

Environmental

Soil pH is one of the most important measurements to indicate soil fertility. Thermo Electron Corporation offers a range of quality instruments, electrodes and consumables to correctly measure pH content in a variety of samples.

pH of Soils

Orion 3-Star pH Benchtop Meter



For instructions on pH measurements using Orion products, download our Star Series meter information at www.thermo.com/water.



Orion 3-Star for pH of Soil

Understanding the pH level can provide vital information for diagnosing problems such as poor growth and plant stress. The ideal soil pH range is between 6 and 7 to promote readily available plant nutrients. The pH level in soil can be affected by many events including natural rainwater leaching away basic ions or introduced effects such as fertilizer or lime amendments.

Accurate measurements with the Orion 3-Star pH benchtop (Cat. No. 1112000) meter and Epoxy-Body Sure-Flow® Silver Chloride electrode (Cat. No. 9165BNWP)

are fast and simple. The Orion 3-Star pH meter has several unique features to improve the quality of your measurements such as: a convenient, built in Quick-Start Guide, a bright LCD display and the ability to store up to 10 setup parameters and calibrations with password protection.

Orion 3-Star pH

Thermo Electron's advanced technology offers you superior quality with the Orion Epoxy-Body Sure-Flow® pH electrode (Cat. No. 9165BNWP). Get simpler, faster measurements with the Orion 3-Star pH (Cat. No. 1112000) meter than with any other analytical instruments.

Orion 3-Star pH Specifications:

Specifications		Benefit
pH		
Readout Range / Resolution	-2.000 to 19.999 or 0 to 14 in aqueous solutions / 0.1,0.01,0.001	Calibration point flexibility
Relative Accuracy	± 0.002	For exceptional accuracy
SMART STABILITY™ and SMART AVERAGING™	Resolution dependent / automatic	Optimized accuracy, precision & response time
AUTO-CAL™ and/or Manual Calibration	1 to 5 points; US/NIST, DIN, and custom buffers recognized	Protocol compliance
Temperature		
Range / Resolution	-5 to 105 °C / 0.1 up to 99.9 °C, 1.0 over 99.9 °C	Allows for temperature variations
Relative Accuracy	± 0.1 °C	
Temperature Compensation	Auto/Manual	
Display	Custom backlit LCD, for easy viewing	Easy to read
Special GLP Software Features		
# Of Data Logging Points	200 points by time, stability or manual read with time/date stamp	Expanded data storage available
Calibration Log	Last 10 Calibrations	Establish audit trail
User Method Storage	10 Saved	For easy retrieval of routine tests
Power	Universal power adapter and battery power 4 x AA batteries	Data is secure
Regulatory and Safety	CE, CSA, UL, TÜV, FCC Class A limits	Meets all necessary regulations
Environmental Operating Conditions		
Ambient Operating Temperature	5 to 45 °C	
Relative Humidity	5 to 85% Non-Condensing	
IP Rating	IP54, splashproof and dustproof	
Warranty	36 months (from date of purchase)	Reduces service cost

Above data generated under optimal/controlled circumstances.

Equipment needed for pH measurement using the Orion 3-Star pH meter:

Description	Orion Cat. No.
pH Application Package (includes all items listed below)	1010117
Star Series Method Note: pH in Soil	M-1016-E
3-Star benchtop pH meter	1112000
Silver chloride epoxy electrode	9165BNWP
Star stainless steel ATC electrode	927007MD
pH electrode storage solution	910001
Cleaning kit	900023
Benchtop stirrer	096019
Benchtop electrode stand	111001
pH 4.01 Buffer, 475 mL	910104
pH 7.00 Buffer, 475 mL	910107
pH 10.01 Buffer, 475 mL	910110