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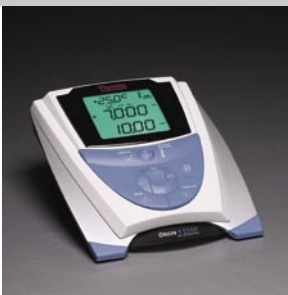
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Pharmaceutical

The analgesic effectiveness of an ointment is dependent upon its pH. Therefore pH is often used in over the counter topical products as a critical measurement to assure product quality and performance.

pH of Ointments

Orion 4-Star pH/ISE
Benchtop Meter



pH of Ointments

One class of ointments penetrate the skin into the blood stream to soothe sore muscles and to relieve aches and pains due to sports injuries, sprains, joint stiffness and arthritis. The ointment travels through the skin and muscle to the blood stream where the active ingredient, methyl-salicylate lowers the blood's pH. Ointment overdose is rarely a serious poisoning, depending on the blood level of salicylates found. Recovery is likely if the acidic effect of the salicylate can be effectively neutralized. The Federal Food, Drug and Cosmetics Act set forth by the FDA regulates the testing and the accurate labeling warning

information to ensure the safety of consumers who use sports ointments.

The new Orion 4-Star pH/ISE meter (Cat. No. 1115000) and ROSS™ Sure-Flow® combination pH electrode (Cat. No. 8172BNWP) assure 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. Ensure analytical integrity with built in GLP features of password protected methods, time/date stamp stored calibration and more. This package is upgradable with 21 CFR Part 11 compliant software that includes system validation, security, audit trails, data archiving 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%, of mV reading 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 screen
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

Equipment needed for pH/ISE measurement using the Orion 4-Star pH/ISE meter:

Above data generated under optimal/controlled circumstances.

Description	Orion Cat. No.
pH in Application Package (includes items listed below)	1010156
Star Series Method Note: pH of Ointments	M-1704-E
4-Star benchtop pH/ISE meter	1115000
Orion ROSS™ Sure Flow® pH Electrode	8172BNWP
Benchtop Stirrer	096019
Benchtop Electrode Stand	1110001
pH Buffers 4.01, 7.00, and 10.01, 475 mL bottles	910104, 910107, 910110
Star Stainless Steel ATC probe	927007MD
Optional 21 CFR Part 11 Software	1010007