultra-Low Flow 0.005 to 0.900 ml/minute	61161-354	\$283.31
VWR® Variable-Speed Peristaltic Pump Low Flow 0.03 to 8.20 ml/minute	54856-070	\$320.72
VWR® Variable-Speed Peristaltic Pump Medium Flow 0.4 to 85.0 ml/minute	54856-075	\$320.72
VWR® Variable-Speed Peristaltic Pump Medium/High Flow 4.0 to 600 ml/minute	57951-016	\$569.40

## VWR® Variable-Flow Chemical Transfer Pump

Designed specifically for pulseless fluid transfer at variable flow rates. Pumps from 4 $\frac{1}{4}$  fluid ounces to  $\frac{5}{8}$  gallon (120 to 2,250 milliliters) per minute. Pumps fluids with a viscosity to 200 centipoises. Suction lift is 10 feet wet, 4 inches dry. May be used with fluid temperatures from -40 to 200°F (-40 to 93°C). Barbed inlet/outlet ports use any type of tubing with an inside diameter (nominal  $\frac{3}{16}$  inches).

Direct-drive engineering provides maximum motor power to the pump. Continuous-sweep variable control provides precise, seamless speed control. The chemical-resistant, wetted parts are Dupont Delrin®, 304 stainless-steel, Viton, and PTFE. Pump has a purge/prime switch for high-speed emptying/filling. It also reverses for ease in draining tubing. May be used with up to 120 feet of tubing for remote sampling. Pump comes ready to use with 115 VAC UL-rated wall power supply. Housing is chemical-resistant ABS plastic. Size: 8 x 4 $\frac{3}{4}$  x 4 $\frac{3}{4}$  inches. Weight: 3 $\frac{1}{4}$  pounds.



Description	Cat. No.	Price
VWR® Variable-Flow Chemical Transfer Pump	23609-170	\$436.38

Different wetted parts may be available upon request.



## VWR® Traceable® Ultra-Low Flow Meter

Compact, fully contained, ready to operate, no assembly required. Ready to run right out of the box. Simple 4-key operation (Flow/Total, Units, Zero and Power) and easy to read LCD make this meter extremely user-friendly. Display shows the current flow and total accumulated flow.

Accuracy is  $\pm 2\%$  full scale with liquid temperatures of 20 to 30°C; otherwise,  $\pm 4\%$  full scale. May be used with fluid temperatures from 32 to 122°F (0 to 50°C). Unit permits adjusting a viscosity compensation correction. Chemically resistant nylon  $\frac{1}{16}$  barbed inlet/outlet connectors are compatible with all types of tubing.

### Traceable to NIST for accuracy

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: wall power adaptor and a battery connector for portable use. Meter draws so little power it will run for six months on a car battery. Housing is constructed of chemical-resistant ABS plastic. Size:  $6\frac{5}{8}$  x  $4\frac{3}{4}$  x  $4\frac{1}{2}$  inches. Weight: 1 pound. One-year warranty.

Description	Cat. No.	Price
VWR® Traceable® Ultra-Low Flow Meter	89140-172	\$344.63



0.000682 ml/min **FLOW**

1999999.8 ml **TOTAL**

**Displays flow rates and total flow of fluids in seven user selectable units of measure:**

Range	Unit
4 to 25.00	milliliters/minute
0.004 to 0.0250	Liters/minute
4.00 to 25.00	cubic centimeters/minute
0.135 to 0.84	fluid ounces/minute
0.001050 to 0.00660	gallons/minute
0.140 to 0.88	fluid imperial ounces/minute
0.00088 to 0.00549	imperial gallons/minute

## VWR® Liquid Alarm

Inexpensive Liquid Alarm may be placed anywhere. Use it to detect when drums, tanks, flasks, or beakers are close to overflowing. It's the perfect reminder for unattended filling of any container. The moment a solution touches the sensor, the alarm sounds and a red LED light flashes continually until the liquid no longer touches the sensor.

### Alarm sounds for hours

Place the sensor on the floor to detect spills. It allows taking action before a serious situation develops. A loud, high-decibel alarm sounds and a red LED light flashes until the sensor is removed from liquid. Constantly alarms for over 30 hours. Position the detector on an overflow tube or near a pump to alert you when an accident is occurring. Cable length is 10 feet. Use with aqueous solutions and liquids that don't attack plastic. Battery-operated alarm sounds even during power outages. Pays for itself by preventing just one ruined lab test. Size:  $1\frac{3}{16}$  x  $3$  x  $\frac{3}{4}$  inches. Weight: 2½ ounces. Supplied: 9V battery.

Description	Cat. No.	Price
VWR® Liquid Alarm	61161-273	\$43.38





## VWR® Hose/Tubing Clamp Assortment Kit



### Eliminate leaks

Clamps securely fasten tubing to connectors, pumps, glassware, and filtration units. Chemical-corrosion-resistant, rustproof, non-conducting nylon is ideal for use in wide temperature range of 32 to 194°F (0 to 90°C).

### May be sterilized

One-piece, reusable clamp squeezes shut for a leak-proof seal. Pressing on the side releases the clamp. Designed specifically for pressure, vacuum, and liquid applications where a secure seal is required. Tight-Seal™ is the only clamp that works with all types of plastic and rubber tubing. May be chemically or gas-sterilized for biomedical or food applications. Available in 13 sizes, clamps have an inside diameter of ¼ to 1½ inches (6.25 to 40.90 mm). Assortment includes 65 clamps, 5 of each of the 13 sizes. Handy kit ensures that the proper Size: immediately available.

Cat. No.	Inside Clamp Diameter		Price
	Inches	Millimeters	
<b>89030-264</b>	0.360 to 0.406	9.14 to 10.31	<b>\$33.49</b>
<b>89030-204</b>	0.410 to 0.468	10.41 to 11.89	<b>\$33.49</b>
<b>89030-206</b>	0.475 to 0.536	12.07 to 13.61	<b>\$33.49</b>
<b>89030-208</b>	0.538 to 0.608	13.67 to 15.44	<b>\$33.49</b>
<b>89030-210</b>	0.597 to 0.665	15.16 to 16.89	<b>\$34.17</b>
<b>89030-212</b>	0.670 to 0.780	17.02 to 19.81	<b>\$34.19</b>
<b>46610-002</b>	0.730 to 0.830	18.54 to 21.08	<b>\$41.84</b>
<b>89030-214</b>	0.870 to 0.975	22.10 to 24.77	<b>\$39.80</b>
<b>89030-216</b>	0.953 to 1.093	24.21 to 27.76	<b>\$47.86</b>
<b>89030-218</b>	1.031 to 1.187	26.21 to 30.15	<b>\$47.86</b>
<b>89030-220</b>	1.250 to 1.425	31.75 to 36.20	<b>\$55.53</b>
<b>89030-222</b>	1.406 to 1.610	35.71 to 40.90	<b>\$54.20</b>

Description	Cat. No.	Price
VWR® Hose/Tubing Clamp Assortment Kit	<b>21732-000</b>	<b>\$65.53</b>

## VWR® Tight-Ties™ Assortment Kit

Cable ties feature a unique tapered tip for fast insertion and tightening. One-piece, self-locking ties are made of tough, chemical-corrosion-resistant, rustproof, non-conducting nylon. Applications include affixing tubing to pumps, bundling materials, hanging equipment.

### Usable in wide temperature range

Use in the wide temperature range of -40 to 185°F (-40 to 85°C). Tensile strength is 12 to 50 pounds. When fastened, the diameters adjust ½ to 4 inches (2.60 to 101.60 mm).

Description	Cat. No.	Price
VWR® Tight-Ties™ Assortment Kit Includes 400 ties consisting of five sizes.	<b>21800-000</b>	<b>\$28.76</b>

Cat. No.	Quantity	Length (Inches)	Millimeters	Price
<b>89030-224</b>	100 ea.	4	101.60	<b>\$10.72</b>
<b>46610-196</b>	100 ea.	5½	142.88	<b>\$12.18</b>
<b>80080-914</b>	100 ea.	8	203.20	<b>\$11.57</b>
<b>80080-912</b>	50 ea.	11	279.40	<b>\$11.57</b>
<b>89030-230</b>	50 ea.	14	355.60	<b>\$11.36</b>



## VWR® Standard Check Valves

### Chemical-resistant check valves

Tubing barbed check valves are constructed of chemical-resistant Kynar® body and Viton® valve for an inert, high-purity, smooth and clear flow path. Prevents damage to equipment, pumps, and flow systems by preventing backflow. Use with acids, bases, water, chemical processing, and alcohols. Use for liquids, gases, pressure, and vacuum applications. Operating ranges are 0 to 50 PSI and -40 to 126°C. Autoclavable, zero maintenance, unit installs in any position.



Description	Quantity	Size	Cat. No.	Price
VWR® Chemical-Resistant Check Valves	Pk/6	1/8-inch	89094-708	\$34.75
VWR® Chemical-Resistant Check Valves	Pk/6	3/16-inch	89094-710	\$34.75
VWR® Chemical-Resistant Check Valves	Pk/6	1/4-inch	89094-712	\$34.75
VWR® Chemical-Resistant Check Valves	Pk/6	3/8-inch	89094-714	\$34.75

## VWR® Workstation Spilltray™ and Drying Rack

Eliminate spills with this chemical-resistant, maintenance-free, polyethylene containment tray. Use one at each workstation or fumehood to safely handle chemicals and liquids while pipeting, measuring, or mixing. Holds 1¼ liters of spilled liquid. Easy to clean—simply lift off the white grid and empty.

Low profile design is perfect for drying glassware and delicate items. Plastic grid cushions and protects against breakage and scratches. Grid cuts drying time in half by permitting air circulation. Easel permits drying odd shaped items. Entire unit is dishwasher safe. Tray folds up to 4¾ inches creating an incline of 45 degrees. Size: 16½ x 13 x 5/8 inches. Weight: 1 pound.



Description	Cat. No.	Price
VWR® Workstation Spilltray™ and Drying Rack	46610-022	\$22.11



## VWR® Desi-Vac™ Containers

Desiccator with a vacuum pump is ideal for drying, preserving, storing, and even shipping samples. Vacuum pump built into the top removes air with manual strokes. Rubber O-ring-sealed cover maintains vacuum. Achieves a vacuum of better than 200 inches of water (15 inches of mercury). A release key on top allows air into the plastic container to remove the lid.

### Keeps powder dry

Use desiccants to keep material dry—ideal for storing chemicals, powders, sample tissues, and plant sections, and for weighing samples.

Description	Diameter	Height	Volume	Cat. No.	Price
VWR® Desi-Vac™ Container	4½ inches	5 inches	42 in³ 700 cc	62344-926	\$27.86
VWR® Desi-Vac™ Container	5 inches	7¼ inches	91 in³ 1500 cc	62344-930	\$34.67
VWR® Desi-Vac™ Container	8½ x 7 inches	7¼ inches	183 in³ 3000 cc	36934-144	\$41.17

## VWR® Humidity Sponge™ Regenerable/Indicator

The latest in drying technology turns any container into a desiccator. Indicator bag particles show when moisture capacity has been reached.

### Nontoxic and ideal for clean rooms

Humidity Sponges™ meet US FDA requirements for use in direct contact with food and drugs. Desiccant (sodium calcium aluminosilicate hydrate) is nontoxic and is a GRAS (generally recognized as safe) material. It is ideal for storing food/pharmaceutical samples, electronics, PC boards, optics, chemicals, and equipment. Outer material is made of DuPont's Tyvek® breathable, high-density polyethylene. Zero-Dust bags are certified as Class M3.5 (formerly Class 100) clean room compatible.

### Retains 16% moisture, guaranteed

Drying capability depends on volume, temperature, and moisture.

As a benchmark, one bag will maintain dry conditions in a container with a volume of two gallons (476 cubic inches/7800 cubic centimeters). Bags are guaranteed to retain 16% moisture by weight; typical results are 37% moisture absorption. Each bag measures 3 x 3 x ¼ inches. Weight: ¾ ounce.

### Indicator Humidity Sponges™

Indicator Sponge has one side of clear film and one of white Tyvek®. It contains blue particles which turn pink when the desiccant has reached its moisture capacity and needs to be replaced. Indicator Humidity Sponge™ cannot be regenerated.

### Regenerable Humidity Sponges™

Regenerable Sponge has white Tyvek® on both sides and may be regenerated and reused continuously. Regeneration requires heating in an oven at 220°F (104°C). Included in each pack is a Relative Humidity Card which changes from blue to pink to show when sponges need to be regenerated. Tyvek® is a registered trademark of DuPont.



Description	Quantity	Cat. No.	Price
VWR® Humidity Sponge™ Regenerable	40/pack	61161-321	\$49.22
VWR® Humidity Sponge™ Indicator	40/pack	61161-319	\$49.19

## VWR® Traceable® Humidity-On-A-Card™

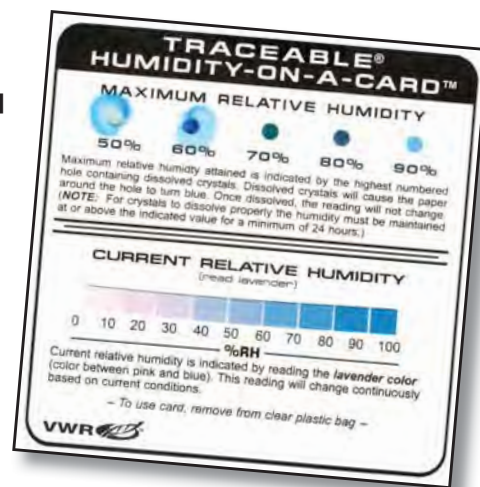
Unique humidity card indicates both the current humidity and the maximum humidity attained. Easy-to-read cards are ideal for use with bottles, chemicals, plastic bags, electronics, desiccators, and storage containers. Easily monitor humidity levels in shipments, optics, and packaging.

### Watch colors change as humidity rises/falls

Dual ranges are Current and Maximum. Current range is 0 to 100% relative humidity. Color changes from blue to lavender in increments of 10%RH. Reversible indicator changes color as the humidity increases and decreases. Readable to an accuracy of ±5%RH at 75°F (24°C).

### View maximum RH% reached

Maximum relative humidity attained is indicated by the highest numbered hole with dissolved crystals. Dissolved crystals cause the paper around the hole to turn blue. Once dissolved, the reading will not change. (NOTE: for crystals to dissolve properly, the humidity must be maintained at or above the indicated value for a minimum of 24 hours.) Each card is individually sealed in a clear moisture-barrier bag with a Humidity Sponge™ desiccant to keep the card dry and provide for an extended shelf life. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Card size: 4 x 4 inches.



Description	Quantity	Cat. No.	Price
VWR® Traceable® Humidity-On-A-Card™	Pack of six cards	15551-012	\$46.95



## VWR® Spray-Anywhere™ Adjustable Sprayer

Sprayer changes any bottle into a wash bottle, turns any reagent into a spray. Chemical-resistant and virtually unbreakable sprayer is made of polypropylene. It's ideal for hot, cold, aqueous, and solvent-based solutions. The entire unit may be gas or chemically sterilized and is dishwasher-safe.

### Measured delivery

Sprayer has a continuously adjustable spray for every requirement. Set it on fine-mist, needle, or big-steam. Closed position maintains solution purity by preventing evaporation and air/dust contamination. Trigger is comfortable for one-handed operation. Provides controlled delivery and requires a very light pressure. Contoured shape fits in the hand and reduces finger fatigue when pumping continuously. Instant-off release eliminates messy drips on the bench.

### Use with any container

A cone-shaped universal adaptor bung fits virtually all glass, plastic, and metal containers, bottles, and flasks. Fits inside diameters from 1 inch to 1 $\frac{3}{8}$  inches. Tube diameter is  $\frac{1}{4}$  inch. Tube length is 32 inches.

Description	Cat. No.	Price
VWR® Spray-Anywhere™ Adjustable Sprayer	15551-018	\$14.05

## VWR® Adjustable Spray Wash Bottles

### Wash Bottles with an adjustable spray

Wash Bottles have an adjustable spray for every requirement. Set the nozzle on fine mist for TLC plates, position it to needle to rinse glassware, and pump a continuous, forceful jet on the big stream position for washing filters.

### No-effort pumping

The pump trigger is comfortable for one-handed operation, provides controlled delivery, and requires a very light pressure. Ease of use reduces finger fatigue. Contoured to fit in the hand, it makes the awkward-to-grasp, difficult-to-pump, and impossible-to-control squeeze bottle obsolete. The instant-off trigger release eliminates messy drips on the bench. Chemical-resistant and virtually unbreakable bottle is made of high-density polyethylene (HDPE). The sprayer is made of polypropylene (PP). Ideal for hot, cold, aqueous, and solvent-based solutions. The entire wash bottle may be gas or chemically sterilized. It may be cleaned in the lab dishwasher.

### Zero contamination

Closed position on sprayer maintains solution purity by eliminating overnight evaporation and air/dust contamination. Squat shape takes up little bench space and assures a low center of gravity to eliminate tip-over problems. Double-headed design, available only in the 1000-milliliter size (1 liter), has a convenient side-fill opening to help maintain purity of solutions. When bottle is empty, the double-headed feature eliminates removing a pump and allows refilling in seconds through a separate opening.

Description	Cat. No.	Price
VWR® Double-headed Adjustable Spray Wash Bottle 1000ml (lower left)	16650-049	\$43.90
VWR® Adjustable Spray Wash Bottle 240ml (3/pack) (upper right)	23609-182	\$22.65





## VWR® Clean-Wipes™

### New universal clean-up tool

Pre-moistened Clean-Wipes™ clean even the dirtiest parts. Non-woven cloths are moistened with a blend of pure, reagent-grade 70% isopropyl alcohol and 30% reagent-grade deionized water or 100% pure reagent-grade deionized water. They are ideal for wiping optical parts, delicate glassware, electrodes, cuvettes, microscopes, or lenses. Wipes are also available dry, with no solution. This permits using any liquid by simply adding eight fluid ounces to the wipe canister. Instantly clean metals, plastics, glass, rubber, and epoxies. Use for cleaning electronics, computer screens, instruments, probes, glassware, syringes, pipettes, cameras, and lab counters. Wipes are designed for all applications in environmentally sensitive areas.

### Lint-free

Very strong, nonwoven cloth is soft and lint-free. Constructed of cellulose and polyester, it will not scratch surfaces. Wipe material is 90% biodegradable. Meets all lab and production requirements for cleanliness, softness, absorbency, and strength. Long-lasting wipes never fall apart like paper towels. Individually dispensed wipes are handy and ready for instant use. Unique opening allows wipes to virtually glide out when pulled. Reclosable bench top container assures a clean wipe every time. Snap-on sealed top eliminates contamination from dust or dirt. Each canister is provided in shrink-wrap or a sealed bag to maintain cleanliness for use in clean rooms. Wipes are 6 x 9 inches and packaged 100 per polyethylene canister.



Description	Cat. No.	Price
VWR® Pre-moistened Alcohol/DI Clean-Wipes™ 70% reagent-grade isopropyl alcohol and 30% reagent-grade deionized water	21910-110	\$26.41
VWR® Pre-moistened DI Clean-Wipes™ 100% pure reagent-grade deionized water	21910-111	\$14.23
VWR® Dry Clean-Wipes™ User adds any solution	21910-009	\$11.14



## VWR® Optik-Wipes™

One swipe makes eye glasses sparkle. Designed specifically for wiping goggles, lenses, eyeglasses, gauge windows, plastic glasses, fume hood windows, optical parts, and microscopes/magnifiers. Clean smudges, dirt, dust, and the static that attracts them. Works equally well with glass and plastic. Pre-moistened cloths easily remove oil, grease, and lint.

### Won't rip apart

Nonwoven cloth is pre-moistened with a unique formulation and is soft and lint-free. Constructed of cellulose and polyester, it will not scratch surfaces or fall apart. Wipe material is 90% biodegradable. Individually dispensed wipe is handy and ready for instant use. Each canister is provided in shrink-wrapped for use in clean rooms. Reclosable container assures a clean wipe every time and eliminates contamination from dust or dirt. Microfiber cloth to polish lenses is included. Individual pop-up 6 x 9 inches wipes are packaged 100 per polyethylene canister.

Description	Cat. No.	Price
VWR® Optik-Wipes™	23609-168	\$16.97

## VWR® Certified Cheesecloth Wipes

### Reagent-grade quality

New wipes are certified to be 100% pure cotton of reagent-grade quality and purity. They meet all lab requirements for cleanliness, softness, absorbency, and strength. Cheesecloth Wipes absorb 6 times their own weight of both solvents and aqueous solutions. They never scratch surfaces or fall apart.

### Clean any optical grade surface

Use them to wipe cuvettes and microscopes, clean cameras, and dry delicate glassware, syringes, pipettes, and pH electrodes. Because they are inert to even harsh solvents, they are ideal as a filtering material. Certified Cheesecloth Wipes meet cleanliness specifications of USP (United States Pharmacopoeia) and Federal Specification CCC-G-101c. Individually dispensed wipes eliminate time-consuming cutting of bolts of cloth and the dust, dirt, and waste associated with handling difficult-to-store rolls.



Description	Cat. No.	Price
VWR® Certified Cheesecloth Wipes Brilliant white, 9-inch-square pad (8-ply) unfolds to approximately 18 x 36 inches, 60/dispenser box	21910-105	\$46.11
VWR® Certified Cheesecloth Mini-Wipes Brilliant white, 4-inch-square pad (8-ply) unfolds to approximately 7 x 14 inches, 200/box	21910-107	\$36.33
VWR® Certified Cheesecloth Bolt 100-yard bolt, 36 inches wide	46610-054	\$131.30



## VWR® Dust'it™ Blower

Powerful bulb duster forcibly blows away dust, lint, and dirt. It provides high-pressure, pinpoint jets of air exactly where desired. Varying the squeeze provides for controlled delivery. One-way inlet valve at the top stops air/dust from being drawn through the tip. Non-conductive plastic sleeve-tip prevents scratches and permits cleaning optical lenses, slides, circuit boards, and cuvettes. It's ideal for delicate, difficult-to-clean, and inaccessible equipment. Dust'it™ provides the best environmentally safe solution. Size: 2¼ diameter x 5 inches. Weight: 2 ounces.

Description	Cat. No.	Price
VWR® Dust'it™ Blower	36934-142	\$10.28



## VWR® Knife Set

Fine precision cutting tools for the lab are provided by this high-quality knife set. Ultra-micro to heavy-duty cutting edges are perfect for corks, paraffin, plant samples, and rubber tubing. Exceptionally sharp knives are ideal for delicate, close-tolerance, accurate cutting needs.

### High-grade steel construction

Blades are made of the highest-grade steel and are ground to razor sharpness for precision cutting. Features include positive-holding blade lock, non-slip ergonomic handles, and a perfect weight for balance.

### Over 45 blades

Comes complete with 8 different handles, 47 sharp blades, and an aluminum-oxide, wet/dry sharpening stone. Set is packed in a handy plastic carrying-storage case with magnets to keep blades in place.

Description	Cat. No.	Price
VWR® Knife Set	36394-000	\$77.57

## VWR® Micro Spatulas, 4-pack

### Micro Spatulas—perfect for handling extremely small samples with ease

Use spatulas to dispense/transfer expensive chemicals, place particulate matter in weighing containers, apply micro amounts of adhesive for tacking down specimens, and mix small granular samples.

### Four sizes

Use with balances, microscopes, and weighing boats. Flat-ended, steel blades have widths of 0.004 to 0.04 inches (0.1 mm, 0.3 mm, 0.5 mm, and 1.0 mm). Handles are color-coded for easy size identification. Overall length is 2½ inches (63.5 mm).



Description	Cat. No.	Price
VWR® Micro Spatulas, 4-pack	57951-010	\$36.56

## VWR® Microprobes, 6-pack

### Six scientific shapes for manipulating micro work

Microprobes are ideal for lab applications—positioning samples under a microscope, dissecting, inspecting, soldering, gluing, and all micro-manipulation in the lab.

### Hundreds of uses

Probes are excellent for hooking small springs, packing columns, cleaning miniature parts, and soldering boards (solder will not stick to probes). Precision-ground, highly polished, hardened, and tempered stainless-steel instruments are designed for quality-control and experimental requirements. The tips are hand-honed to needle sharpness. Handles are non-slip and ergonomically designed. Probe length is 6 inches. Six different shapes are supplied in a handy carrying case.



Description	Cat. No.	Price
VWR® Microprobes, 6-pack	25939-958	\$69.64





## VWR® Ultra-Clean™ Supremium Aluminum Foil

Premium Ultra-Clean™ pure aluminum foil is manufactured specifically for the lab with added strength and puncture resistance. Highly versatile material can withstand extreme heat and cold. Ultra-Clean™ aluminum foil purity helps maintain the integrity of samples. The rolls achieve the lowest moisture-vapor transfer rate of all wrapping materials. The carton has a metal tear-off bar for ease in cutting to size. Unique box flaps prevent the roll from leaving the box.

### Individual sheets require no cutting

AL-Pop-Ups™ are individual sheets of foil. Timesaving one-at-a-time single sheet pop-up requires no cutting or tearing. Sheets are ideal for covering flasks, beakers, and petri dishes.

Cat. No.	Type	Dimensions	Thickness	Unit package	Case quantity	Price
89107-724	roll	12 inches x 25 feet	regular	each	12 each	\$7.96
89107-726	roll	12 inches x 75 feet	regular	each	12 each	\$20.39
89107-728	roll	12 inches x 200 feet	regular	each	12 each	\$48.76
89107-730	roll	18 inches x 25 feet	heavy-duty	each	12 each	\$14.84
89107-732	roll	18 inches x 50 feet	heavy-duty	each	12 each	\$28.32
89107-734	roll	18 inches x 25 feet	extra heavy-duty	each	12 each	\$22.13
89107-736	pop-ups	9 inches x 10¾ inches (200 sheets)	regular	each	12 each	\$41.65

## VWR® Clear Plastic Lab Wrap

### Tight seal

Wrap is designed specifically for the lab with low-tangle properties to insure that it doesn't ball up when handled. It also has high-cling properties to enable wrapping a beaker, flask, or petri dish with an extraordinary tight seal that stays in place. The clarity of the film allows you to see through it. The distinctive proprietary formulation yields ultra-clean film to ensure sample purity and eliminate contamination. It is made of 100% polyethylene.

The carton has a metal tear-off bar for ease in achieving the exact size needed. The carton also has unique flaps which prevents the roll from leaving the box. Plastic wrap Size: 12 inches wide by 100 feet long.



Description	Cat. No.	Price
VWR® Clear Plastic Lab Wrap	46610-056	\$13.22



## VWR® Original Labtool™

Fits in your pocket and provides 14 tools at-the-ready. This compact, folding multi-tool was specifically designed for today's needs. Double lock safety system helps protect against accidental injury. Provides for hundreds of laboratory and plant requirements—use the file to score or break glass tubing, the opener for chemical bottles, the saw to reduce cork stoppers, the knife to cut tubing, and much more. Has pliers/gripper, wire cutter, inches/millimeter ruler, knife, file, nut driver, large/medium/small flat head screwdrivers, Phillips™ screwdriver, bottle/can opener, wood saw, and serrated blade. Constructed of stainless-steel for years of heavy-duty use. Measures just 4 inches long when closed. Weight: 10 ounces.

Description	Cat. No.	Price
VWR® Original Labtool™	61161-376	\$106.99

## VWR® Labtool II™

Stainless-steel Labtool II™ with aluminum handle is the ideal device to help with lab needs. Fourteen tools provide for hundreds of laboratory and plant requirements—use the opener for chemical bottles, the saw to reduce cork stoppers, the knife to cut tubing, and much more. Supplied: pliers/gripper, wire stripper, wire cutter, ruler, small knife, large knife, serrated knife, punch, flat head screwdriver, Phillips™ screwdriver, bottle opener, needle, saw, and serrated stripper. Pocket size unit measures just 3½ inches when closed, Weight: 7 ounces.

Description	Cat. No.	Price
VWR® Labtool II™	21800-056	\$37.64



## VWR® Mini-Labtool™ with Key-Chain

Stainless-steel Mini-Labtool™ with aluminum handle is 13 tools in 1. Complete with pliers/gripper, wire stripper, wire cutter, knife, flat head screwdriver, Phillips™ screwdriver, scissors, file, saw, bottle opener, can opener, and key-chain. Unit measures just 2½ inches when closed, Weight: 3 ounces.

Description	Cat. No.	Price
VWR® Mini-Labtool™ with Key-Chain	21800-058	\$22.59



## VWR® Ultrasonic Automatic Measuring Meter

Simply point and shoot to measure distance, area, and volume. Designed specifically for easy and intuitive use. After one minute, you'll never again look at the instructions. LCD displays exactly which measurement is being made. One-key operation automatically performs length, area, or volume calculations. Audible beep confirms each measurement. Three distance memories and one calculation memory are maintained even when the unit is off. Memory permits computing areas and volumes from stored measurements. Calculator function permits addition/subtraction of readings.

Range is 2 feet (0.61 meters) to 50 feet (15.24 meters). Resolution is 0.1 feet and 0.01 meters with accuracy of 1% ±1 digit. Instantly converts meters to feet or vice versa with the push of a key. Utilizes the newest-generation, high-precision ultrasonic sensor. Designed for indoor/outdoor use. Automatically and accurately compensates for temperature from 32 to 104°F (0 to 40°C). Supplied complete 1-year battery. Size: 5½ x 2⅝ x 1⅞. Weight: 5½ ounces.

Description	Cat. No.	Price
VWR® Ultrasonic Automatic Measuring Meter	37000-412	\$64.70



## VWR® Laser Pointer

Perfect pocket laser pointer for slide presentations, detailed scientific discussions, microscope projections, field studies, wall charts, and lectures. Provides a brilliant red light at the highly visible 630–680 nm wavelength with a beam diameter of 3.5 mm. Laser Class IIIA has an output power of 5 mW and a range of over 300 feet. Two batteries provide months of intermittent use or 2 hours of continuous use. Size: ½-inch diameter x 5½ inches. Weight: 1⅜ ounces. Supplied: batteries and pocket clip.

Description	Cat. No.	Price
VWR® Laser Pointer	62344-942	\$86.90



## VWR® Laser Key-Chain

Pointer's brilliant red beam works equally well in daylight and dark. Laser is designed specifically for slide presentations, wall charts, and field use. Beam is at the highly visible 650 nm wavelength with diameter of 3.5 mm. Output is 4 mW with a range of 400 feet. Key-chain makes it easy to carry. Supplied lithium battery powers unit for a year of intermittent use. Size: 2½ x 1 x ¼ inches. Weight: ½ ounce.

Description	Cat. No.	Price
VWR® Key-Chain Laser	46610-058	\$14.13



## VWR® Key-Chain Micro-Laser Pointer

Laser is perfect for slide presentations, wall charts, and lectures. Provides a brilliant red light at the highly visible 650 nm wavelength with a beam diameter of 3.5 mm. Power Class III laser has an output power of 4 mW and a range of 300 feet.

Three silver-oxide batteries provide months of intermittent use or 2 hours of continuous use. Switch is momentary on/off. Size: ⅝-inch diameter x 2⅜ inches. Weight: less than one ounce. Supplied complete with batteries and key-chain.

Description	Cat. No.	Price
VWR® Key-Chain Micro-Laser Pointer	62379-521	\$41.20

## VWR® Flexible-Arm™ Light

### Moves in all directions

Flexible-Arm™ places light exactly where needed. It's ideal for inspection, quality control, electronics, and sample examination. Fingertip bar raises, lowers, and pivots the perfectly balanced lamp wherever desired. It moves 360 degrees in three dimensions. The arm smoothly articulates at three points. Spring counterbalance permits smooth and fluid movement with superior stability. Stylish design is geared specifically for the lab. It is engineered with durable metal construction for years of heavy use. The shade is compact and vented, has rolled edges, and a safety-glass cover with a UV filter for eye protection.

### Natural daylight

Designed specifically to reduce distortion, increase contrast, and give visual clarity up to 40% greater than typical lamps. It is ideal for viewing samples, photographs, PC boards, and reading. It brings out the finest details and renders colors accurately. Beam closely resembles daylight for correct color detection. The natural light is virtually glare-free.

### Perfect task lamp

Supplied with 7-pound, 7-inch diameter metal base for the bench. In addition, it comes with clamping unit for positioning vertically or horizontally to the top or side of any edge. Supplied: white reflector and 35 watt bright halogen white light. Unit Weight: 8 pounds. UL listed, 115 VAC.



Description	Cat. No.	Price
VWR® Flexible-Arm Natural-Light™ Light extended arm length 20"	<b>23609-166</b>	<b>\$66.16</b>
VWR® Flexible-Arm Natural-Light™ Light extended arm length 31"	<b>23609-162</b>	<b>\$81.36</b>



## VWR® 2X Magnifier Lamp

Magnifier Lamp is the ideal tool to view objects at two times magnification in bright light, with high-contrast and a sharply defined focus. Designed specifically for lab and plant applications requiring precise work. Useful in inspection, electronics, quality control, sample examination, and biological analysis.

### Magnifies large area

Large viewing area (4 x 2½ inches) is easy on the eyes. Highly polished optical glass 2X lens provides a crisp and distinct image with vivid enhancement of surface details. Sliding shutter cover protects lens from dust and scratches when not in use.

### Bright light makes examination easy

Supplied with a 60-watt incandescent bright bulb to light the exact area to be viewed. Brilliant light beam closely resembles daylight for optimal color detection and clarity. Convenient front handle provides fingertip control to raise, lower, and pivot the magnifier wherever desired. Extension is 31 inches. Clamps vertically or horizontally to the top or side of any edge. UL- and CSA-listed.

Description	Cat. No.	Price
VWR® 2X Magnifier Lamp	<b>37000-410</b>	<b>\$79.42</b>



## VWR® Hands-Free™ Fold-up Magnifiers

Hands-Free™ Magnifiers allow two-handed examination of objects. They provide a sharp, crisp, distinct image with vivid enhancement of details. Some sizes provide battery-powered brilliant illumination for precision work (batteries supplied).

### Magnifiers have perfect focus with zero distortion

Designed specifically for use in quality control, labs, food, electronics, manufacturing, and universities. White ruler markings in both inches and millimeters on the lower panel assist in making measurements. All-glass optics assure perfect focus with zero distortion. Magnifiers fold twice for compact storage.

Cat. No.	Magnification	Lens Diameter	Lighted	Price
62379-535	2.5 X	4 $\frac{3}{8}$ inches	YES	\$66.33
62379-537	2.5 X	3 $\frac{1}{2}$ inches	YES	\$59.71
62379-541	3.5 X	2 inches	NO	\$46.44
62379-543	5.0 X	1 $\frac{1}{4}$ inches	NO	\$48.11
62379-545	7.0 X	$\frac{7}{8}$ inches	NO	\$33.99
62379-547	10.0 X	$\frac{1}{2}$ inches	YES	\$33.99



## VWR® Illuminated Microscope

Pocket Microscope magnifies view. An indispensable tool for anyone who needs to see things at high magnification in bright light, with true color, high contrast, and a sharply defined focus. Handheld unit is perfect for inspection, quality control, field use, electronics, metal analysis, clinical observation, cloth/paper examination, and plant studies. Adjustable light source directs the bright bulb onto the exact area to be examined. An adjustable focus control knob produces a rock-solid view.

### Rugged microscopes

Case is chemical- and shock-resistant ABS plastic. Zoom microscope comes with snap-on microscope slide holder accessory. Supplied: batteries and a vinyl carrying case (model 36934-111 only). Pocket-sized units measure 5 $\frac{1}{2}$  x 1 $\frac{1}{2}$  x  $\frac{7}{8}$  inches and weigh only 3 ounces.

Description	Cat. No.	Price
VWR® Illuminated Microscope 30X	36934-111	\$70.51
VWR® Illuminated Microscope Zoom (60X to 100X with snap-on slide holder)	36934-113	\$48.48



## VWR® Illuminated Magnifier

Powerful lighted magnifiers provide perfect-focus, highly-defined view of surface details and illuminate uniformly. Units feature state-of-the-art LED lamps and provide bright, even light.

Superior LED lamp-life is nearly 20 times that of conventional incandescent illumination and virtually eliminates bulb replacement. Lamps low-power consumption and high-efficiency also improves battery life and performance. Supplied: replaceable batteries.

Magnification	Cat. No.	Price
VWR® Illuminated Magnifier 2X with 4X spot (large size, 2 $\frac{3}{4}$ x 2 $\frac{3}{4}$ inches window)	36934-115	\$33.32
VWR® Illuminated Dual Magnifier 3X with 10X (medium size, 1 $\frac{1}{4}$ x 1 $\frac{3}{4}$ inch window)	36934-117	\$25.15
VWR® Magnifier with adjustable focus 8X (small size, 1 inch diameter, not illuminated)	36934-119	\$19.05



## VWR® Lab Label Maker™

Quickly and easily make labels for chemicals, bottles, shelves, and equipment. Self-adhesive colored tape sticks powerfully to any surface including glass, plastic, metal, rubber, or wood. Raised white letters on 3/8-inch (9mm) wide tape are readable from 8 feet. Operation is easy: dial a letter, squeeze the handle, and when finished pull down black lever in the front of the unit to cut the tape. Easy-Peel™ perforation allows the label backing to be removed quickly and efficiently.

### Low cost permits a label maker at every workstation

Lab Label Tape™, available in multiple colors, allows for color coding labels for specific requirements. Label tape can be unloaded and reloaded in less than 30 seconds. No batteries needed, unit is always ready to use. Supplied: two rolls of tape, blue and red.

Description	Tape Color	Tape Size	Tape Quantity	Cat. No.	Price
VWR® Lab Label Maker™	Red & Blue	3/8" x 118"	2 rolls	<b>89094-696</b>	<b>\$16.80</b>
VWR® Lab Label Tape™	Black	3/8" x 118"	4/ pack	<b>89094-698</b>	<b>\$10.46</b>
VWR® Lab Label Tape™	Red	3/8" x 118"	4/ pack	<b>89094-700</b>	<b>\$10.46</b>
VWR® Lab Label Tape™	Blue	3/8" x 118"	4/ pack	<b>89094-702</b>	<b>\$10.46</b>
VWR® Lab Label Tape™	Green	3/8" x 118"	4/ pack	<b>89094-704</b>	<b>\$10.46</b>



## VWR® Write-On™ Aluminum Tags

Permanently engrave your warnings, messages, instructions, or sample number on these aluminum metal tags. Write on them with an ordinary ballpoint pen. Features a soft center that takes messages on both sides.

### Use in any environment

Extremely durable and suited for use in hot, cold, and moist environments. Handy size of 3 1/8 x 1 1/8 inches makes it ideal for tagging valves, tubing, samples, and cylinders. Package includes 48 tags with wires.

Description	Cat. No.	Price
VWR® Write-On™ Aluminum Tags	<b>36419-213</b>	<b>\$41.74</b>

## VWR® Anti-Static Static-Away™ Brush



Anti-Static Static-Away™ Brush eliminates harmful static. Eliminates the possibility that static will damage sensitive lab work, affect balance results, or harm microchip-driven instruments.

### Power to take the ZAP out of static

Anti-Static Static-Away™ Brush dissipates static while whisking away harmful dust, lint, and dirt from your work environment. New design blends natural hair and synthetic conductive fibers that simply remove static as it cleans. Because it won't scratch critical surfaces, it's ideal for cleaning film, slides, optics, cuvettes, balance pans, microscopes, electronics, and computer monitors. It has a conductive composite handle.

### Maintain accurate readings

Use the compact brush to clean electronic balances and avoid pan weight variances caused by static. Long handle brushes allow access to difficult places and eliminates the possibility of a hand touching. Weight: 1/2 ounce.

Description	Brush Size	Handle Size	Cat. No.	Price
VWR® Anti-Static Static-Away™ Brush	2 1/2-inch	1 1/2-inch	<b>15551-016</b>	<b>\$29.31</b>
VWR® Anti-Static Static-Away™ Brush	1-inch	5-inch	<b>89094-716</b>	<b>\$18.92</b>
VWR® Anti-Static Static-Away™ Brush	2-inch	5-inch	<b>89094-718</b>	<b>\$19.95</b>
VWR® Anti-Static Static-Away™ Brush	3-inch	6-inch	<b>89094-720</b>	<b>\$21.02</b>

## VWR® Slide Holders/Cabinet

### Store microscope slides with ease, speed, efficiency

Organize and classify your slides for instant reference and fingertip-fast retrieval. Use the index-card Microscope Slide Holders to sort, classify, or arrange slides in any order. Fingers never touch the slide.

### Adapt to any file system

Cards may be added, removed, or changed for fast updating and filing—insert a new card anywhere. You will never outgrow this system. Adapts instantly to your slide ID system (numbers, letters, dates, names, or color coding). Visible, four-position tabs provide always-in-sight indexing. Ruled data lines are keyed to numbered slots and allow complete slide identification, plus your comments.

### Protect vital specimens from contamination

The durable holder is 3 x 5-inch cardboard fitted with a protective plastic frame. It ensures safe, clean, scratchproof, and secure protection for your specimens. Slides never touch. One hundred percent compatible with any and all makes of slides. Each slide holder card accepts four slides of 75 x 25 millimeters or 3 x 1-inch size of any thickness.



Description	Cat. No.	Price
VWR® Slide Holders, 12-pack	48457-107	\$22.18
VWR® Slide Holder Cabinet, 1 Drawer Steel cabinet stores 100 slide holders, a total of 400 slides. Dimensions: 5½ x 6½ x 16¼ inches.	48457-129	\$81.12
VWR® Slide Holder Cabinet, 2 Drawer Steel cabinet stores 200 slide holders, a total of 800 slides. Dimensions: 5½ x 12½ x 16¼ inches.	89030-198	\$105.67



## VWR® Glassware Rescuer™

### Rescue glassware using diamonds

Save your glassware, recover beakers, and preserve your flasks with this handy industrial diamond file. Instead of tossing glassware because of a chip, now you can rescue it. Half round/half flat shape smooths sharp and jagged edges.

### Never discard chipped glassware again

Pays for itself in 30 days by making your glassware safe for use. Also may be used to score glass tubing for breaking. No-slip grip handle is easy to hold. File diameter is ¼ inch, file length 4 inches, overall length 8 inches.

Description	Cat. No.	Price
VWR® Glassware Rescuer™	62344-924	\$50.99



## VWR® Permanent Marking Pen Assortment

Produce precise lines of 0.3-mm width. Perfect marking pens for lab samples, microscope slides, photographic slides, glass and plastic beakers, and plastic sample bags. Writes on all surfaces including glass, film, wood, plastic, metal, rubber, and porcelain. Unique stainless-steel long leg allows precise writing in a limited space. Instant writing, long storage time, and dry-out prevention are assured by an airtight ring seal cap.

Permanent ink dries in a split second and is waterproof and fade proof. Colors are opaque black, vivid red, blue, and green. Thinnest permanent line ever developed is sharp, precise, and clear.

Cat. No.	Color & Quantity	Size	Price
52877-810	6 black, 2 red, 2 blue, 2 green	0.3mm	\$27.02
52877-842	Black/ 6 pack	0.3mm	\$22.11
52877-864	Red/ 6 pack	0.3mm	\$16.91
52877-886	Blue/ 6 pack	0.3mm	\$16.01
52877-900	Green/ 6 pack	0.3mm	\$16.01

## VWR® Scientific Technical Pen Assortment

Record results in lab notebooks, fill in charts, draw graphs, mark recording paper, and produce diagrams. Pen's unique, long leg lays flat against rulers and flexible curves for accurate alignment. This precision pen is perfectly balanced to feel good in your hand. Instant writing, long storage time, and dry-out prevention are ensured by an airtight ring seal in the cap. Pen responds the moment it is touched to paper.

### Long lasting, no bleeding

Smooth-flowing, fade-proof ink is a patented formulation. Instant-drying ink eliminates smearing and bleeding. Extra-large ink reservoir assures half-mile write out. Colors are ultra-black (opaque black for making superb photocopies), vivid red, blue, and green.

### Narrow 0.2 mm lines

Perfect and precise lines are drawn at first stroke with the long-legged, highly polished stainless-steel point tube. Durable wear-free plastic tip glides smoothly across a page. Tip stays sharp—won't mush up. Narrow line is sharp, precise, clear, and constant. Line sizes are 0.2 mm and 0.4 mm. Order an assortment and a pack of your favorite color.



Cat. No.	Size	Color	# In Pack	Price
52899-109	0.2 and 0.4 mm	Red, Blue, Green, Black	12	\$27.28
52899-131	0.2 mm	Black	6	\$20.25
52899-164	0.4 mm	Black	6	\$20.25
52899-197	0.2 mm	Red	6	\$20.18
52899-222	0.4 mm	Red	6	\$20.25
52899-255	0.2 mm	Blue	6	\$20.25
52899-288	0.4 mm	Blue	6	\$13.69
52899-313	0.2 mm	Green	6	\$20.25
52899-346	0.4 mm	Green	6	\$20.25





## VWR® Aluminum Fold-Up Cart

Sturdy aluminum alloy construction permits this lightweight cart to be used for loads up to 330 pounds. Move your heaviest lab chemicals, drums, and cases of glassware with this cart.

### Adjustable height

Folds up for easy storage to a compact briefcase size. Handle adjusts to two heights (27 inches and 33 inches) to accommodate all users. Telescoping platform extends for longer loads from 18 inches to 25½ inches. Width is 16 inches.

Supplied bungee cords keep items from slipping. Large, solid rubber wheels make this cart extremely easy to push. Rubber bumpers on all four corners protect walls from accidental nicks. Weight: 18 pounds.

Description	Cat. No.	Price
VWR® Aluminum Fold-Up Cart	62344-932	\$213.09



## VWR® Aluminum Fold-Up Hand Truck

Move cartons, chemicals, and gas cylinders easily. Aluminum alloy construction allows this lightweight unit (only 15 pounds) to move loads up to 220 pounds. Supplied bungee cords hold materials firmly in place.

### Store in a drawer

Folds to a compact size for easy storage. Height of handle is 28 inches (lower position) and 42 inches (extended). Flip-down platform size: 14 inches wide by 9½ inches. Big, smooth-rolling, solid-rubber, 6½ inch diameter tires make it easy to move heavy loads.

Description	Cat. No.	Price
VWR® Aluminum Fold-Up Hand Truck	62344-934	\$152.99



## VWR® Mini-Dolly Folding Cart

This is the ideal platform cart to move chemicals, carboys, computer paper, filing boxes, and scientific equipment. Eliminates lifting required by high-shelf carts. Cart ingeniously folds to a compact size for easy storage.

### Easy rolling

Weighs only 20 pounds, but handles up to 265 pounds. Large nonskid platform (17¾ x 25½ inches) holds materials firmly. Plastic guard on four sides protects your walls. Supplied elastic cords with quick hooks secure the load.

Super-glide wheels swivel for complete maneuverability. Easy-grip handle is 34½ inches long and ensures a firm hold. Constructed of high-impact ABS plastic and chrome-plated steel for durability.

Description	Cat. No.	Price
VWR® Mini-Dolly Folding Cart	61161-316	\$138.71

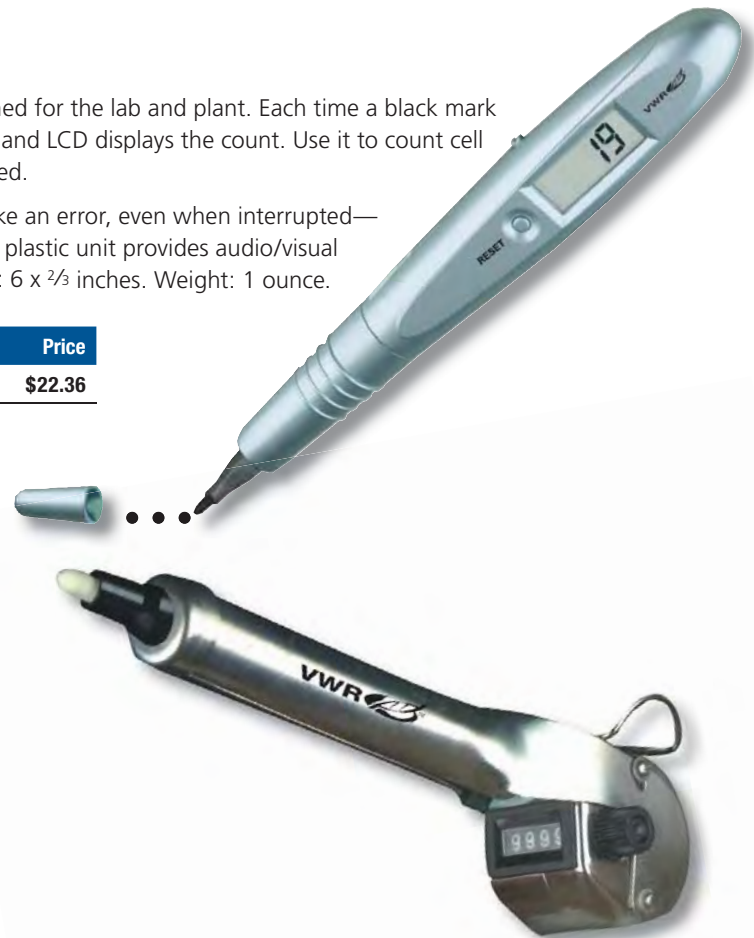


## VWR® Counter-Pen™

Counter-Pen™ is a combination marker and digital counter designed for the lab and plant. Each time a black mark is made with the felt-tipped pen, it automatically sounds a beep, and LCD displays the count. Use it to count cell growths on petri dishes, inventory parts, and tally samples received.

Touch, sound, and count occur simultaneously. Impossible to make an error, even when interrupted—marks hold your place and counter holds your total. Durable ABS plastic unit provides audio/visual counts to 99999 with reset key, on/off switch, and pen cap. Size: 6 x 2/3 inches. Weight: 1 ounce.

Description	Cat. No.	Price
VWR® Counter-Pen™	21800-060	\$22.36



## VWR® Hand Tally Counter

Easy-to-use, four-digit unit records up to 9999. Numbers instantly and automatically return to zero with a twist of the reset knob. Hundreds of lab applications provide opportunities to: count blood samples, take surveys, inventory items, total drops of liquid, receive lab samples, and tally biomedical events.

### Long-lasting metal construction

For ease in viewing, large white numerals appear on a black background. A protective window seals out dust, dirt, and humidity. The rugged, heavy-duty chrome-finished case has a hinged finger loop for a sure grip. Finger pressure on the key produces an audible click that signals the count. This feature provides the assurance of a registered count without looking at the counter.

Metal construction is designed for reliability, long life, and hard use. Unique engineering provides a smooth, tactile feel. Compact unit is ideal for carrying in the pocket. Size: 1 3/4-inch diameter by 1 1/8-inch width. Weight: 3 ounces.

Description	Cat. No.	Price
VWR® Hand Tally Counter	23609-102	\$31.56

## VWR® Touch-Counter™

### Cut counting time in half

Touch-Counter™ is a combination marker and digit counter designed for the lab and plant. Each time an item is touched, it is automatically marked by the felt-tip pen and counted by the built-in digital counter. Use it to count sample bottles, cell growths, and to receive/inventory/ship supplies.

### One-touch operation saves time

Operation is simple: Touch an item and it is marked and counted simultaneously. Impossible to make an error, even when interrupted. Marks hold your place and counter holds your total. Durable aluminum unit has an audible click, zero reset knob, and a 9999-digit counter. Touch-Counter™ is 7 x 2 x 1 1/2 inches in length. Weight: 6 ounces. Spring-actuated ink reservoir valve seals felt tip when not in use and prevents ink dry-out.

Description	Cat. No.	Price
VWR® Touch-Counter™ Supplied with black disposable pen	23609-103	\$102.78
VWR® Disposable 5-Pen Pack™ Package contains one each: black, red, blue, green, and yellow	23609-158	\$56.15



## VWR® Digital Counter

Lightweight counter reads to 99,999. Water-resistant, O-ring-sealed and shock-resistant ABS plastic case is ideal for lab and plant use. Tactile click keys provide positive action.

### Completely electronic

Easy-to-read LCD and solid-state construction eliminate gear and miscount problems associated with mechanical counters. Fail-safe design eliminates accidentally resetting. Size: 2<sup>5</sup>/<sub>8</sub> x 1<sup>2</sup>/<sub>3</sub> x 5/<sub>16</sub> inches. Weight: 1 ounce. Battery powers unit for over 2 years of continuous operation.

Description	Cat. No.	Price
VWR® Digital Counter	77776-674	\$24.01

## VWR® Digital Key-Chain Counter with Wrist Strap

Key-Chain/Wrist-Strap/Carabiner Digital Counter is designed for ease-of-use and fail-safe counting. Features include display count to 99,999, two year constant use battery, water-resistant O-ring-sealed with shock-resistant ABS plastic case, key click for count confirmation, and recessed no-accident reset.

Eliminates gear and miscount problems associated with mechanical counters. Diameter is 1<sup>7</sup>/<sub>8</sub> inches by 1/2 inches. Weight: less than an ounce.



Description	Cat. No.	Price
VWR® Digital Key-Chain Counter with Wrist Strap	21800-062	\$15.51

## VWR® Metric Converter

### Change lab measurements to U.S. or metric in an instant with this handy workhorse

Metric Converter provides fast and accurate answers for 126 types of metric conversions. Simply enter a number, press an arrow, and read the exact metric or U.S. answer with decimal point in place. Converts length, area, volume, weight, liquid, energy, and temperature. Also performs English (Imperial) conversions and has all routine calculator functions.

### Easy-to-use, easy-to-read

Raised and oversized keys make the metric converter a joy to use, even for large fingers. It has an automatic, flip-open, LCD cover that converts to a bench top stand, rubberized side grips for easy handling, and a bright and vivid 1/2-inch-high eight-digit LCD that is easy to read. The converter is ultra-lightweight, just 2 ounces, and has a super-compact size, only 3 x 3<sup>3</sup>/<sub>4</sub> x 1/2 inches—this makes it perfect for carrying in a pocket.



Description	Cat. No.	Price
VWR® Metric Converter	40500-011	\$75.55



## VWR® Compact-Sized Metric Converter

Compact-Sized Metric Converter replaces cumbersome factor handbooks. Unit provides fast and accurate answers for 126 types of metric conversions. Simply enter a number, press an arrow, and read the exact metric or U.S. answer with decimal point in place.

### Performs conversion functions

Converts length, area, volume, weight, liquid, energy, and temperature. Also performs English (Imperial) conversions and has all routine calculator functions.

### Easy to use, easy to read

Raised keys, large digits (½-inch-high), and a bright, vivid eight-digit LCD make the metric converter easy to read and use. Supplied: 1.5 V alkaline battery and protective case. Ultra-lightweight, just 1 ounce, and super-compact size, only 4¼ x ½ x 2½ inches, make it perfect for carrying anywhere.

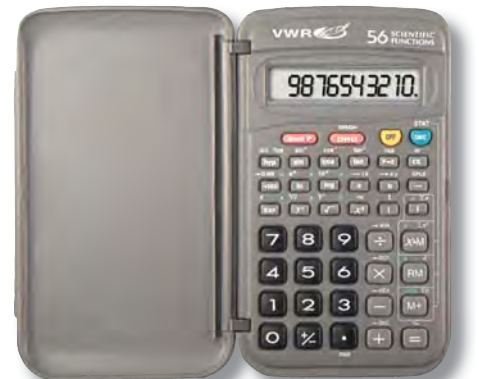
Description	Cat. No.	Price
VWR® Compact-Sized Metric Converter	15551-122	\$32.41

## VWR® Scientific Calculator

Scientific calculator performs 99% of the lab's routine and not-so-routine calculations. It does all arithmetic operations (add, subtract, multiply, divide). It performs over 50 functions, including science, math, common/hyperbolic trigonometric, logs/natural logs, powers, roots, reciprocals, factorials, percentages, hexadecimals, random number generation, and degree/decimal conversion. Statistical features include standard deviation, mean, sum of squares, sum of data, and much more. Three-key memory and Forever-Memory store data when the unit is off. Automatic power-down function conserves battery life. Answers are shown on a 10-digit numerical, 2-digit exponent display.

### Easy-to-carry pocket size, easy-to-use raised keys

Handy pocket size makes it ideal to carry with you. Rugged case protects the unit. Raised keys make the calculator perfect for oversized fingers. Large, bright, vivid display is easy to read. Complete with instructions. Size: 5 x 3 x ½ inches. Weight: 1½ ounces.



Description	Cat. No.	Price
VWR® Scientific Calculator	15551-112	\$25.92

## VWR® Big Digit Solar-Powered Calculator

### Environmentally friendly, never again buy a battery

Large digit calculator is solar-powered, saves batteries, and it's ideally priced. Half-inch-high digits allow effortless readings.

Over-sized keys and jumbo digits make it easy on the fingers and eyes. Performs all arithmetic operations (add, subtract, multiply, divide), and features memory, percent, and floating decimal point. Supplied: attractive, protective case design. Size: 4¼ x 2¾ x ¼ inches. Weight: 2 ounces.



Description	Cat. No.	Price
VWR® Big Digit Solar-Powered Calculator	15551-118	\$14.59



## VWR® 12-Digit Computer

### Calculator displays the entire answer to 12 digits

Twelve digits end rounding errors and confusing scientific notation. Oversized, raised keys and jumbo digits (1/2-inch-high) make it easy on the fingers and eyes. Simple to use. Functions include arithmetic calculation, percent, memory, floating decimal, ratios, and grand totals. Tough ABS plastic case is drop-proof and chemical-resistant. Supplied: solar panel and silver-oxide battery. Size: 4 1/2 x 2 1/2 x 5/8 inches. Weight: 3 ounces.

Description	Cat. No.	Price
VWR® 12-Digit Computer	23609-180	\$58.11

## VWR® Solar Desktop Calculator

Solar Desktop unit is a big-digit desktop calculator which features arithmetic functions (add, subtract, multiply, divide), percent, 3-key memory, square root, and floating decimal point.

Solar-powered unit can be read in any light. Performs chain calculations. Digit height is 3/4 inches. Large 8- or 12-digit display is angled to eliminate reflected glare. Jumbo digital display allows effortless readings even with your glasses off. Oversized keys and perfect spacing are easy on the fingers. Tough ABS plastic case is ideal for rough lab use. Feet protect the unit from spills. Supplied complete with instructions. Size: 4 1/2 x 6 1/2 x 3/16 inches. Weight: 4 ounces.



Description	Cat. No.	Price
VWR® Solar Desktop Calculator (8-digits)	23609-236	\$17.97
VWR® Solar Desktop Calculator The 12-digit unit permits calculating numbers as large as 999,999,999,999 and as small as .000000000001 without confusing scientific power notations or symbols.	46610-052	\$22.16

## VWR® Clipboard/Calculator with Traceable® Timer

### Perfect for keeping notes

Clip securely holds forms, notes, and schedules. Attached pen is always at the ready. Hole in back allows unit to be hung on the wall. Eight-digit, solar-powered calculator performs 99% of the lab's routine calculations. Functions are: add, subtract, multiply, divide, chain calculation, constants, powers, reciprocal values, percent calculations, square root, and memory.

### Two models

Supplied as two different models, one with a quartz-crystal accurate Traceable® timer, and the other with a retractable tape measure (60 inches and 150 centimeters). Timer model may be programmed in the countdown mode, in one-second increments, from 100 hours to 1 second. At zero, a loud-beeping alarm sounds for 60 seconds or may be silenced manually. In the stopwatch mode, it times from 1 second to 99 hours. Also has a time-out feature in both up and down counting. Big-digit, 1/3-inch-high display is easy to read. Operation is quick and intuitive (no need to ever read the instructions). To assure accuracy an individually serial-numbered Traceable® Certificate is provided for timing. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Size: 14 x 9 inches. Weight: 11 ounces.



Description	Cat. No.	Price
VWR® Clipboard with Calculator	89038-238	\$51.37
VWR® Clipboard with Calculator and Traceable® Timer	89094-776	\$51.37

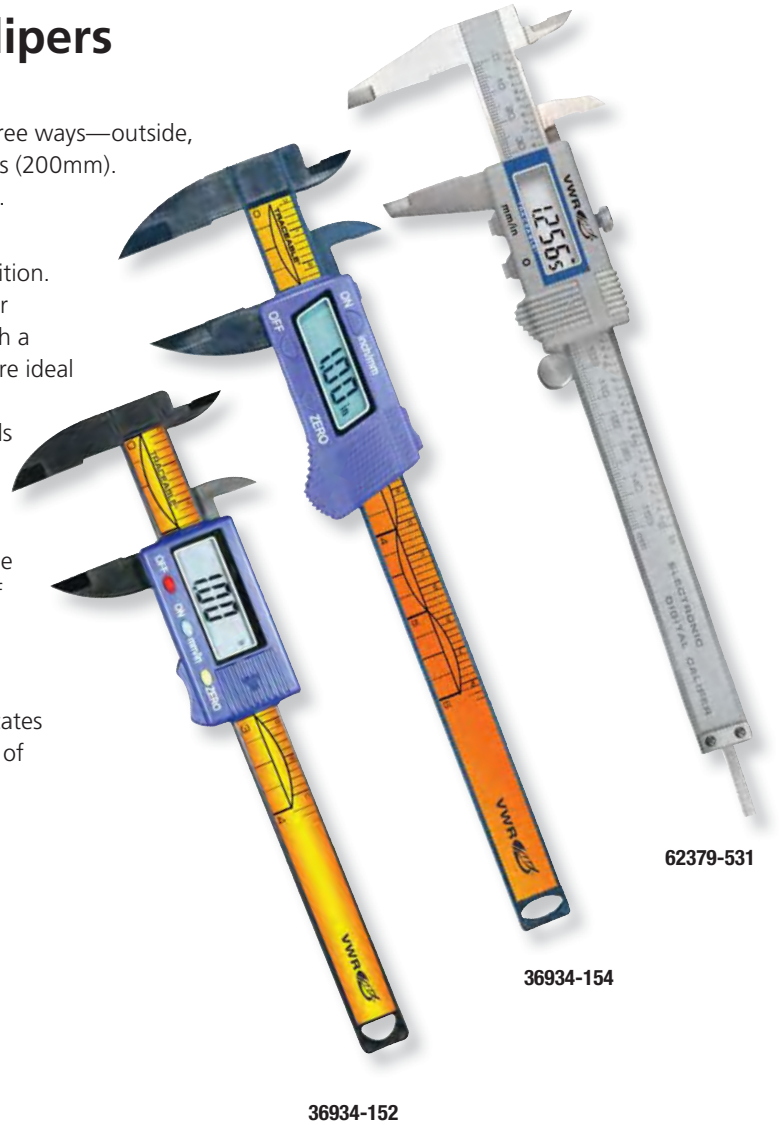
## VWR® Traceable® Digital Calipers

### Designed for the lab

Traceable® Calipers make length/diameter measurements three ways—outside, inside, and depth. Digital display models measure to 8-inches (200mm). At the touch of a key units switch from inches to millimeters.

### Zeroes at any point

Zero key instantly sets unit to zero when jaws are at any position. This permits, without calculations, setting a Floating Zero™ or reference point to read “greater than or less than results with a minus sign displayed”. Ergonomic design precision calipers are ideal for measuring the outside diameter of stoppers, the inside diameter of tubing, and the depth of vials. Depth bar extends from the end of caliper. Fine adjustment thumb roller improves reading speeds and position-holding lock screw sets length. Easy-to-read jumbo digital display is 1/3-inch-high. No lubrication is ever required on the ultra-smooth slide bar. Runs on the supplied battery for 10,000 hours. Made of durable acid-resistant, hardened stainless-steel or strong, composite carbon fiber. To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).



62379-531

36934-154

36934-152

Cat. No.	62379-531	12777-830	36934-152	36934-154
Price	\$101.40	\$138.87	\$29.67	\$33.02
Material	Stainless-steel		Carbon Fiber	
Measuring range	6"/150mm	8"/200mm	4"/100mm	6"/150mm
Resolution	0.0005 inch/0.01mm		0.01 inch/0.1mm	
Accuracy	±0.001 inch or ±0.03mm.		±0.01 inch or ±0.2mm.	
Depth Bar	Yes		No	
Thumb roller/Lock screw	Yes		No	
Non-metallic/non-conductive	No		Yes	
Traceable® Certificate	Yes		Yes	
Dimensions	9 x 3 inches	11 x 3 inches	7 x 2½ inches	9½ x 3 inches
Weight	5 ounces	6 ounces	1 ounce	2 ounces

## VWR® Traceable® SpatulaBalance™

Unique spatula both scoops material and instantly displays weight. Balance with digital display is located in the easy-grip handle. The weighing range is 0 to 300.0 grams and 0 to 10.580 ounces. Readability is 0.1 gram and 0.005 ounce. Level position repeatability is 0.1 gram and accuracy is  $\pm 0.2g$  or 0.25%. Three position soft-touch keys in the handle tares (sets to zero), hold (freezes the display), and changes grams/ounces. LCD indicates low battery.

### Scoop design eliminates spilling

Markings on see-through scoop are graduated from 5 to 30 milliliters in 5 milliliter increments for weighing liquids with ease. Scoop detaches from balance for effortless dishwasher-safe cleaning. Chemical/corrosion-resistant ABS plastic construction allows transferring materials without sticking. SpatulaBalance™ transfers and weighs crystals, granulated material, solids, liquids, precipitates, and chemicals.

To assure accuracy an individually serial-numbered Traceable® Certificate is provided from an ISO 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology). Supplied: two batteries for over a year of usage. Scoop holds 32 milliliters/1.1 fluid ounces and scoop volume is 32 cubic centimeters/1.95 cubic inches. Size: 9 x 2 x 1 inches. Weight: 3 ounces.

Description	Cat. No.	Price
VWR® Traceable® SpatulaBalance™	89047-296	\$40.04



# Traceable® Certificates

All Traceable® products are provided with a Traceable® Calibration Certificate from an ISO 17025 calibration laboratory. Most certificates are accredited by the American Association for Laboratory Accreditation (A2LA).

Traceable® Certificate indicates the product is traceable to standards provided by the National Institute of Standards and Technology (NIST), a U.S. Government agency within the Commerce Department. Traceable® Certificates comply with ANSI/NCSL Z540-1.

A2LA is widely recognized internationally through bilateral and multilateral agreements and through its participation in the International Laboratory Accreditation (ILAC) and Multilateral Recognition Arrangement (MRA). Traceable® Certificates are internationally recognized by accreditation agencies and governments in over 75 countries throughout the world.

A Traceable® Certificate includes all of the information to meet today's stringent accreditation demands, CLIA requirements, government specifications, and ISO 9000 certifications.

This quality certification provides users with the assurance that they receive only the finest and most reliable products. It is worldwide recognition of superb quality for innovative electronic products. ISO 9001 Certification insures that every product is checked and rechecked to provide for absolutely the highest quality. In addition, ISO 9001, in contrast to other ISO 9000 certifications, requires that the design phase of every product be included in the quality requirements. The 9001 certification provides that quality is designed into every product beginning with the first drawing. ISO 9001 certification is through DNV (Det Norske Veritas).

Accredited by A2LA (The American Association for Laboratory Accreditation) dedicated to "one test accepted everywhere, one accreditation accepted everywhere". A2LA is your assurance of **internationally recognized technical laboratory competence**. A2LA is recognized by ILAC and MRA.

Displays **catalog number** for complete product reference

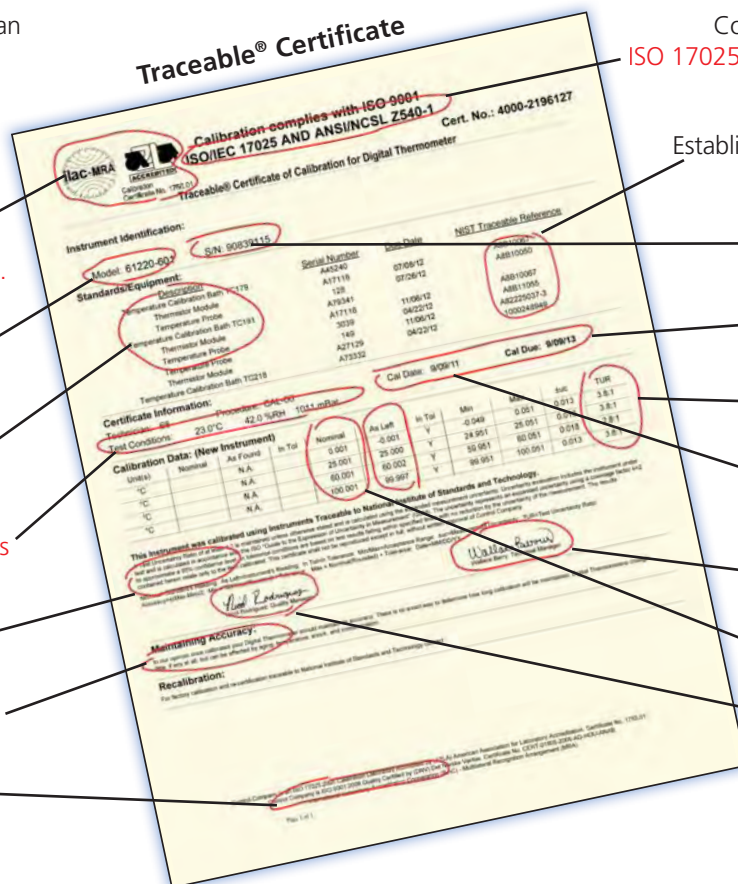
Calls out the **test equipment** used for calibration

Reports **environmental conditions** at the time of measurement

Spells out **test uncertainty ratio** and **confidence level**

Lists **specific conditions** that may affect product accuracy

Supplied from an **ISO 9001** quality facility certified by DNV



Conforms to universally recognized **ISO 17025 Standard**, a requirement for any ISO 9000 quality facility

Establishes with reference numbers the **unbroken chain** of traceability

Displays **serial number** for total product identification

Indicates **Calibration Due Date**

Spells out **test uncertainty ratio** and **confidence level**

Specifies **Calibration Date** when the unit was tested

Signed by the **Technical Manager**

Provides **measurement test results** for your specific unit

Signed by the **Quality Manager**