



SOUTHWEST RESEARCH INSTITUTE®

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



Certificate #

0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer Model: FISHER SCIENTIFIC 15-078-39

Description: TEMPERATURE METER

Serial No: 41523645

Asset No: 011675

Procedure: DIGITAL THERMOMETERS - 9 MAY 2006

Work Order: 303069438

Date Issued: May 23, 2006

Calibration Date: May 23, 2006

***Calibration Due:** May 23, 2007

Calibration Location: Bldg. 64

Environment: Temp. 74.0°F Hum. 42 %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: None

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
006413	7085202	FLUKE	5520A/SC1100	MULTI-PRODUCT CALIBRATOR	Mar 16, 07

Reviewed by: blt () jg () pwc () wgh ()

Metrology Technician

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

Measurements by: Paul Depmore

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303069438	Mfr.	Fisher Scientific	Technician	PRD
Asset No.	011675	Model	15-078-39	Cal Date.	23-May-06
Serial No.	41523645	Type	Thermocouple Thermometer		
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
T1 Input Type K	°C	°C	°C	°C	°C	Result
	-50	-49.4	0.6	1.2	0.38	Pass
	190	189.6	-0.4	1.6	0.30	Pass
	575	576	1	2.7	0.66	Pass
	960	960	0	3.9	0.66	Pass
	1200	1200	0	4.6	0.74	Pass
T2 Input Type K	°C	°C	°C	°C	°C	
	-50	-49	1	1.2	0.38	Pass
	190	190.0	0.0	1.6	0.30	Pass
	575	576	1	2.7	0.66	Pass
	960	960	0	3.9	0.66	Pass
	1200	1200	0	4.6	0.74	Pass
T1 Input Type K	°F	°F	°F	°F	°F	
	-58	-58	0	1.7	0.90	Pass
	310	311	1	2.4	0.80	Pass
	1025	1026	1	4.6	0.80	Pass
	1740	1740	0	6.7	0.80	Pass
	1900	1901	1	7.2	1.0	Pass
T2 Input Type K	°F	°F	°F	°F	°F	
	-58	-58	0	1.7	0.90	Pass
	310	311	1	2.4	0.80	Pass
	1025	1026	1	4.6	0.80	Pass
	1740	1740	0	6.7	0.80	Pass
	1900	1901	1	7.2	1.0	Pass
Difference	°F	°F	°F	°F	°F	
	T1-T2	0	0.0	0.0	1.5	.012
T1-T2	°C	°C	°C	°C	°C	
	0	0.0	0.0	1.0	.012	Pass

END OF REPORT