

Procedure: PH METERS - 23 DEC 09

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired, As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of k=2.

Remarks: Millivolts calibrated only.

Standards Used

Asset # Manufacturer 004164 FLUKE

Model 5500A/SC

Description CALIBRATOR Cal Date Due Date 12-Oct-2010

Humidity: 48 %RH **Barometer:** N/A

12-Oct-2011

an Walt Hill

Laboratory Manager m:VA2'_A OCT_08.rpt

Carlos Mendoza Metrology Technician

Southwest Research Institute Calibration Laboratory Measurement Report

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Work Order:	303099984	Mfr.	Orion Tech 720A Type pH Meter Cal		Technician:	com	
Asset No.	001441	Model			Type Data:	Found-left 28-Feb-11	
Serial No.	003368	Туре.			Cal Date:		
Remarks: millivolts cali	brated only.		· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • • • • • • • • • • •		
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Function/Range	Test Point	TI Reading	Difference	± Limit	± Uncertainty	Result	% Limit
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts		
Input 1	0.0	0.0	0.0	0.5	0.24	Pass	0%
	1000.0	999.8	-0.2	1.0	0.24	Pass	20%
	-1000.0	-1000.1	-0.1	1.0	0.24	Pass	10%
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts		
Input 2	0.0	0.0	0.0	0.5	0.24	Pass	0%
	1000.0	999.8	-0.2	1.0	0.24	Pass	20%
	-1000.0	-1000.2	-0.2	1.0	0.24	Pass	20%
		END	OF REPORT				