

Pinnacle series



New Advanced Bench Meters

Multi-parameter Meters

Portable Meters

Advanced Portable Meters

Electrodes

Solutions

Accessories

Electrochemistry Products 2006



Scientific Instruments

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CAUTION

Electrochemistry products are intended for laboratory use only. The well-being of individuals using these products is dependent on the proper operation and maintenance of the products, as well as safe laboratory practice. Please refer to the owner's guide for details regarding the proper use and operation of Electrochemistry products.

Welcome to Pinnacle Electrochemistry

Quality, Value and Performance.

In March of 2003 Nova Analytics Corporation of Woburn, Mass acquired the Corning Electrochemistry product line, including all the pH, I.S.E., Dissolved Oxygen and Conductivity products. We continued to supply these products under the Corning Electrochemistry brand for the last three years.

Following a large investment in new Meter models and technology we have re-named the product line PINNACLE ELECTROCHEMISTRY.

We always strive to provide the best possible service and products, and I am sure when you see the new meters you will agree that Pinnacle Electrochemistry is the new standard in bench and handheld meters.

NEW Pinnacle Series

The new Pinnacle series from Nova Analytics continues to provide the most feature-packed meters applicable to any lab application, ranging from education to the most demanding research or production needs. The Pinnacle series features the next generation of "user-friendly" software, expanded digital displays, and improved icon graphics. Each unit is equipped with an improved electrode arm; suitable for either left or right hand use.

To order the Chek-Mite or any of our products, contact your preferred Nova distributor. Technical assistance and product information are also available. Just call us at **1-866-664-6682**. We look forward to hearing from you.

Chek-Mite Testers

Our Chek-Mite testers offer you a whole new level of performance in an inexpensive line of hand-held instruments. Ideal for pH, conductivity, and temperature measurements in the field, production facilities, or lab, these testers feature waterproof durability and automatic capabilities. Check out these extreme performers.



Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.

Our Model 425 and Model 530P pH bench meters provide high quality, reliability, and digital accuracy for basic pH measurement needs.

Model 425 Scholar™ pH Bench Meter

Designed for ease of use, the Model 425 Scholar™ pH meter has a simple three button interface to make measurements quick and easy. Because automatic temperature compensation (ATC) capability is standard, accurate pH determination is ensured—whether you're a student just learning how to measure pH, or a graduate student with specific and highly accurate measurement needs. An optional low maintenance, gel-filled electrode is ideal for multiple-user environments.

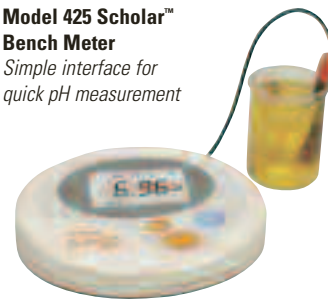
- Large digital display provides simultaneous output of pH and temperature.
- Optional three-in-one electrode offers pH and temperature measurement capabilities in one probe.
- AC/DC adapter (included) or battery powered (six AA).

Pinnacle Model 530P Basic pH Meter

The Model 530P is a basic yet highly reliable meter. This meter provides accurate, efficient digital measurements for applications performed in educational institutions or routine laboratories. Simplified, operation and automatic temperature compensation reduce special training required to operate this pH meter.

- Basic...reliable
- 2 point calibration
- Flexible electrode arm
- Percent slope readout
- Automatic temperature compensation
- pH/mV and temperature modes

Model 425 Scholar™ Bench Meter
Simple interface for quick pH measurement



Pinnacle Model 530P

Special Features

Easy interface provides highly accurate and reliable pH and temperature measurements.

Model	Catalog No.	Description
425	475894	Model 425 Digital pH Meter Only (120V)
	475895	Model 425 Digital pH Meter with Refillable Electrode (120V)
	475898	Model 425 Digital pH Meter with Gel-Filled Electrode (120V)
	475896	Model 425 Digital pH Meter Only (230V)
	475897	Model 425 Digital pH Meter with Refillable Electrode (230V)
	475899	Model 425 Digital pH Meter with Gel-Filled Electrode (230V)
Contents	Meter with refillable electrode includes electrode, catalog number 476044, storage bottle and buffer kit. Meter with gel-filled electrode includes electrode, catalog number 476043, storage bottle and buffer kit.	
530P	475730	Model 530P pH meter w/arm, universal
	475731	Model 530P pH meter w/arm and pH electrode (476436P), universal

Refer to page 3 for meter specifications.

pH Bench Meters

pH/Ion Bench Meters



Pinnacle Model 540P

Pinnacle Model 540P General Purpose pH Meter

The Model 540P Meter features advanced software for completely automatic performance to make your applications easier than ever before. This all purpose meter is rugged enough to service even the busiest academic, research and development laboratories while offering acutely accurate readings required by medical and pharmaceutical applications. This meter has streamlined applications with expanded specifications, such as automatic buffer recognition and calibration, automatic temperature compensation, self-diagnostics testing, and slope readout.

- Flexible electrode arm
- RS-232 output
- Auto endpoint
- Display includes graphic icons
- Nonvolatile memory retains calibration data during a power loss

diagnostic test checks the meter upon power up, and nonvolatile memory will retain calibration and measurement data during power loss.

- Flexible electrode arm
- Select display resolution 0.001/0.01/0.1
- Display includes graphic icons
- 3-point pH calibration
- Percent slope readout
- RS-232 data output

Pinnacle Model 555P pH/Ion Meter

The Model 555P Meter features two independent channels with a split display and dual electrode reference. Our pH/Ion meter uses advanced software and technology to ensure accurate, reliable, and precise results. Upon power up, a diagnostic test starts the application. Sophisticated microprocessor technology then runs complete measurements and analysis, providing numerous options for specifications. Automatic read and endpoint sensing reduce keypad interaction, and a multiparameter LCD provides readings, user prompts, and help messages. To help laboratories conform to regulatory requirements, our special "Good Laboratory Practices" data provides calibration data, sample readings, and experimental conditions at the time of measurement.

- Flexible electrode arm
- 5-point pH and concentration calibration
- Multi-lingual menu system
- RS-232 communication
- 4500-point internal data logging



Pinnacle Model 545P

Pinnacle Model 545P Advanced/Research pH Meter

Sophisticated software and microcomputer technology make the Model 545P Meter our most flexible meter. Special user functions, such as the data logger, selectable high/low alarm in pH mode and timer, among others for GLP, suit this meter for high volume quality control laboratories to research facilities developing the latest scientific discoveries. Automatic and manual temperature compensations give the operator more control, and automatic read and end-point sensing combine to reduce the number of keypad operations required for calibration and sample measurement. A self-



Pinnacle Model 555P

Model	Catalog No.	Description
540P	475734	Model 540P pH meter w/arm, universal
	475735	Model 540P pH meter w/arm and pH electrode (476436P), universal
545P	475771	Model 545P pH meter with arm, universal
	475772	Model 545P pH meter with arm and pH electrode (476436P), universal
Contents	Meter with electrode, arm, kit includes 3-in-1 electrode, catalog number 476436P	
555P	475738	Model 555P pH/Ion Meter with arm, universal
	475739	Model 555P pH/Ion Meter with arm and High Performance pH Electrode (476146), universal
Contents	The meter with electrode, arm, kit features the High-Performance electrode, catalog number 476146.	

Specifications

Model	425	530P	540P	545P	555P
Measurement Modes/Ranges					
pH	0 to 14.00	-2.00 to 19.99	-2.00 to 19.99	-2.000 to 19.999	-2.00 to 19.99
Absolute mV		0 to +/- 1999	0+/- 999.9 & 0 +/-1999	0+/- 999.9 & 0 +/-1999	0+/- 999.9 & 0 +/-1999
Temperature °C	0 to 100	-5.0 to 105.0	-5.0 to 105.0	-5.0 to 105.0	-5.0 to 105.0
Activity/concentration					0.00 to 1999 (4 ranges)
Resolution and Relative Accuracy *					
pH	0.01 & +/-0.02	0.01 & +/-0.01	0.001& +/-0.007	0.001 & +/-0.005	0.001 & +/-0.004
Absolute mV		1mV	0.5 mV	0.3 mV	0.2 mV
Temperature °C	1 & +/- 1	0.1 & +/- 0.1	0.1 & +/- 0.1	0.1 +/- 0.1	0.1, +/- 0.1
Activity/concentration					1 / 0.1 / 0.01 / 0.001
Temperature Compensation					
Manual	Set at 25°C	•	•	•	•
Automatic	0 to 100 °C	-5.0 to 105.0	-5.0 to 105.0	-5.0 to 105.0 ° C	-5.0 to 105.0 ° C
Simultaneous Display	•	•	•	•	•
Adjustable ISO point	Auto to pH 7	•	•	•	•
Calibration Options					
Auto CAL w/Auto Buffer Recognition	2- point	1-, 2-point	1-, 2-, 3-point	1-, 2-, 3-point	1-, 2-, 3-point & 1 to 7 ion
Selectable Buffer Table	3 Buffer Sets	16 Buffer Sets	16 Buffer Sets	16 Buffer Sets	16 Buffer Sets
User Defined Calibration		2-point	2-point	2-point	2-point
Last Calibration, Time/Date		•	•	•	•
Slope Readout	%	mv/pH or %	mv/pH or %	mv/pH or %	mv/pH or %
Read Format					
Manual "Freeze" Function	•	•	•	•	•
Auto Endpoint	•	•	•	•	•
Other Functions					
Time and date			•	•	•
Self diagnostic test	•	•	•	•	•
Data Log/Memory/# of readings				800 Data Sets	4500 Data Sets
Methods storage		•	•	•	•
ID/sample number (GLP)				•	•
Electrode identification					•
Measure Inputs/Outputs					
Electrode input	Single, BNC	Single, BNC	Single, BNC	Single, BNC	Dual BNC
Temperature probe input	Single, RCA Phone	Banana plug	Banana plug	Banana plug	Banana plug
Reference input		2 mm Pin	2 mm Pin	2 mm Pin	2 mm Pin
Display					
Custom Multi-Character LCD	pH and temp	pH or mV and Temp	pH or mV and Temp	pH or mV and Temp	pH, mV or Conc and Temp
Graphic "icon" error codes	•	•	•	•	•
"ATC" indicator	•	•	•	•	•
Cal. value reminder indication		•	•	•	•
Esthetics/Casework					
Splash resistant housing	•	•	•	•	•
Tactile and audible keypads	•	•	•	•	•
Chemical resistant	•	•	•	•	•
Data Output/Input					
Service Input for Firmware Updates		•	•	•	•
RS-232C output			•	•	•
Selectable baud rate			1200, 2400, 4800, 9600	1200, 2400, 4800, 9600	1200, 2400, 4800, 9600
Regulatory Compliance					
	UL/CSA/FCC/CE	ISO9001 / CSA / FCC / UL	ISO9001 / CSA / FCC / UL	ISO9001 / CSA / FCC / UL	ISO9001 / CSA / FCC / UL
IP rating **		IP43	IP43	IP43	IP43
Power Requirements	Power Supply	Power Supply or Battery	Power Supply or Battery	Power Supply or Battery	Power Supply or Battery
Electrode Catalog Number	476043 or 476044	476436P	476436P	476436P	476146
Warranty					
Meter	1 Year	3 Year	3 Year	3 Year	3 Year
Electrode	1 Year	1 Year	1 Year	1 Year	1 Year
Catalog Numbers					
Meter only (120V)	475894	475730	475734	475771	475738
Meter w/electrode (120V)	475895 (with refillable electrode) 475988 (with gel-filled electrode)	475731	475735	475772	475739

Note: 3-in-1 electrode is a combinatin electrode with integral Automatic Temperature Compensation Sensor.

* All accuracy specifications are subject to an additional ±LSD.

** IP ratings refer to Ingress Protection (IP). IP65 is dust-tight and splash-proof.

Optional Accessories

Description	Catalog No.
400 Series Electrode Arm	478109
3-in-1 Refillable pH Electrode	476436
3-in-1 Refillable pH Electrode	476436P*
3-in-1 Gel-Filled pH Electrode	476466
3-in-1 Gel-Filled pH Electrode	476466P*
Scholar Refillable Electrode	476044
Scholar Gel-Filled Electrode	476043
General Purpose Gel-Filled Electrode	476326
High-Performance Combo Electrode	476146

*For Pinnacle series only.

Description	Catalog No.
500 Series Arm	478930
Buffer Sachets Multi-Pack	473676
Printer, Dot Matrix (440/445)	470493
Printer Paper (5 rolls/Pack)	470136
Pinnacle Series Electrode Stand	478930P*
Pinnacle Power Supply	477939
Temperature Electrode	477968
Temperature Electrode for Pinnacle	477968P*

For Technical Information, Call 1-866-664-6682 • www.pinnacle-ph.com

Visit www.clarksonlab.com/vNova.pdf for Nova Analytics Corning Electrochemistry Price List

pH/ISFET Meters

Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.



Model 314iP

Portable: Sealed case, ISFET technology

Leveraging the latest pH sensing technology, our unique ion sensitive field effect transistor (ISFET) pH meters offer many measurement choices that have not been available in traditional pH meters. Available with glass-free probes, these meters are ideal for a variety of applications, including food production and quality control.

Model 314iP

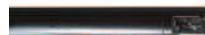
This portable meter has a sealed case that is dust and waterproof to IP67, making it well suited for production environments. With features such as automatic temperature compensation (ATC), auto endpoint, three-point calibration, RS-232C output, data logging, and auto-off, the 314iP meter offers peace of mind with its accurate and highly reliable measurements.

- UL/CSA/CE approved
- Three-year meter warranty; one-year sensor warranty

Special Features

ISFET Probes

Pinnacle offers an ISFET probe that is compatible with all of the Pinnacle meters. The probe contains no glass and is durable and easy to clean.



476504 Standard ISFET Probe

- General purpose, well suited for all other applications.

Model	Catalog No.	Description
314iP	475890	Model 314iP Portable ISFET pH Meter Only
	475891	Model 314iP Portable ISFET pH Meter with ISFET Probe & Buffer Sachets

Specifications

Model	314iP pH/Temp
Catalog No. - Meter Only	475876
Catalog No. Complete	475871
Specifications	
pH Range	2.00 to 19.00 -2.000 to 19.999
pH Resolution	0.001 / 0.01 (Selectable)
pH Accuracy	+/-0.005+/-0.005 @ 15°C to 35°C
mV Range	0+/- 999.9 & 0 +/-1999
mV Resolution	0.1 / 1
mV Accuracy	+/-0.3 @ 15°C to 35°C
ATC Range (°C)	-5.0 to 105.0
Resolution (°C)	0.1
Accuracy (°C)	+/- 0.1
Manual Temp. Comp.	•
Auto Temp. Comp.	•
Concentration Range (mg/L)	
Concentration Resolution	
Features	
Display	LCD
pH Cal Points	1-, 2-, 3 point
ISE Cal Points	
Auto Endpoint	•
Manual Freeze	•
Last Cal Recall	•
Cal Reminder	•
Stability Indicator	•
Low Battery Indicator	•
Electrode Condition Indicator	•
Slope Efficiency Readout	•
Clock (Real Time)	•
Baud Rate Selection	1200, 2400, 4800, 9600
Date/Time Function	•
Data Logger	800 Data Sets
Electrode Input	BNC
Temperature Input	Banana Plug
Pin Reference Input	2 mm Pin
RS232 Output	•
Battery Life (approx hours)	3000
Auto Off	•
IP Rating	IP 66 / IP67
Regulatory Compliance	ISO9001 / CSA / FCC / UL
Meter Warranty	3 Year
Electrode Warranty	1 Year
Dimensions	
Inches (HxWxD)	1.46 x 3.15 x 6.77
mm (HxWxD)	37 x 80 x 172
Weight	0.3 kg / 0.66 lbs
Electrodes	
Gel/Refillable	Gel

*All accuracy specifications are subject to an additional \pm LSD, due to possible digital rollover.

**IP Ratings refer to ingress protection (IP). IP66 is protected against a strong water jet. IP67 is dust-tight and waterproof to a depth of one meter for 30 minutes.

Optional Accessories

Description	Cat. No.	Use with Model
Buffer Sachets Multi-pack (32)	473676	All pH Meters
ISFET Electrode	476505P	314iP

Conductivity/pH Bench Meters



Pinnacle Model 541P

Pinnacle Model 541P Conductivity Meter

The Model 541P Conductivity Meter features advanced software and micro-processing that expand accuracy while simplifying operation. The meter runs a self-diagnostic test upon power up, logs data up to 800 readings, and will automatically recognize up to four preprogrammed calibration standards. This sophisticated meter has special user features such as angled graphic display, large tactile buttons, and RS-232 output jack to enhance the partnership between operator and device.

- Flexible electrode arm
- Automatic temperature compensation
- Adjustable total dissolved solids factor
- Display resolution 0.001/0.01/0.1
- Resistivity measurements

Special Features

476501 Carbon Conductivity Probe, 0–1000 mS
General purpose, suitable for most applications



476502 Glass Conductivity Probe, 0–500 µS
Designed for extremely low conductivity solutions such as pure water



476503 Glass Conductivity Probe, 0–500 mS
Ideal for higher conductivity solutions where aggressive solvents may attack a regular probe



Use 476501P for Pinnacle Conductivity Meters.

Model	Catalog No.	Description
541P	475742	Model 541P Conductivity meter w/arm, 120V
	475743	Model 541P Conductivity meter w/arm and Conductivity probe (476501P), 120V
	475745	Model 541P Conductivity meter w/arm, 230V, power supply not included
	475746	Model 541P Conductivity meter w/arm and Conductivity probe (476501P), 230V, power supply not included.
Contents	The Model 541P comes complete with probe 476501P, arm and selection of calibration sachets.	

Specifications

Model	M 541P
Measurement Modes/Ranges	
Temperature °C	-5.0 °C to 105
Conductivity	0.001 µS/cm to 500 mS
TDS (mg/l)	0.0 to 1999
Salinity (ppt)	0 to 42
Resistivity (Mohm)	0.000 to 1999
Resolution and Relative Accuracy	
Temperature	NTC 30 0.1 °C / +/- 0.1 °C PT1000 0.1 °C / +/- 0.3 °C
Conductivity (range dependent)	1 / 0.1 / 0.01 / 0.001 +/- 0.5 % +/- 1 LSD
TDS (mg/l)	1 / +/- 1
Salinity (ppt)	+/- 0.1 (5 to 25 °C) +/- 0.2 (25 to 30 °C)
Temperature Compensation	
Automatic	•
Simultaneous Display	•
Temperature Coefficients	Linear, NLF, Off (none)
Reference Temperature °C	20 °C or 25 °C
Calibration Options	
AutoCal in 0.1 M KCL Standard	•
Manual Calibration	•
Cell Constant	0.01(fixed) , 0.1, 0.25 to 2.5
Read Format	
Manual Freeze Function	•
Auto Endpoint	•
Other Functions	
Time and Date	•
Self-test Diagnostic Test	•
DataLog/Memory/# of readings	800 Data Sets
Measure Inputs/Outputs	
Electrode Input	DIN
Temp probe input	•
Display	
Custom Multi-Character LCD	µS, mS and temp
Graphic icon error codes	•
ATC indicator	•
Esthetics/Casework	
Splash resistant housing	•
Tactile Keypad	•
Chemical Resistant	•
Data Output/Input	
Service Interface for Firmware Updates	•
RS-232C Output	•
Selectable Baud Rate	1200, 2400, 4800, 9600
Regulatory Compliance	
	ISO9001 / CSA / FCC / UL
IP Rating	IP43
Power Requirements	
	Power Supply or Battery
Electrode Catalog Number	
	476501
Warranty	
Meter	3 Year
Electrode	1 Year
Catalog Numbers	
Meter Only (Multi 115V)	475742
Meter w/ Electrode (Multi 115V)	475743

* All accuracy specifications are subject to an additional ±LSD.

** IP ratings refer to Ingress Protection (IP). IP66 is protected against a strong water jet.

*** For older 400 & 500 Series models.

Optional Accessories

Description	Catalog No.
400 Series Arm	478109
Carbon Conductivity Probe, 0–1000 mS (541/542)	476501
Carbon Conductivity Probe, 0–1000 mS	476501P*
Glass Conductivity Probe, 0–500 µS (542)	476502
Glass Conductivity Probe, 0–500 mS (542)	476503
Conductivity Sachets (10), 12.88 mS	473737
Conductivity Sachets (10), 1413 µS	473738
500 Series Arm	478930
500 Series Arm	478930P*

*For Pinnacle series models.

Description	Catalog No.
Conductivity Sachets (10), 84 µS	473740
Conductivity Sachets (10), 80 mS	473741
Printer, Dot Matrix	470493
Flow-Thru Tube (542)	470499
400 Series Arm	478109
12.88 mS 500 ml	473623
1413 µS 500ml	473624

Chek-Mite Portable pH Testers

Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.



Chek-Mite pH-10
Measures pH

Our Chek-Mite pH testers provide a whole new level of performance in an inexpensive line of hand-held instruments. Featuring advanced microprocessor technology, Chek-Mite testers offer automatic calibration (to values of 4, 7, or 10.01) and options such as automatic temperature compensation (ATC), automatic endpoint, and BNC connection. Sealed components and casing are waterproof, and enable the tester to float when dropped in water. The pH-10, pH-15 and pH-20 offer replaceable electrode sensors, while the pH-25 has a built-in BNC connector so you can connect a standard lab electrode. This new line of testers comes with a six-month warranty.

Chek-Mite pH-15

This tester measures pH with automatic calibration. Manual endpoint also provides the capability to freeze the display once a reading has stabilized.

Chek-Mite pH-20

Similar to the Chek-Mite pH-15, this tester offers the added convenience of automatic temperature compensation (ATC) and automatic endpoint.

Chek-Mite pH-25

This tester provides pH measurement with automatic calibration, automatic endpoint, and a built-in BNC connector for taking readings with a standard lab electrode.

Chek-Mite DUO-60

This dual-purpose tester measures pH and conductivity. With automatic calibration, automatic endpoint, and automatic temperature compensation (ATC), the Chek-Mite DUO-60 tester offers high-level performance at a low price.

Chek-Mite pH-15
Measures pH with automatic calibration and read



Chek-Mite pH-10

This tester offers value and performance for pH measurement. This tester automatically recognizes buffer solutions 4, 7, and 10.01, and then calibrates on that value—no manual adjustments to make.

Special Features

The Chek-Mite line also includes inexpensive hand-held testers to measure conductivity (CD-30—see page 12); temperature (TMP-55—see page 14); total dissolved solids (TDS-35—see page 12).



Chek-Mite pH-20
Measures pH with automatic calibration, read, and ATC

Chek-Mite pH-25
Measures pH with automatic calibration, read, and BNC



Chek-Mite DUO-60
Measures pH with conductivity, automatic calibration, read, and ATC

Model	pH-10	pH-15	pH-20	pH-25	DUO-60
Catalog #	475660	475661	475662	475663	475670
Specifications					
Parameter	pH	pH	pH	pH	pH & Conductivity
Measured Units	pH	pH	pH	pH	pH & μ S
Range/Parameter #1	0 to 14	0 to 14	0 to 14	0 to 14	0 to 14 pH
Range/Parameter #2	N/A	N/A	N/A	N/A	0 to 1999 μ S
Resolution	0.01	0.01	0.01	0.01	0.01 pH/1 μ S
Accuracy	\pm 0.2 pH	0.04 pH	0.04 pH	0.04 pH	0.05 pH/2% μ S
Temp. Compensation	Set	Set	0 to 50°C	Set	0 to 50°C
Manual or Automatic	@ 25°C	@ 25°C	Auto	@ 25°C	2%/°C
Reference Temp.	N/A	N/A	N/A	N/A	25°C
Calibration Auto/Man	Auto	Auto	Auto	Auto	Auto
# of CAL Points	2 of 3	2 of 3	2 of 3	2 of 3	2 of 3
Method of Adjustment	Press Key	Press Key	Press Key	Press Key	Press Key
ISO Potential Point	7 pH	7 pH	7 pH	7 pH	7 pH
Measure (READ) Cycle	Direct w/ Freeze	Auto Endpoint	Auto Endpoint	Auto Endpoint	Auto Endpoint
Features					
Sensor Type	Combo	Combo	"3 in 1"	BNC Skt.	"3 in 1" + S/S Pins
Replaceable	Yes	Yes	Yes	—	Yes
Battery Life	Storage (i.e., Batteries in Place but Turned OFF) = 1000 Days: Use, Based upon Intermittent Daily Usage >100 hrs. Batteries Are Replaceable				
Auto OFF	After 8 Minutes, if No Key Is Pressed				
IP Rating	IP-66+ (Waterproof to Depth of 2 Inches (50 mm).				
Regulatory	CE Directives EN-55011 & EN-50082-1				
Warranty	6 Months				
Dimensions					
Size: (H x W x D)	9.0 (230 mm) x 1.75 (44 mm) x 1.25 (30 mm) Inches				
Weight:	Approximately 5 ozs. (115 gms)				

Optional Accessories

Description	Catalog No.
pH Electrode for Chek-Mite pH-10	473040
pH Electrode for Chek-Mite pH-15	473051
pH Electrode for Chek-Mite pH-20/Duo-60	473049
Conductivity Probe for Chek-Mite Duo-60	473041
Replacement Batteries (All Chek-Mites)	470530

Portable pH Meters

Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.



Model 313P
IP67 waterproof rating

Models 313P/314P/315P

This series of portable meters offers expanded benchtop features through patented polymer electrode technology, three-in-one gel-filled electrodes, and microprocessor design. Our exclusive design includes an ultrasonically sealed case and special electrode connectors to ensure an IP67 rating (dust-tight and waterproof to a depth of one meter). In addition, our 314P and 315P models allow you to set a calibration reminder interval, date and time, manual temperature compensation, and pH calibration points. Up to 800 endpoint results can also be stored. Model 315P also gives the user ISE capabilities.



Model 315P
Measures pH and ISE

Special Features

A variety of accessories for Model 313P/314P/315P further enhance their functionality.

Electrode Socket Covers

Exclusive electrode socket covers allow meters to be IP67 waterproof with any BNC electrode and/or temperature probe.

Note: three-in-one electrodes include pH/reference/temperature elements in one probe.

Model	M 313P pH/Temp	M 314P pH/Temp	M 315P pH/ISE/Temp
Catalog No. - Meter Only	475875	475876	475877
Catalog No. Complete	475870	475871	475872
Specifications			
pH Range	-2,000 to 19,999 2.00 to 19.00	2.00 to 19.00 -2,000 to 19,999	-2,000 to 19,999 2.00 to 19.00
pH Resolution	0.001 / 0.01 (Selectable)	0.001 / 0.01 (Selectable)	0.001 / 0.01 (Selectable)
pH Accuracy	+/-0.005 @ 15°C to 35°C	+/-0.005 @ 15°C to 35°C	+/-0.005 @ 15°C to 35°C
mV Range	0+/- 999.9 & 0 +/-1999	0+/- 999.9 & 0 +/-1999	0+/- 999.9 & 0 +/-1999
mV Resolution	0.1 / 1	0.1 / 1	0.1 / 1
mV Accuracy	+/-0.3 @ 15°C to 35°C	+/-0.3 @ 15°C to 35°C	+/-0.3 @ 15°C to 35°C
ATC Range (°C)	-5.0 to 105.0	-5.0 to 105.0	-5.0 to 105.0
Resolution (°C)	0.1	0.1	0.1
Accuracy (°C)	+/- 0.1	+/- 0.1	+/- 0.1
Manual Temp. Comp.		•	•
Auto Temp. Comp.	•	•	•
Concentration Range (mg/L)			0.00 to 1999 (4 ranges)
Concentration Resolution			1/0.1/0.001/0.001 (range dependent)
Features			
Display	LCD	LCD	LCD
pH Cal Points	1-, 2-, 3-point	1-, 2-, 3 point	1-, 2 point
ISE Cal Points			2-, 3 point
Auto Endpoint	•	•	•
Manual Freeze	•	•	•
Last Cal Recall	•	•	•
Cal Reminder		•	•
Stability Indicator	•	•	•
Low Battery Indicator	•	•	•
Electrode Condition Indicator	•	•	•
Slope Efficiency Readout	•	•	•
Clock (Real Time)		•	•
Baud Rate Selection		1200, 2400, 4800, 9600	1200, 2400, 4800, 9600
Date/Time Function		•	•
Data Logger		800 Data Sets	500 Data Sets
Electrode Input	BNC	BNC	BNC
Temperature Input	Banana Plug	Banana Plug	Banana Plug
Pin Reference Input	2 mm Pin	2 mm Pin	•
RS232 Output		•	•
Battery Life (approx hours)	3000	3000	3000
Auto Off		•	•
IP Rating	IP66 / IP67	IP 66 / IP67	IP 66 / IP67
Regulatory Compliance	ISO9001 / CSA / FCC / UL	ISO9001 / CSA / FCC / UL	ISO9001 / CSA / FCC / UL
Meter Warranty	3 Year	3 Year	3 Year
Electrode Warranty	1 Year	1 Year	1 Year
Dimensions			
Inches (HxWxD)	1.46 x 3.15 x 6.77	1.46 x 3.15 x 6.77	1.46 x 3.15 x 6.77
mm (HxWxD)	37 x 80 x 172	37 x 80 x 172	37 x 80 x 172
Weight			
	0.3 kg / 0.66 lbs	0.3 kg / 0.66 lbs	0.3 kg / 0.66 lbs
Electrodes			
	476466P/476436P	476466P/476436P	476466P/476436P
Gel/Refillable	Gel/Refillable	Gel/Refillable	Gel/Refillable

*All accuracy specifications are subject to an additional \pm LSD, due to possible digital rollover.

**IP Ratings refer to ingress protection (IP). IP66 is protected against a strong water jet. IP67 is dust-tight and waterproof to a depth of one (1) meter for 30 minutes.

***Optional cable required for RS-232C output.

Optional Accessories

Description	Catalog No.	Use with Model
Buffer Sachets Multi-Pack	473676	All pH Models
Meter Holder "Gator"	470444	313/314/315
Replacement Batteries (4)	470438	313/314/315
RS-232 Cable with Software	470445	314/315
RS-232 Cable with Software	470445P*	314P/315P

*For Pinnacle Series only.

Portable Conductivity/TDS Meters

Please see page 6 for bench conductivity meters.

NEW!

Chek-Mite CD-30

Dual-range conductivity with automatic endpoint



Nova offers a complete line of portable conductivity/TDS meters to meet your specific needs. All meters are encased in rugged, chemical- and water-resistant housings and have large, easy-view LCDs and one-touch button interfaces.

Chek-Mite CD-30

This portable tester features dual-range conductivity, automatic calibration, auto endpoint, and automatic temperature compensation (ATC). A sealed case and electrodes protect electronic components and enable the tester to float when dropped in the water.

Chek-Mite TDS-35

This meter reads total dissolved solids (TDS) in parts per million (ppm). With an easy-view display and TDS resolution of one ppm, this is an easy-to-use and accurate meter for TDS readings.



Model 316P

Precise conductivity and TDS readings with data log

Model 316P

This conductivity and TDS meter is micro-processor-controlled and has an IP67 rating for waterproof performance in depths of up to one meter. With auto endpoint, Good Laboratory Practices (GLP) information, data input capability (for reference temperature and solids factors), and data logging for up to ten values, this versatile meter simplifies data research. A rugged hard case helps protect and organize the meter and its accessories.

Special Features

Data logging for endpoint results is available on the Model 316P.

Model	CD-30	TDS-35	M 316P
Catalog No	475664	475665	475873
Specifications			
Conductivity Range	0 to 1999 uS/19.99 mS (Selectable)	(Autoranging)	0.001 uS to 500 mS -4 Ranges
Conductivity Resolution	1 uS/0.01mS (Selectable)		0 / 0.0 / 0.00 / 0.000 - range dependent
Conductivity Accuracy	+/- 2%		+/-0.5 % +/- 1 LSD
TDS Range (mg/l)		0 to 1999 ppm/15 ppt (Selectable)	0.0 to 1999
TDS Resolution		1 ppm/0.1 ppt (Selectable)	1 mg/L
TDS Accuracy		+/-2%	1 mg/L
Solids Factor		0.5	0.4 to 1.0
Salinity			0.0 to 42 ppt
Resistivity			0.000 to 1999 MOhm
ATC Range (°C)	0 to 50	0 to 50	-5.0 to 105
Reference Temperature (°C)	25	25	20 or 25
Temperature Coefficient	2%/°C	2%/°C	0.001 - 3.000%/°K, NLF, Off (none)
Cell Constants	Fixed	Fixed	0.01(fixed) , 0.1, 0.25 to 2.5
Features			
Display	LCD	LCD	LCD
Cal Points	1	1	1
Standards	84 uS / 1413 uS / 12.88 mS / 80mS		0.01 M KCL
Auto End Point	•	•	•
GLP Information			
Datalog			800
Electrode Input	Custom	Custom	Waterproof DIN
RS232 Output			•
Analog Output			•
Battery Life (approx hours)	>200	>200	3000
Auto Off	•	•	•
Regulatory Compliance	ISO9001/CE	ISO9001/CE	ISO9001 / CSA / FCC / UL
IP Rating	IP66	IP66	IP 66 / IP67
Meter Warranty	6 Mos	6 Mos	3 Years
Probe Warranty	6 Mos	6 Mos	1 Year
Dimensions			
Inches (HxWxD)	9.0 x 1.75 x 1.25	9.0 x 1.75 x 1.25	1.46 x 3.15 x 6.77
mm (HxWxD)	230 x 44 x 30	230 x 44 x 30	37 x 80 x 172
Weight (kg)	0.31 lb (115g)	0.31 lb (115g)	0.3 kg / 0.66 lbs
Probe	473041	473041	473041
Contents			
	All meters come with meter, probe, batteries, instructions		
Test Plug	•	•	
Solutions			
Wrist Strap	•	•	
Case			

*IP Ratings refer to ingress protection (IP). IP66 is protected against a strong water jet. IP67 is dust-tight and waterproof to a depth of one (1) meter for 30 minutes.

**Optional cable required for RS-232C output.

Optional Accessories

Description	Use with Model	Catalog No.
Conductivity Probe 6-Foot Cable	476620	316
Conductivity Probe 6-Foot Cable	476620P*	316P
Conductivity Probe 30-Foot Cable	476621	316
Conductivity Probe 30-Foot Cable	476621P*	316P
Conductivity/TDS Probe	473041	CD-30/TDS-35
Conductivity Sachet, 84 uS (10)	473740	
Conductivity Sachet, 1413 uS (10)	473738	
Conductivity Sachet, 12.88 mS (10)	473737	
Conductivity Sachet, 80 mS (10)	473741	
Meter Holder "Gator"	470444	316
Printer, Dot Matrix	470494	316
Replacement Batteries (4)	470438	316
Replacement Batteries	470530	CD-30/TDS-35

*For Pinnacle series only.

Portable Dissolved Oxygen Meters

Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.



Model 317P

Barometric pressure and salinity compensation, IP67

Pinnacle portable dissolved oxygen meters provide extremely accurate measurements so you can monitor water quality reliably and with ease. Our expanded line of portable meters utilizes state-of-the-art technology, durable materials, and intuitive features to provide lightweight tools that are convenient and easy to use.

Model 317P

This meter is microprocessor controlled to provide features such as auto endpoint, automatic temperature compensation (ATC), barometric pressure and salinity compensation, and data logging of up to ten endpoint values. The ultrasonically sealed housing is rated IP67, for dust-tight and waterproof performance at depths of up to one meter for 30 minutes.

Special Features

Powerful resolution and automatic compensation (for barometric pressure, salinity, and temperature) ensure extremely accurate readings.

Portable Temperature Meters

Please see page 25 for calibration buffers and other accessories.

Chek-Mite TMP-55

Readings in °C or °F; K-type thermocouple; compact design



All Nova portable temperature meters feature moisture- and chemical-resistant housings.

Chek-Mite TMP-55

This portable tester uses a K-type thermocouple to provide readings in °C or °F. With an IP rating of 66+, the Chek-Mite TMP-55 is waterproof to a depth of two inches.

Special Features

Expanded specifications (memory, °C or °F) in a portable and economical meter.

Model	317P
Catalog No.	475874
Contents	All meters come complete with meter, probe, membrane cap, fill solution, wrist strap, battery and instructions.
Specifications	
Range—ppm or mg/L	0 to 20.0
% Saturation	0 to 200
Resolution—ppm or mg/L	0.1
Accuracy—%	±1
Temp. Resolution (°C)	0.1
Temp. Accuracy (°C)	±0.5
ATC Range (°C)	0 to 40

Model	317P
Features	
Display	LCD
Auto Endpoint	•
Barometric Pressure Comp.	•
Salinity Comp.	•
Datalog	10
ISO 9001/CE	•
Electrode Input	DIN
RS-485/RS-232C Output*	•
Battery Life (Approx. Hrs.)	500
Auto Off	•
IP Rating	67
Meter Warranty	2 year
Electrode Warranty	1 year
Dimensions	
Inches (HxWxD)	7.75 x 3.25 x 1.75
mm (HxWxD)	200 x 85 x 45
Weight	1 lb. (0.45 kg)

*Optional cable required for RS-232C output.

Optional Accessories

Description	Catalog No.
D.O. Sensor 6-Foot Cable	476622
D.O. Sensor 6-Foot Cable	476622P*
D.O. Sensor 30-Foot Cable	476623
D.O. Sensor 30-Foot Cable	476623P*
Zero Oxygen Sachets (10)	473739
Meter Holder "Gator"	470444
D.O. Replacement Membrane Caps 3-Caps	473736
Printer, Dot Matrix	470494
Stainless Steel D.O. Probe Sinkers	470463
Replacement Batteries (4)	470438

*For Pinnacle series only.

Portable Temperature Meters

Model	TMP-55
Catalog No.	475669
Contents	All meters come complete with meter, general purpose probe, battery and instructions.
Specifications	
Range (°C)	-40 to 550 (-40 to 999°F)
Resolution (°C)	1
Accuracy (°C)	±2 (4°F)
Features	
Display	LCD
Low Battery Indicator	•
Hi/Lo Recall	
Probe Input	
Temperature Input	K-Type Thermocouple
Battery Life (Approx. Hrs.)	>200
Auto Off	•
ISO 9001/CE	•
Meter Warranty	2 Years
Probe Warranty	1 Year
Dimensions	
Inches (HxWxD)	9.0 x 1.75 x 1.25
mm (HxWxD)	230 x 44 x 30
Weight	0.31 lb. (115 g)

Optional Accessories

Description	Catalog No.	Use With Products
General Purpose Probe	473048	TMP-55
Replacement Battery	470530	TMP-55

High-Performance pH Electrodes

Please see page 25 for calibration buffers and other accessories.



Premium Glass Gel Electrode

Ideal for dirty or turbid samples



High-Performance Electrode

Rugged for variety of applications

Nova's patented ion barrier technology enables Ag/AgCl electrodes to respond quickly without having to use AgCl in the reference solution. These electrodes are tris compatible and can be used for tris buffers.

Our high-performance electrodes have been optimized for stability by reducing drift due to temperature changes. These electrodes have superior response time and accuracy.

Special Features

High-performance, symmetrical design electrode offers exceptional response time and accuracy, especially when temperature gradients exist between samples.



Specifications

Model	Premium Glass Gel Combo	High Performance
Catalog Number	476566	476146
Connector Types	BNC	BNC
ATC Connector		
Measuring		
pH range	0 to 14	0 to 14
Reference		
Internal Element	Silver Scavenger	Silamid (Ag+ Barrier)
Fill Solution	3 M KCL	3 M KCl
Junction Material	Open	Multiple Ceramic
Temperature		
Operational Range	0 to 100 °C	0 to 100 °C
Dimensions		
Length		
Overall	6.25" (158.8)	6.1" (155 mm)
Diameter		
Body/Tip	0.5" (12.7 mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)
Body Material	Glass	Glass
Fill Solution	477006	477006
Replaceable Junction	NA	NA
Applications	<ul style="list-style-type: none"> • Tris Buffers • Quick response to temperature changes • Dirty or turbid samples 	<ul style="list-style-type: none"> • Tris Buffers • Quick response to temperature changes • Rugged tip bulb
Warranty	1 Year	1 Year

Please see page 25 for calibration buffers and other accessories.

Glass Body Combination pH Electrodes



Spear Tip pH Electrode

Ideal for obtaining internal pH in semi-solid samples



Premium Rugged Bulb

Ideal for organic or aqueous samples

Pinnacle's patented ion barrier technology enables Ag/AgCl electrodes to respond quickly without having to use AgCl in the reference solution. Tris compatible, these

glass pH electrodes are chemical-resistant and a good choice for measurements of aqueous as well as non-aqueous solutions.

Special Features

The low profile premium rugged bulb electrode is well suited for measurements where depth of immersion is an issue, such as in soil samples.



Please see page 25 for calibration buffers and other accessories.

Pinnacle Epoxy Body Three-in-One



Three-in-One Refillable pH Electrode

Replaceable junction helps prevent clogging

The Pinnacle three-in-one electrodes measure pH, reference, and temperature with one electrode. Constructed of an epoxy material, these electrodes are durable for long-lasting performance. Automatic temperature compensation functions with 300, 400, 500 and Pinnacle series meters.

of an Ag/AgCl electrode without the use of AgCl in the reference solution. This tris-compatible electrode also features Pinnacle's patented replaceable junction for extended electrode life.

Three-in-One Gel-Filled pH Electrode

This electrode requires less maintenance than a refillable electrode, and costs less. It uses premium KCl gel and is tris compatible.

Three-in-One Refillable pH Electrode

This electrode features a patented ion barrier that produces the fast response

Three-in-One Gel-Filled pH Electrode

Designed for durability and ease of maintenance in aqueous sampling

Special Features

Pinnacle's patented replaceable junction (available for three-in-one refillable electrode) allows you to restore your electrode to like-new performance in minutes, and at a fraction of the cost of a new electrode. Because slow response times and unstable readings are most often caused by clogged or contaminated reference junctions, our replaceable junction can have dramatic impact on performance and cost savings.



Specifications

Model	Spear Tip pH Electrode	Premium Rugged Bulb
Catalog Number	476456	476296
Connector Types	BNC	BNC
ATC Connector		
Measuring		
pH range	0 to 14	0 to 14
Reference		
Internal Element	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)
Fill Solution	3 M KCL	3 M KCl
Junction Material	Ceramic	Ceramic
Temperature		
Operational Range	0 to 100 °C	0 to 100 °C
Dimensions		
Length		
Overall	6.1" (155 mm)	6.1" (155 mm)
Diameter		
Body/Tip	0.47" / 0.3" (12/8 mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)
Body Material	Glass	Glass
Fill Solution	None	477006
Replaceable Junction	NA	NA
Applications	<ul style="list-style-type: none"> • Tris buffers • Semi-solid samples • To obtain internal pH 	<ul style="list-style-type: none"> • Tris buffers • Rugged tip bulb • Organic or aqueous sample
Warranty	1 Year	1 Year

Epoxy Body Three-in-One Combination pH Electrodes

Specifications

Model	3 in 1 Refillable	3 in 1 Refillable	3 in 1 Gel	3 in 1 Gel
Catalog Number	476436	476436P	476466	476466P
Connector Types	BNC	BNC	BNC	BNC
ATC Connector	RCA	Banana	RCA	Banana
Measuring				
pH range	0 to 14	0 to 14	0 to 14	0 to 14
Reference				
Internal Element	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)
Fill Solution	3 M KCl	3 M KCl	Referid Polymer	Referid Polymer
Junction Material	Replaceable Ceramic	Replaceable Ceramic	Open (Hole)	Open (Hole)
Temperature				
Operational Range	0 to 100 °C	0 to 100 °C	0 to 80 °C	0 to 80 °C
Dimensions				
Length				
Overall	6.1" (155 mm)	6.1" (155 mm)	6.1" (155 mm)	6.1" (155 mm)
Diameter				
Body/Tip	0.47" (12 mm)	0.47" (12 mm)	0.47" (12 mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)	38" (1M)	38" (1M)
Body Material	Polymer	Polymer	Polymer	Polymer
Fill Solution	477006	477006	None	None
Replaceable Junction	477269	477269	NA	NA
Applications	<ul style="list-style-type: none"> • Replaceable junction helps prevent clogging • General pH measurement with automatic temperature compensation • Tris Buffers 	<ul style="list-style-type: none"> • Replaceable junction helps prevent clogging • General pH measurement with automatic temperature compensation • Tris Buffers 	<ul style="list-style-type: none"> • Designed for durability and ease of maintenance in aqueous sampling • General pH measurement with automatic temperature compensation • Tris buffer 	<ul style="list-style-type: none"> • Designed for durability and ease of maintenance in aqueous sampling • General pH measurement with automatic temperature compensation • Tris buffer
Warranty	1 Year	1 Year	1 Year	1 Year

*476436P and 476466P are for Pinnacle series only.

Please see page 25 for calibration buffers and other accessories.

Epoxy Body Combination pH Electrodes with Replaceable Junctions



General Purpose pH Electrode

General use and aqueous solutions



Deep Vessel pH Electrode

Aqueous solutions in deep vessels



Flat Surface pH Electrode

Small, semi-solid samples

General Purpose pH Electrode

6.1 inches in length, this tris-compatible electrode is ideal for general use in aqueous solutions.

Deep Vessel pH Electrode

Four inches longer than the general purpose electrode, this pH electrode is also tris

compatible. It is well suited for aqueous solutions in deep vessels.

Flat Surface pH Electrode

This tris-compatible pH electrode has a flat surface for gels and other semi-solid samples. It is also ideal for small samples.

Special Features

Pinnacle's patented replaceable ceramic junctions prevent clogging during applications that use semi-solids, oil-based solutions, and suspensions. The replaceable junction lets you restore your electrode to like-new performance in minutes, at a fraction of the cost and time to replace it with a new electrode.



Please see page 25 for calibration buffers and other accessories.

Epoxy Body Combination pH Electrodes



Fast-Flow pH Electrode

Ideal for samples that clog rapidly



Gel General Purpose pH Electrode

Ideal for aqueous samples; low maintenance



Gel Spear Tip pH Electrode

Ideal for dense samples; low maintenance



High-Performance pH Electrode

Two replaceable junctions for consistent, rapid response

Fast-Flow pH Electrode

This electrode features a circular junction that can flush KCl solution through the junction or into the sample. Ideal for samples that clog rapidly as well as low ionic strength solutions.

Gel General Purpose pH Electrode

This economical electrode requires less maintenance than refillable electrodes. Well suited for general applications in aqueous samples.

Gel Spear Tip pH Electrode

Another economical choice, this gel-filled electrode is low maintenance and is ideal for dense samples such as meat and cheese.

High-Performance pH Electrode

Tris compatible, the high-performance electrode features two replaceable ceramic junctions which provide fast response time and superior accuracy.

Special Features

Pinnacle's patented replaceable junction is available for the high-performance pH electrode.

Specifications

Model	General Purpose	Deep Vessel	Flat Surface
Catalog Number	476086	476306	476286
Connector Types	BNC	BNC	BNC
ATC Connector			
Measuring			
pH range	0 to 14	0 to 14	0 to 14
Reference			
Internal Element	Silamid (Ag+ Barrier)	Silver Ion Barrier	Silamid (Ag+ Barrier)
Fill Solution	3 M KCl	3 M KCl	3 M KCl
Junction Material	Replaceable Ceramic	Replaceable Ceramic	Replaceable Ceramic
Temperature			
Operational Range	0 to 100 °C	0 to 100 °C	0 to 100 °C
Dimensions			
Length			
Overall	6.1" (155 mm)	10" (254 mm)	6.1" (155 mm)
Diameter			
Body/Tip	0.47" (12 mm)	0.5" (12.7 mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)	38" (1M)
Body Material	Polymer	Epoxy	Polymer
Fill Solution	477006	477006	477006
Replaceable Junction	477269	477269	477269
Applications	<ul style="list-style-type: none"> • Tris Buffers • General use • Aqueous Junction • Replaceable junction 	<ul style="list-style-type: none"> • Deep vessel containers • Tris buffer • Replaceable junction 	<ul style="list-style-type: none"> • Tris buffers • Small samples • Semi-solid substance • Replaceable Junction
Warranty	1 Year	1 Year	1 Year

Epoxy Body Combination pH Electrodes

Specifications

Model	Fast Flow	Gel General Purpose	Gel Spear Tip	High Performance
Catalog Number	476316	476326	476476	476546
Connector Types	BNC	BNC	BNC	BNC
ATC Connector				
Measuring				
pH range	0 to 14	0 to 14	2 to 13	0 to 14
Reference				
Internal Element	Silver Scavenger	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)	Silamid (Ag+ Barrier)
Fill Solution	3 M KCl	Gel	Gel	3 M KCl
Junction Material	Annular	Ceramic	Ceramic	2 Replaceable Ceramic
Temperature				
Operational Range	0 to 100 °C	-5 to 80 °C	-5 to 80 °C	0 to 100 °C
Dimensions				
Length				
Overall	6.75" (171.5mm)	6.1" (155 mm)	4.9" (125 mm)	6.1" (155 mm)
Diameter				
Body/Tip	0.5" (12.7mm)	0.47" (12 mm)	12"/5 mm (length 65"/25 mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)	38" (1M)	38" (1M)
Body Material	Epoxy	Polymer	Polymer	Polymer
Fill Solution	477006	None	None	477006
Replaceable Junction	NA	NA	NA	NA
Applications	<ul style="list-style-type: none"> • Sample with rapid clogging 	<ul style="list-style-type: none"> • Aqueous samples • Low maintenance 	<ul style="list-style-type: none"> • Sampling meats, cheese • Low maintenance 	<ul style="list-style-type: none"> • Tris buffers • Fast response • 2 replaceable junctions
Warranty	1 Year	6 Months	6 Months	1 Year

Small Diameter Semi-Micro and Micro Combination pH Electrodes

Please see page 25 for calibration buffers and other accessories.

Semi-Micro Refillable Combo pH Electrode

Non-aqueous, small volume, sample depth 5/8" min.



Pinnacle small diameter electrodes are designed to meet the most precise application needs with quick and stable responses.

Semi-Micro Refillable Combo pH Electrode

Our semi-micro refillable combo pH electrode has a patented ion barrier that produces the fast response of an Ag/AgCl electrode without the use of AgCl in the reference solution. This tris-compatible electrode is a good choice for non-aqueous solutions, small volumes, and tris buffers.

Semi-Micro Gel Combo pH Electrode

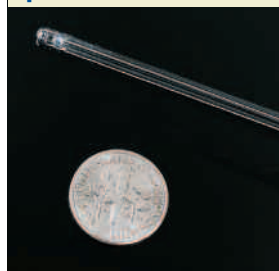
Culture tubes, low maintenance, sample depth 3/8" min.



Semi-Micro Gel Combo pH Electrode

This durable gel-filled electrode offers the benefits of accurate and reliable performance, with less maintenance than refillable electrodes. It is ideal for culture tubes where sample depths are not below 3/8".

Special Features



Complete range of semi-micro offers specialized and highly accurate measurements for a wide variety of applications.

Specifications

Model	Semi-Micro Refillable	Semi-Micro Gel
Catalog Number	476156	476346
Connector Types	BNC	BNC
ATC Connector		
Measuring		
pH range	0 to 14	0 to 14
Reference		
Internal Element	Silamid (Ag+ Barrier)	Ag/AgCl
Fill Solution	3 M KCl	Gel
Junction Material	Platinum	Annular
Temperature		
Operational Range	0 to 100 °C	0 to 80 °C
Dimensions		
Length		
Overall	8.07" (205 mm)	7.5" (190.5mm)
Diameter		
Body/Tip	12 / 5 mm (0.47" / 0.19")	0.25" (6.35 mm)
Cable Length	38" (1M)	38" (1M)
Body Material	Glass	Epoxy
Fill Solution	477006	None
Replaceable Junction	NA	None
Applications	<ul style="list-style-type: none"> • Non-aqueous • Tris buffers • Small volume • Sample depth 5/8" min 	<ul style="list-style-type: none"> • Culture Tubes • Low maintenance • Sample depth 3/8" min
Warranty	1 Year	6 Months

Half-Cell pH Electrodes (Requires Separate Reference)

Please see page 25 for calibration buffers and other accessories.



Epoxy Half-Cell pH Electrode
pH with BNC connector



Glass Half-Cell pH Electrode
pH with U.S. Std. connector

Our rugged bulb pH electrodes are designed to provide rapid and reliable pH results. The specially formulated glass membrane responds to hydrogen ion activity by developing an electrical potential across the membrane. The potential inside the pH electrode is fixed by the buffered pH filling solution. The potential of the separate reference electrode (see below for reference electrode units and features) is also constant. Any change in the potential of the electrical system is due to the pH of the solution, and is subsequently measured.

Epoxy Half-Cell pH Electrode

Ideal for general purpose aqueous solutions, this epoxy electrode is 5.5" in length, and features a 0 to 14 pH range.

Glass Half-Cell pH Electrode

This glass electrode also features a 0 to 14 pH range, and is well suited for general purpose aqueous or organic solutions, as well as photoprocessing applications.

Reference Electrodes

Please see page 25 for calibration buffers and other accessories.

General Purpose Ag/AgCl Reference Electrode

Tris buffers, redox, highly corrosive acid bases, replaceable junction

General Purpose (Glass) Calomel Reference Electrode

Tris buffers, redox

General Purpose (Epoxy) Calomel Reference Electrode

Tris buffers, redox

Reverse Sleeve Ag/AgCl Reference Electrode

Well suited for highly viscous, oily, or non-aqueous solutions

Double Junction Ag/AgCl Reference Electrode

Excellent for ion selective use where chloride ion interference is an issue; replaceable junction

Pinnacle reference electrodes are designed to produce stable reference potential for measurements with pH and other electrochemical sensors. The reference electrodes have an internal element (either Ag/AgCl or Calomel) that is in equilibrium with its surrounding saturated KCl solution. This forms a stable, reversible half-cell. The flow of saturated KCl from the tip of the electrode is controlled by a porous ceramic plug or a ground glass sleeve. This junction provides a conductive salt bridge between the internal element and the test solution. The slow, even flow of the KCl solution minimizes

diffusion potentials that can develop at the junction and ensures a stable reference potential.

The Pinnacle double junction reference electrode is designed to produce a stable reference potential. It contains two reservoirs connected by a porous ceramic plug. The internal reservoir contains an Ag/AgCl wire in equilibrium with saturated KCl. The external reservoir is used to contain the preferred reference solution. This provides a conductive salt bridge from the internal reference electrode to the test solution while isolating it from the saturated KCl.

Specifications

Model	Epoxy Half-Cell pH	Glass Half-Cell pH
Catalog No.	476026	476024
Connector Types Available	BNC	US Std.
Measuring		
pH Range	0 to 14	0 to 14
Reference		
	Requires a separate reference electrode	Requires a separate reference electrode
Temperature		
Operational Range	0 to 100°C	0 to 100°C
Dimensions		
Length		
Overall	5.5" (139.7 mm)	5.5" (139.7 mm)
Diameter		
Body	0.5" (12.7 mm)	0.5" (12.7 mm)
Cable Length	38"	38"
Body Material	Epoxy	Glass
Applications	<ul style="list-style-type: none"> • General purpose aqueous solutions 	<ul style="list-style-type: none"> • General purpose aqueous or organic solutions • Photoprocessing applications
Warranty	1 Year	1 Year

Reference Electrodes

Specifications

Model	General Purpose	General Purpose	General Purpose	Reverse Sleeve	Double Junction
Catalog No.	476046	476002	476406	476426	476416
Connector	2 mm Pin	2 mm Pin	2 mm Pin	2 mm Pin	2 mm Pin
Reference					
Internal Element	Silver Ion Barrier	Calomel	Calomel	Silver Ion Barrier	Silver Ion Barrier
Fill Solution	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl and 1 M KNO ₃
Junction Material	Replaceable Ceramic	Ceramic	Ceramic	Ground Glass Sleeve	Replaceable Ceramic
Temperature					
Operational Range	0 to 100°C	0 to 100°C	0 to 80°C	0 to 100°C	0 to 100°C
Dimensions					
Length					
Overall	5.5" (139.7 mm)	5.5" (139.7 mm)	5.5" (139.7 mm)	5.5" (139.7 mm)	5.5" (139.7 mm)
Diameter					
Body	0.5" (12.7 mm)	0.5" (12.7 mm)	0.5" (12.7 mm)	0.5" (12.7 mm)	0.5" (12.7 mm)
Cable Length	38"	38"	38"	38"	38"
Body Material	Epoxy	Glass	Epoxy	Glass	Epoxy
Fill Solution	477000	477000	477000	477000	477000/478154
Replaceable Junction	477269		477269		477269
Applications	<ul style="list-style-type: none"> • Tris buffers • Redox • High corrosive acid bases 	<ul style="list-style-type: none"> • Tris buffers • Redox applications 	<ul style="list-style-type: none"> • Tris buffers • Redox applications 	<ul style="list-style-type: none"> • High viscosity solution • Oily substances • Non-aqueous solutions 	<ul style="list-style-type: none"> • For ion selective use where chloride ion interference is a problem
Warranty	1 Year	1 Year	1 Year	1 Year	1 Year

*Only for 400 and 500 series. Not for Pinnacle series.

Pinnacle meters require use of reference electrode with Banana plug. Use General purpose reference 476046P or Double Junction Reference 476416P.

Metallic Electrodes

Please see page 25 for calibration buffers and other accessories.

Redox Platinum Combination Electrode

Measures ion concentration from potentiometric titration techniques, replaceable junction



Redox Platinum Combination Electrode

Pinnacle's unique technology combines the platinum electrode and the Ag/AgCl replaceable junction electrode to offer an exceptional platinum combination electrode. This electrode is capable of rapid response to oxidation-reduction potentials by measuring the ionic strength (concentration) of ions from potentiometric titration techniques. The reference element incorporates a unique silver ion barrier that prevents contamination of samples and eliminates

junction blockage due to AgCl precipitation. In addition, the replaceable junction feature increases electrode life, performance, and stability.

Silver Billet, Half-Cell Electrode

Our silver billet electrode can be used with the Pinnacle Calomel reference electrode (catalog number 476406) to perform potentiometric titrations to determine chloride and other halides.

Silver Billet, Half-Cell Electrode

Halide titrations requires separate reference electrode



Special Features

Our patented replaceable junction is included in our redox platinum combination electrode. This exclusive feature gives you like-new performance at a fraction of the cost of a new electrode.



Standards, Buffers and Consumables

Please see the Selection Guide on page 28 to choose the appropriate meter for your needs.



Bottled Buffers in 4, 7, and 10.01 Values

Consumables

Nova offers a wide variety of reagents and standards to keep your electrodes well maintained and properly calibrated.

packaged with a certificate of analysis and MSDS information.

Bottled Buffers

We offer bottled pH buffer solutions packed one or two bottles per case. A rainbow pack is also available, and consists of one bottle of each buffer value—4, 7, and 10.01. Each bottle contains 500 mL of solution, and comes with a flip-top cap for easy dispensing. All solutions are NIST traceable, and are

Starter Kits

Nova also offers starter kits as an optional accessory for meter-only purchases. Starter Kit A (catalog number 470124) includes an electrode arm, a storage bottle, and buffer solution sachets (three of each value—4, 7, and 10.01). Starter Kit B (catalog number 470125) includes all of the items found in Starter Kit A, *plus* a temperature probe.



Buffer and Rinsing Solution Sachets

Specifications

Model	Silver Billet Half-Cell	Redox Platinum Combination
Catalog Number	476526	476516
Connector	BNC	BNC/Pin
Reference		
Internal Element	Requires a separate reference electrode	Silamid (Ag+ Barrier)
Fill Solution		3 M KCl (477006)
Junction Material		Ceramic
Temperature		
Operational Range	0 to 80°C	0 to 100 °C
Dimensions		
Length		
Overall	5.5" (139.7 mm)	6.1 "(155 mm)
Diameter		
Body/Tip	0.5" (14.7mm)	0.47" (12 mm)
Cable Length	38" (1M)	38" (1M)
Body Material	Epoxy	Polymer
Applications	Halide Titrations	Measures oxidation - reduction potential Endpoint indicator for select potentiometric titration techniques
Warranty	1 Year	1 Year

Standards, Buffers and Consumables

Description	Catalog No.
pH Buffers, Bottled	
4.00 Buffer Red, 500 mL	478551
7.00 Buffer Yellow, 500 mL	478552
10.01 Buffer Blue, 500 mL	478553
Rainbow (1 Bottle of Each)	478554
4.00 Buffer Red, 500 mL (2/Case)	478540
7.00 Buffer Yellow, 500 mL (2/Case)	478570
10.01 Buffer Blue, 500 mL (2/Case)	478510
Rainbow Buffer Pack, 500 mL (2 Each)	478574
Buffers, Sachets	
4.00 Buffer Sachet (10/Case)	473651
7.00 Buffer Sachet (10/Case)	473650
10.01 Buffer Sachet (10/Case)	473652
Rinsing Solution Sachet (30/Case)	473653
Multi-Pack Buffer Sachet (Assortment of 4.00, 7.00, 10.01 and Rinsing Solution) (32/Case)	473676
Conductivity	
Conductivity 1413 µS (10/Case)	473738
Conductivity 12.88 mS (10/Case)	473737
Conductivity 80 mS (10/Case)	473741
Conductivity 84 µS (10/Case)	473740
Conductivity Standard, 1413 µS, 500 mL	473623
Conductivity Standard, 12.88 mS, 500 mL	473624
Dissolved Oxygen	
Zero Oxygen Std. (10/Case)	473739

Description	Catalog No.
Electrode Fill Solutions	
Saturated KCl, 125 mL (6/Case)	477000
3 M KCl, 125 mL (6/Case)	477006
3 M KCl, 125 mL (2/Case)	477007
Replaceable Junctions	
Replaceable Junctions (3/Pack)	477269
Checkmate Standards and Solutions	
pH Electrode Fill Solution (3/Pack)	473654
Zero Oxygen Standard, 500 mL	473625
Dissolved Oxygen Membrane Kit (2 Caps, 5 mL Fill Solution)	473626
B.O.D. Membrane Kit (2 Caps, 5 mL Fill Solution)	470083
Adapters	
US Std. to BNC	478383
BNC to US Std.	478381

Ion Selective Electrodes

Please see page 27 for ISE solutions and consumables.

SOLID-STATE ELECTRODES



Chlorine (Cl₂)



Fluoride (F⁻)

LIQUID ION EXCHANGE MEMBRANE ELECTRODES



Calcium (Ca⁺⁺)



Nitrite (NO₂⁻)

GLASS COMBINATION ELECTRODES



Chloride (Cl⁻)



Sodium (Na⁺)

GAS-SENSING ELECTRODES



Ammonia (NH₃)



Carbon Dioxide (CO₂)

Pinnacle offers an extensive line of ion selective electrodes to handle a wide variety of applications. Solid-state technology and advanced manufacturing techniques enable us to offer high-performance electrodes at an affordable price.

- Easy to operate (ISE measurements as simple as basic pH measurements)
- Wide linear concentration range (complete experiments without excessive dilutions)
- Direct measurement (ion activity or concentration)
- Versatile (choose the electrode that's right for your application)
- Six-month warranty

Solid-State Electrodes

Solid-state electrodes use an active membrane comprised of compressed crystalline material. These electrodes require a separate reference electrode, such as the double junction reference

electrode (catalog number 476416). The chlorine solid-state combination electrode has two ion-sensing elements and therefore does not require a separate reference electrode.

Liquid Ion Exchange Membrane Electrodes

These electrodes incorporate a selective ion exchanger into a PVC film to eliminate handling difficulties often associated with liquid ion exchangers. Ion exchange electrodes require a separate reference electrode, such as the general purpose Ag/AgCl reference electrode (catalog number 476046).

Glass Combination Electrodes

These electrodes were specially developed to provide continually reliable results.

Gas-Sensing Electrodes

Gas-sensing electrodes feature a pre-mounted membrane module for fast and easy assembly. They do not require a separate reference.

Applications

Pinnacle ion selective electrodes permit a wide range of applications in a wide variety of chemical analyses:

- Chlorine and ammonia in water and wastewater
- Chloride in blood, sweat, salt in foods
- Fluoride in water, foodstuffs, soil and serum
- Iodide in pharmaceuticals

- Calcium in foodstuffs, water, soil and serum
- Nitrate in agricultural materials
- Potassium in wine, urine and soils
- Sulfide in pulping liquors
- Sodium and carbon dioxide in foodstuffs
- And many more

Specifications

ISE Type	Cat. No.	Membrane Type	Concentration Range Molarity Range	Temperature pH Range	REFERENCE ELECTRODE INFORMATION		
					Cat. No.	Fill Solution	Fill Solution Cat. No.
Ammonia (NH ₃)	476130	Gas-Sensing Combination	0.017 to 17,000 ppm 1 to 10 ⁻⁶ m	0–50°C 11 to 13 pH	Not Required	Ammonia	477394
Calcium (Ca ⁺⁺)	476041	Liquid Fill	0.02 to 4,000 ppm 1 to 5 x 10 ⁻⁷ m	0–50°C 4 to 9 pH	476416 or 476046	1 M KNO ₃ or Sat KCl	478154 or 477000
Carbon Dioxide (CO ₂)	476120	Gas-Sensing Combination	4.4 to 440 ppm 1 x 10 ⁻² m to 1 x 10 ⁻⁴ m	0–50°C 0 to 14 pH	Not Required	CO ₂	476151
Chloride (Cl ⁻)	476136	Glass Combination	1.75 to 35,500 ppm 1 to 5 x 10 ⁻⁵ m	0–80°C 2 to 11 pH	Not Required	1 M KNO ₃	478154
	476126	Solid-State	1.75 to 35,500 ppm 1 to 5 x 10 ⁻⁵ m	0–80°C 2 to 11 pH	476416	1 M KNO ₃	478154
Cyanide (CN ⁻)	476127	Solid-State	0.2 to 260 ppm 10 ⁻² to 5 x 10 ⁻⁶ m	0–80°C 10 to 14 pH	476416	1 M KNO ₃	478154
Fluoride (F ⁻)	476135	Glass Combination	0.019 to 19,000 ppm 1 to 10 ⁻⁶ m	0–80°C 5 to 7 pH	Not Required	Sat KCl	477000
	476042	Solid-State	0.019 to 19,000 ppm 1 to 10 ⁻⁶ m	0–80°C 5 to 7 pH	476416	Sat KCl	477000
Iodide (I ⁻)	476127	Solid-State	0.02 to 12,700 ppm 1 to 10 ⁻⁷ m	0–80°C 3 to 12 pH	476416	1 M KNO ₃	478154
	476137	Glass Combination	0.8 to 62,000 ppm 1 to 5 x 10 ⁻⁶ m	0–50°C 2.5 to 11 pH	Not Required	1 M (NH ₄) ₂ SO ₄	478153
Nitrate (NO ₃)	476134	Liquid Fill	0.8 to 62,000 ppm 1 to 5 x 10 ⁻⁶ m	0–50°C 2.5 to 11 pH	476416	1 M (NH ₄) ₂ SO ₄	478153
	476132	Liquid Fill	0.04 to 39,000 ppm 1 to 10 ⁻⁶ m	0–50°C 4 to 9 pH	476416	1 M NaCl	None
Potassium (K ⁺)	476129	Solid-State	0.01 to 10,800 ppm 1 to 10 ⁻⁷ m	0–50°C 2 to 9 pH	476416	1 M NaCl	None
Silver (Ag ⁺)	476123	Glass Combination	0.02 to 23,000 ppm 1 to 1 x 10 ⁻⁶ m	0–80°C 9 to 12 pH	Not Required	4 M KCl	476167
Sulfide (S ⁻)	476129	Solid-State	0.003 to 32,000 ppm 1 to 10 ⁻⁷ m	0–80°C 12 to 14 pH	476416	1 M KNO ₃	478154

Please see pages 2 & 3 for
pH/Ion bench meters.

ISE Solutions and Consumables



Nova offers many solutions and accessories necessary for accurate ion measurement. They are listed under each appropriate ISE in the Ordering Information chart below.

Description	Catalog No.
Ammonia	
Ammonia Standard, 1000 ppm, 500 mL	478160
Molarity Standard Ammonium, 0.1 M, 500 mL	478161
Ammonia Fill Solution, 50 mL	477394
Ammonia Replacement Cap with Fill Solution (3 caps)	477693
Calcium	
Molarity Standard, Calcium, 0.1 M, 500 mL	478162
Calcium Fill Solution, 35 mL	477591
Calcium Membrane Caps (2/Pack)	477588
Saturated KCl	477000
Carbon Dioxide	
0.1 M NaHCO ₃ Standard, 500 mL Bottle	476148
1000 ppm as CaCO ₃ Standard, 500 mL Bottle	476149
Carbon Dioxide ISA, 500 mL Bottle	476150
Carbon Dioxide Fill Solution, 50 mL Bottle, 5 Pack	476151
Carbon Dioxide Membranes, Pack of 3	476152
Chloride	
Chloride Standard, 100 ppm	478171
Chloride Standard, 0.1 Molar	478168
Reference Electrode Filling Solution, 1 M KNO ₃ , for the outer chambers of 476136 or 476416	478154
Polishing Paper for the Chloride Electrodes	478113
Cyanide/Iodide	
Reference Electrode Filling Solution, 1 M KNO ₃ , for outer chamber of 476416	478154

Description	Catalog No.
Fluoride	
Fluoride Standard, 100 ppm	478170
Fluoride Standard, 0.1 Molar	478165
FAD (Fluoride Analysis Diluent)	478172
Polishing Paper for the Fluoride Electrodes	478113
Saturated KCl	477000
Nitrate	
Nitrate Standard, 0.1 Molar	478163
2 M (NH ₄) ₂ SO ₄ , ISAB and Reference Electrode Filling Solution, for the 476137 or 476416	478153
Spare Membrane Caps for 476134 (2/Case)	477589
Fill Solution for 476134 (25 mL)	477592
Potassium	
Molarity Standard Potassium 0.1 M, 500 mL	478164
Potassium Fill Solution, 35 mL	477590
Potassium Membrane Caps (2/Pack)	477587
Silver/Sulfide	
Molarity Standard Potassium Nitrate 1 M (10%), 500 mL	478154
Sodium	
0.1 M NaCl Standard, 500 mL Bottle	476163
Sodium Standard, 1000 ppm, 500 mL Bottle	476161
Sodium ISA, 500 mL Bottle	476165
Sodium Fill Solution, 50 mL Bottle, 5 Pack	476167
Sodium Standard 100 ppm, 500 mL	478169
Saturated KCl	477000

Selection Guide

For expanded product information see referenced catalog pages.

Model Number	Catalog Page Number	Portable Meter	Bench Meter	Measures pH	Millivolt Measurement	Measures ORP	Ion-Selective Measurement	Measures Conductivity and/or TDS	Displays Dissolved Oxygen	Displays Temperature	Replaceable Electrode	Data Logging Capability	IP67 Rated	Auto Temperature Compensation	Manual Freeze	CAL Points	Auto Endpoint
Model 425	1		•	•				•	•					•	•	2	•
Model 530P	1		•	•	•	•		•	•					•	•	2	•
Model 540P	2		•	•	•	•		•	•					•	•	2	•
Model 545P	2		•	•	•	•		•	•	•				•	•	3	•
Model 555P	2		•	•	•	•	•	•	•	•				•	•	5	•
Model 314iP	4	•		•				•	•	•	•	•		•	•	3	•
pH-10	10	•		•				•							•	2	
pH-15	10	•		•				•							•	2	•
pH-20	10	•		•				•	•					•	•	2	•
pH-25	10	•		•				•	•						•	2	•
Duo-60	10	•		•			•	•	•					•	•	2	•
Model 313P	12	•		•	•	•		•	•	•	•	•		•	•	2	•
Model 314P	12	•		•	•	•		•	•	•	•	•		•	•	3	•
Model 315P	12	•		•	•	•	•	•	•	•	•	•		•	•	3	•
Model 541P	6		•				•	•	•	•				•	•	2	•
CD-30	14	•					•		•					•	•	1	•
TDS-35	14	•					•		•					•	•	1	•
Model 316P	14	•					•	•	•	•	•	•		•	•	2	•
Model 317P	16	•					•	•	•	•	•	•		•	•	2	•
TMP-55	16	•						•	•					•	•	N/A	•
ORP-45	18	•			•				•					•	•	N/A	•

Caution: Nova equipment and scientific instruments are intended for laboratory use only. The well-being of individuals using these products is dependent on their proper operation, maintenance and safe laboratory practice. Refer to the owner's guide for details concerning the safe use and operation of any Nova laboratory product.

Service

Nova Analytics offers complete service for all equipment and instruments.

Calibration Certificates

All Pinnacle Series Benchtop (except Model 425) and portable - 313P through 315P - come with a calibration certificate.

Calibration Service

Nova Analytics offers a calibration service for Pinnacle meters and most 400 and 500 series meters. Contact Nova Technical Service at 1-866-664-6682 for details.

470438	BATTERY (AA CELLS) 4/PACK (MODEL 313/314/3141/315/316/317)	11, 13	475894	SCHOLAR 425 pH METER ONLY	1
470444	RUBBER METER HOLDER (MODEL 308/309/310/311/312/313/314/3141/315/316/317)	11, 13	475895	SCHOLAR 425 pH METER WITH REFILLABLE ELECTRODE	1
470445	RS232 INTERFACE (MODEL 314/3141/315/316/317)	11	475896	SCHOLAR 425 pH METER ONLY	1
470445P	RS232 INTERFACE (PINNACLE SERIES)	11	475897	SCHOLAR 425 pH METER WITH REFILLABLE ELECTRODE	1
470493	PRINTER, DOT MATRIX, 20 COLUMN W/CABLE, 115V (MODEL 340-360/440-455/500 SERIES)	3, 7	475898	SCHOLAR 425 pH METER WITH GEL FILLED ELECTRODE	1
470526	ACCESSORY KIT, AMMONIA	27	475899	SCHOLAR 425 pH METER WITH GEL FILLED ELECTRODE	1
470530	REPLACEMENT BATTERY FOR CHEK-MITE SERIES	9, 13, 15	476002	GENERAL PURPOSE, CALOMEL, PIN TIP	23
473040	REPLACEMENT pH ELECTRODE FOR CHEK-MITE pH-10	9	476024	GLASS HALF-CELL PH, U.S. STANDARD	23
473041	REPLACEMENT CONDUCTIVITY PROBE FOR CHEK-MITE CD-30 & DUO-60	9,13	476026	EPOXY HALF-CELL PH, BNC	23
473048	GENERAL PURPOSE TEMP PROBE FOR CHEK-MITE TMP-55	15	476041	CALCIUM PVC, TWO MEMBRANE CAPS AND FILL SOLUTION, BNC	27
473049	REPLACEMENT pH ELECTRODE FOR CHEK-MITE pH-20	9	476042	FLUORIDE SOLID STATE, BNC	27
473051	REPLACEMENT pH ELECTRODE FOR CHEK-MITE pH-15	9	476043	SCHOLAR ELECTRODE - GEL FILLED	3
473623	CONDUCTIVITY STANDARD; 1413µS 500ML	7, 25	476044	SCHOLAR ELECTRODE - REFILLABLE	3
473624	CONDUCTIVITY STANDARD; 12.88MS 500ML	7, 25	476046	GENERAL PURPOSE REFERENCE, 2MM PIN	23
473625	ZERO OXYGEN STANDARD, 500ML	25	476046P	GENERAL PURPOSE REFERENCE, BANANA (PINNACLE)	23
473626	DISSOLVED OXYGEN MEMBRANE KIT (TWO CAPS, 5ML FILL SOLUTION) (CHECKMATE)	25	476086	GENERAL PURPOSE COMBO, REFILLABLE, BNC	20
473650	7.00 BUFFER SACHET	25	476120	CARBON DIOXIDE COMBINATION, BNC	27
473651	4.00 BUFFER SACHET	25	476123	SODIUM COMBINATION, BNC	27
473652	10.01 BUFFER SACHET	25	476126	CHLORIDE SOLID STATE, BNC	27
473676	MULTI-PACK BUFFER SACHETS	3, 5, 11, 25	476127	IODIDE/CYANIDE SOLID STATE, BNC	27
473736	DO MEMBRANE CAPS W/FILL SOLUTION, 59ML 3/PACK (MODEL 317)	15	476129	SILVER SULFIDE SOLID STATE, BNC	27
473737	CONDUCTIVITY STD. SACHETS 12.88MS	7, 13, 25	476130	AMMONIA, THREE MEMBRANE CAPS AND FILL SOLUTION, BNC	27
473738	CONDUCTIVITY STD. SACHETS 1413µS	7, 13, 25	476132	POTASSIUM PVC, TWO MEMBRANE CAPS AND FILL SOLUTION, BNC	27
473739	ZERO OXYGEN STD. SACHETS	15,25	476134	NITRATE PVC, TWO MEMBRANE CAPS AND FILL SOLUTION, BNC	27
473740	CONDUCTIVITY STD. SACHETS 84µS	7, 13, 25	476135	FLUORIDE COMBINATION, BNC	27
473741	CONDUCTIVITY STD. SACHETS 80MS	7, 15, 25	476136	CHLORIDE COMBINATION, BNC	27
475660	CHEK-MITE pH-10 pH TESTER	9	476137	NITRATE COMBINATION, BNC	27
475661	CHEK-MITE pH-15 pH TESTER	9	476146	HIGH PERFORMANCE, COMBO, REFILLABLE, BNC	3, 16
475662	CHEK-MITE pH-20 pH TESTER	9	476148	0.1M NaHCO3 STANDARD, 475ML	27
475663	CHEK-MITE pH-25 pH TESTER	9	476149	1000 PPM AS CaCO3 STANDARD, 475ML	27
475665	CHEK-MITE TDS-35 TDS TESTER	13	476150	CARBON DIOXIDE ISA, 475ML	27
475669	CHEK-MITE TMP-55 TEMPERATURE	15	476151	CARBON DIOXIDE FILL SOLUTION, 5BT/CS, 50ML	27
475670	CHEK-MITE DUO-60 pH/CONDUCTIVITY	9	476152	CARBON DIOXIDE MEMBRANES (3/PACK)	27
475730	M 530P pH METER W/ARM, 120V	1	476156	SEMI-MICRO, COMBO, REFILLABLE, BNC	21
475731	M 530P pH METER W/ARM & pH ELECTRODE, 120V	1	476160	NITRITE ISA, 475ML	27
475734	M 540P pH METER W/ARM, 120V	2	476161	1000 PPM SODIUM STD., 475ML	27
475735	M 540P pH METER W/ARM & pH ELECTRODE, 120V	2	476162	NITRITE MODULES (3/PACK)	27
475738	M 555P pH/ION METER W/ARM, 120V	2	476163	0.1 M NaCl STANDARD, 475ML	27
475739	M 555P pH/ION METER W/ARM & HP pH ELEC, 120V	2	476165	SODIUM ISA, 475ML	27
475742	M 541P CONDUCTIVITY METER W/ARM, 120V	6	476167	SODIUM FILL SOLUTION, 5BT/CS, 50ML	27
475743	M 541P COND METER W/ARM & COND PROBE, 120V	6	476286	FLAT SURFACE, COMBO, REFILLABLE, BNC	20
475745	M 541P COND METER W/ARM, PWR SPLY NOT INCL	6	476296	RUGGED BULB COMBO, BNC	18
475746	M 541P COND METER W/ARM & COND PROBE, PWR SPLY NOT INCL	6	476306	DEEP VESSEL COMBO, REFILLABLE, BNC	20
475771	M 545P pH METER W/ARM, 120V	2	476316	FAST-FLOW COMBO, REFILLABLE, BNC	20
475772	M 545P pH METER W/ARM & pH ELECTRODE, 120V	2	476326	GENERAL PURPOSE GEL COMBO, BNC	3, 20
475870	MODEL 313P pH/MV/°C METER W/ELECTRODE	11	476346	SEMI MICRO COMBO, BNC	21
475871	MODEL 314P pH/MV/°C METER W/ELECTRODE	11	476406	HIGH STABILITY (CALOMEL) REFERENCE, 2MM PIN	23
475872	MODEL 315P pH/MV/°C/ION METER W/ELECTRODE	11	476416	DOUBLE JUNCTION, REFERENCE, 2MM PIN	23
475873	MODEL 316P CONDUCTIVITY METER	13	476416P	DOUBLE JUNCTION, REFERENCE, BANANA (PINNACLE)	23
475874	MODEL 317P DISSOLVED OXYGEN METER	15	476426	REVERSE SLEEVE, REFERENCE 2MM PIN	23
475875	MODEL 313P pH/MV/°C METER	11	476436	3-IN-1 COMBO, REFILLABLE, BNC & RCA (ATC)	3, 18
475876	MODEL 314P pH/MV/°C METER	11	476436P	3-IN-1 COMBO, REFILLABLE, BNC & BANANA (ATC)	3, 18
475877	MODEL 315P pH/MV/°C/ION METER	11	476456	SPEAR COMBO, REFILLABLE, BNC	18
475890	MODEL 314iP pH/ISFET METER ONLY	4	476466	HIGH PERFORMANCE 3-IN-1 GEL COMBO, BNC & RCA	3, 18
475891	MODEL 314iP pH/ISFET METER WITH ISFET PROBE	4	476466P	HIGH PERFORMANCE 3-IN-1 GEL COMBO, BNC & BANANA	3, 18
			476476	SPEAR GEL COMBO, BNC	20
			476501	CARBON CONDUCTIVITY, 0-1000MS, EPOXY BODY, 36" CABLE	6
			476501P	CARBON CONDUCTIVITY PROBE FOR PINNACLE SERIES	6
			476502	GLASS CONDUCTIVITY, LOW RANGE 0-500µS	6
			476503	GLASS CONDUCTIVITY, HIGH RANGE 0-500MS	6
			476505P	ISFET ELECTRODE FOR PINNACLE SERIES	6

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476516	REDOX COMBO, REFILLABLE, BNC	25
476526	SILVER BILLET, 2MM PIN	25
476546	HIGH PERFORMANCE, COMBO, EPOXY BODY	20
476566	PREMIUM GEL COMBO, GLASS	16
476620	CONDUCTIVITY, 6' CABLE (MODEL 316)	13
476620P	CONDUCTIVITY, 6' CABLE (MODEL 316P)	13
476621	CONDUCTIVITY, 30' CABLE (MODEL 316)	13
476621P	CONDUCTIVITY, 30' CABLE (MODEL 316P)	13
476622	DISSOLVED OXYGEN, 6' CABLE (MODEL 317)	15
476622P	DISSOLVED OXYGEN, 6' CABLE (MODEL 317P)	15
476623	DISSOLVED OXYGEN, 30' CABLE (MODEL 317)	15
476623P	DISSOLVED OXYGEN, 30' CABLE (MODEL 317P)	15
477000	SATURATED KCl 6BT/CS 125ML	25
477006	3M KCl 6BT/CS 125ML	25
477007	3M KCl 2BT/CS 125ML	25
477269	REPLACEABLE JUNCTIONS, CERAMIC, FOR USE WITH ALL PINNACLE ELECTRODES WITH REPLACEABLE JUNCTION FEATURE (3/PACK)	25
477394	FILL SOLUTION, AMMONIA	27
477587	MEMBRANE CAPS, POTASSIUM	27
477588	MEMBRANE CAPS, CALCIUM (2/PACK)	27
477589	MEMBRANE CAPS, NITRATE (2/PACK)	27
477590	FILL SOLUTION, POTASSIUM	27
477591	FILL SOLUTION, CALCIUM	27
477592	FILL SOLUTION, NITRATE	27
477693	MEMBRANE CAP, AMMONIA, W/FILL SOLUTION	27
477968	ATC -STAINLESS STEEL FOR 300, 400 AND 500 SERIES ONLY	3
477968P	ATC FOR PINNACLE SERIES METERS	3
478153	MOLARITY STANDARD, AMMONIUM SULFATE, 2.0M, 500ML	27
478154	MOLARITY STANDARD, POTASSIUM NITRATE, 1.0M (10%), 500ML	27
478160	PPM STANDARD, AMMONIA AS N, 1000PPM, 500ML	27
478161	MOLARITY STANDARD, AMMONIUM 0.100M, 500ML	27
478162	MOLARITY STANDARD, CALCIUM 0.100M, 500ML	27
478163	MOLARITY STANDARD, NITRATE 0.100M, 500ML	27
478164	MOLARITY STANDARD, POTASSIUM 0.100M, 500ML	27
478165	MOLARITY STANDARD, FLUORIDE 0.100M, 500ML	27
478168	MOLARITY STANDARD, CHLORIDE 0.100M, 500ML	27
478169	PPM STANDARD, SODIUM, 100PPM, 500ML	27
478170	PPM STANDARD, FLUORIDE, 100PPM, 500ML	27
478171	PPM STANDARD, CHLORIDE, 100PPM, 500ML	27
478172	DILUENT, FLUORIDE ANALYSIS, 3.785 LITERS	27
478302	PRINTER PAPER (FOR 478301 PRINTER)	
478381	ADAPTER, BNC METER TO U.S. STANDARD ELECTRODE	25
478383	ADAPTER, U.S. STANDARD METER TO BNC COMBINATION ELECTRODE	25
478510	10.01 BUFFER BLUE 2BT/CS 500ML	25
478540	4.00 BUFFER RED 2BT/CS 500ML	25
478551	4.00 BUFFER RED 1BT/CS 500ML	25
478552	7.00 BUFFER YELLOW 1BT/CS 500ML	25
478553	10.01 BUFFER BLUE 1BT/CS 500ML	25
478554	RAINBOW BUFFER PACK, 1X7, 1X4, 1X10, 3BT/CS 500ML	25
478570	7.00 BUFFER YELLOW 2BT/CS 500ML	25
478574	RAINBOW BUFFER PACK, 2X7, 2X4, 2X10, 6BT/CS 500ML	25
478930	500 SERIES METER ELECTRODE ARM ASSEMBLY	3
478930P	PINNACLE SERIES ELECTRODE ARM	3
478933	POWER SUPPLY, 230V EUROPE	3
478935	POWER SUPPLY, 120V	3
478938	POWER SUPPLY, 230V UK	3
478939	PINNACLE SERIES POWER SUPPLY	3



Pinnacle series

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