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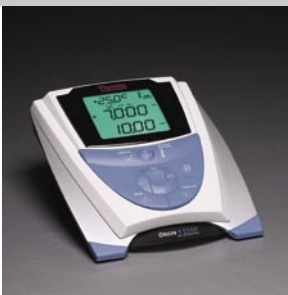
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Pharmaceutical

The pH measurement of pharmaceutical capsules is critical to the health and safety of consumers.

pH of Capsules

Orion 4-Star pH/ISE
Benchtop Meter



Orion 4-Star pH/ ISE for pH of Capsules

Capsules are available in many different sizes and shapes and can be used to administer powders, semisolids and liquids. The tasteless capsule that dissolves or is digested in the stomach after ten to twenty minutes effectively masks unpleasant tastes and odors of drugs. The FDA regulates the testing of capsules, such as those that contain pain medications to ensure the safety and effectiveness of drugs used for the prevention, diagnosis and treatment of illness. The Federal Food, Drug and Cosmetics Act set forth by the FDA has regulated the directions and accurate dosage information on Ibuprofen labels.

The new Orion 4-Star pH/ISE meter (Cat. No. 1115000) and ROSS™ Sure-Flow® combination pH electrode (Cat. No. 8172BNWP) assures you fast, accurate results with proven technology and superior quality. The Orion 4-Star pH/ISE meter has a unique feature set to improve the quality of your pH measurements. The Star Series meters include a convenient, built in Quick-Start Guide, advanced self test and diagnostics, GLP electrode verification, storage of up to 10 password-protected methods and optional 21 CFR Part 11 Software.

Orion 4-Star pH/ISE

Thermo Electron's advanced technology offers you superior quality with the Orion 4-Star pH/ISE meter. 21CFR Part 11 software is security and audit trails with time and date stamps, documentation control or archiving, and record retention and recovery.

Orion 4-Star pH/ISE 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
ISE		
Range / Resolution	0 to 19900 / 1,2, or 3 significant digits	Wide operating range/Increased accuracy
Relative Accuracy	± 0.2 mV or 0.05%, whichever is greater	
SMART STABILITY™ and SMART AVERAGING™	Resolution dependent / automatic	Optimized accuracy, precision, & response time
Units	M, mg/L, %, ppb, or no units	Choice of reporting units
# ISE Cal points	1 to 5	
Special ISE Calibration Features	Linear point to point, selectable auto-blank non-linear, low concentration range	
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/ISE measurement using the Orion 4-Star pH/ISE meter:

Description	Orion Cat. No.
pH in Application Package (includes items listed below)	1010155
Star Series Method Note: pH in Capsules	M-1703-E
4-Star benchtop pH/ISE meter	1115000
Orion ROSS™ Sure-Flow® pH Electrode, Star Satinless Steel ATC probe	8172BNWP, 927007MD
Benchtop Stirrer	096019
Benchtop Electrode Stand	1110001
pH Buffers 4.01, 7.00, and 10.01, 475 mL bottles	910104, 910107, 910110
Optional 21 CFR Part 11 Software	1010007

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Environmental Instruments
Water Analysis Instruments