



SOUTHWEST RESEARCH INSTITUTE®

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Certificate of Calibration

0972-01

Submitted By: DIV20
Address: B57
Contact: DON BANNON
Manufacturer Model: ORION EA940
Description: EXPANDABLE IONANALYZER
Serial No: 2330
Asset No: 001948
Procedure: ORION EA940 - 26 APR. 2006

Work Order: 303070143
Date Issued: Jul 6, 2006
Calibration Date: Jul 6, 2006
***Calibration Due:** Jul 6, 2007
Calibration Location: Bldg. 64
Environment: Temp. 74.0°F Hum. 43 %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: Limit Cal: mV Tested Only

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
000182	5200003	FLUKE	5700A/EP	CALIBRATOR	Sep 29, 06

120

Instrument calibration record for Orion
Expandable Ion Analyzer, Model # EA 940,
Serial # 2330 (07/06/2006)

Reviewed by: blt () jrg () pwc () wgh ()
Metrology Technician

Measurements by: Paul Dempore
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303070143	Mfr:	ORION	Technician:	PRD
Asset No:	001948	Model:	EA940	Cal Date:	06-Jul-06
Serial No:	2330	Type:	ION ANALYZER		

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	999.9	-0.1	1.0	0.12	Pass
	-1000.0	-1000.1	-0.1	1.0	0.12	Pass
Ch 2	mVolts	mVolts	mVolts	mVolts	mVolts	
	1000.0	1000.1	0.1	1.0	0.12	Pass
	-1000.0	-999.8	0.2	1.0	0.12	Pass

END OF REPORT