



SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834



Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: ORION / 720A

Description: PH/ION METER

Serial No: 005885

Asset No: 001869

Procedure: PH METERS MV ONLY - 11 SEP 07

Work Order: 303076645

Date Issued: Oct 3, 2007

Calibration Date: Oct 3, 2007

***Calibration Due:** Oct 3, 2008

Calibration Location: Bldg. 64

Environment: Temp. 72.0°F Hum. 44 %RH

****Data Type:** FOUND-LEFT

DivID/Location: N/A

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. **Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

Remarks: mVolt Cal'd Only

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
006413	7085202	FLUKE	5520A/SC1100	MULTI-PRODUCT CALIBRATOR	Aug 11, 08

Scott Keith

Reviewed by: () wgh (x) srk () jrg () blt () pwc

Metrology Technician

m:\a2la1.rpt Rev date August 15, 2005

Joe Greagrey

Measurements by Joe Greagrey

Metrology Technician

Southwest Research Institute
 Calibration Laboratory
 Measurement Report

Work Order:	303076645	Mfr.	Orion	Technician	JRG
Asset No.	001869	Model	720A	Cal Date.	03-Oct-07
Serial No.	005885	Type.	pH Meter		
Remarks:					
LIMITED CAL: Millivolts Only					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts	Result
Input 1	0.0	0.0	0.0	0.5	0.12	Pass
	1000.0	999.6	-0.4	1.0	0.12	Pass
	-1000.0	-999.7	0.3	1.0	0.12	Pass
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts	
Input 2	0.0	-0.2	-0.2	0.5	0.12	Pass
	1000.0	999.4	-0.6	1.0	0.12	Pass
	-1000.0	-999.9	0.1	1.0	0.12	Pass

END OF REPORT