SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
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ACCREDITED
Certificate #
0972-01

Certificate of Calibration

Submitted By:	DIV20	**Work Order:**	303069401
Address:	B57	**Date Issued:**	Jun 1, 2006
Contact:	DON BANNON	**Calibration Date:**	Jun 1, 2006
Manufacturer Model:	BARNSTEAD INTL. E896X5	***Calibration Due:**	Jun 1, 2007
Description:	RESISTOR	**Calibration Location:**	Bldg. 64
Serial No:	896020321720	**Environment:**	Temp. 74.0°F Hum. 42 %RH
Asset No:	009582	****Data Type:**	FOUND-LEFT
Procedure:	DECADE RESISTOR TO 100 MOHM-STEP 21 MAR, 2006		

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: Cal'd to within +/-1%

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
012066	MY45040419	HEWLETT-PACKARD	3458A	MULTIMETER	Apr 11, 07

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

Measurements by: Paul Depmore
Metrology Technician

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

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303069401	Mfr.	Barnstead Int.	Technician	PRD
Asset No.	009582	Model	E896X5		
Serial No.	896020321720	Type.	Resistor	Cal Date.	01-Jun-06
Remarks:					

Tested to +/- 1 %

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
	MOhm	MOhm	MOhm	MOhm	MOhm	Result
1.5 Mohm	1.5000	1.5056	0.0056	0.0150	0.0053	Pass
	Ohm	Ohm	Ohm	Ohm	Ohm	
552.95 Ohm	552.95	553.330	0.380	5.53	0.0085	Pass

END OF REPORT