



SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
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Certificate #

0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer Model: ORION EA 940

Description: EXPANDABLE IONANALYZER

Serial No: 2330

Asset No: 001948

Procedure: CL-79, JUN/99

Work Order: 303065151

Date Issued: Jul 25, 2005

Calibration Date: Jul 25, 2005

***Calibration Due:** Jul 25, 2006

Calibration Location: Bldg. 64

Environment: Temp. 71.0°F Hum. 40 %RH

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

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, 1999, 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: Limited Cal: Millivolt Use Only.

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
006413	7085202	FLUKE	5520A/SC1100	MULTI-PRODUCT CALIBRATOR	Mar 08, 06

Approved by: Walt Hill

Manager

m:\a2la1.rpt Rev date March 6, 2005

Measurements by: Scott Kester

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303065151	Mfr:	ORION	Technician:	SRK
Asset No:	001948	Model:	EA 940		
Serial No:	2330	Type:	ION ANALYZER	Cal Date:	25-Jul-05
Remarks:					
LIMITED CAL: mVolts Only					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Ch 1	mVolts	mVolts	mVolts	mVolts	mVolts	Result
	1000.0	999.8	-0.2	1.0	0.12	Pass
	-1000.0	-1000.0	0.0	1.0	0.12	Pass
Ch 2	mVolts	mVolts	mVolts	mVolts	mVolts	
	1000.0	999.6	-0.4	1.0	0.12	Pass
	-1000.0	-1000.1	-0.1	1.0	0.12	Pass

END OF REPORT