



# SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory  
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Calibration Laboratory  
Certificate #0972-01

## Certificate of Calibration

**Cost Center:** DIV20

**Mail Stop:** B51

**Customer:** DON BANNON

**Manufacturer/Model:** FISHER SCIENTIFIC / 15-077-26

**Description:** TEMPERATURE METER

**Serial Number:** 51046103

**Asset Number:** 011674

**Procedure:** DIGITAL THERMOMETERS - 17 MAR 08

**Work Order:** 303087444

**Date Issued:** 11-May-2009

**Date Calibrated:** 11-May-2009

**\* Date Due :** 11-May-2010

**\*\* Results:** FOUND-LEFT

**Temperature:** 71°F

**Humidity:** 38 %

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. \*\*Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired, As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of  $k=2$ .

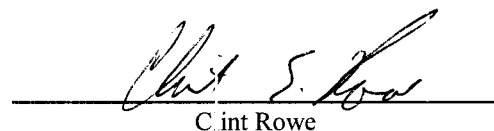
### Remarks:

### Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
004164	FLUKE	5500A/SC	CALIBRATOR	16-Sep-2008	16-Sep-2009

  
Walt Hill

Laboratory Manager

  
Clint S. Rowe

Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303087444	Mfr:	Fisher Scientific	Technician:	CER
Asset No:	011674	Model:	15-077-26	Type:	Data: Found-left
Serial No:	51046103	Type:	Thermocouple Thermometer	Cal Date:	11-May-09
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/- Limit	+/- Uncertainty	Result	% Limit
T1 Input Type K	°C	°C	°C	°C	°C		
	-50.0	-50.5	-0.5	1.4	0.24	Pass	36%
	190.0	189.9	-0.1	2.4	0.32	Pass	4%
	575	573	-2	5	0.66	Pass	40%
	960	960	0	8	0.66	Pass	0%
	1200	1200	0	10	0.74	Pass	0%
T2 Input Type K	°C	°C	°C	°C	°C		
	-50.0	-50.9	-0.9	1.4	0.24	Pass	64%
	190.0	189.7	-0.3	2.4	0.32	Pass	13%
	575	573	-2	5	0.66	Pass	40%
	960	959	-1	8	0.66	Pass	13%
	1200	1200	0	10	0.74	Pass	0%
T1 Input Type K	°F	°F	°F	°F	°F		
	-58.0	-59.0	-1.0	2.4	0.38	Pass	42%
	310	309	-1	4	0.80	Pass	25%
	1025	1023	-2	10	0.80	Pass	20%
	1740	1740	0	15	0.80	Pass	0%
	1900	1902	2	16	1.0	Pass	13%
T2 Input Type K	°F	°F	°F	°F	°F		
	-58.0	-59.6	-1.6	2.4	0.38	Pass	67%
	310	309	-1	4	0.80	Pass	25%
	1025	1022	-3	10	0.80	Pass	30%
	1740	1740	0	15	0.80	Pass	0%
	1900	1901	1	16	1.0	Pass	6%
Difference T1-T2	°F	°F	°F	°F	°F		
	0.0	0.2	0.2	2.0	0.38	Pass	10%
T1-T2	°C	°C	°C	°C	°C		
	0.0	0.1	0.1	1.0	0.22	Pass	10%

END OF REPORT