



SOUTHWEST RESEARCH INSTITUTE®

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Certificate of Calibration

0972-01

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer Model: VAISALA HMP77B

Description: HUMIDITY/TEMPERATURE PROBE

Serial No: Z0750005

Asset No: 010701

Procedure: HYGROTHERMOGRAPH - 28 MAR, 2006

Work Order: 303068480

Date Issued: Apr 13, 2006

Calibration Date: Apr 11, 2006

***Calibration Due:** Apr 11, 2007

Calibration Location: Bldg. 64

Environment: Temp. 73.0°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: Calibrated as a system with Vaisala MI70 Indicator S/N Z0730015, AN 010699

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
006404	9806123	THUNDER SCIENTIFIC	2500	HUMIDITY GENERATOR	Jun 13, 06
009414	A25788	HART SCIENTIFIC	1502A	TEMPERATURE READOUT	Aug 02, 06
010692	632656	HART SCIENTIFIC	5618	PLATINUM RTD	Aug 02, 06

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Instrument calibration record for Vaisala
Temperature/Humidity Probe, Model #
HMP77B, Serial # Z0750005, Asset No.:
010701 (04/11/2006)

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

Metrology Technician

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

Measurements by: Bob Trollinger

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303068480	Mfr:	Vaisala	Technician:	blt
Asset No:	010701	Model:	HMP77B	w- MI70 Meter	
Serial No:	Z0750005	Type:	Temp/Humidity Meter	Cal Date:	11-Apr-06
Remarks:	Calibrated with Vaisala MI70 AN 010699				

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Humidity	%RH	%RH	%RH	%RH	%RH	Result
at 25 °C	20.02	19.67	-0.3	2.0	0.58	Pass
	39.99	39.98	0.0	2.0	0.58	Pass
	60.00	60.18	0.2	2.0	0.58	Pass
	80.03	79.30	-0.7	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
25 °C at %RH	25.161	25.06	-0.1	0.2	0.062	Pass
Set Points	25.163	25.10	-0.1	0.2	0.062	Pass
	25.143	25.09	-0.1	0.2	0.062	Pass
	25.152	25.07	-0.1	0.2	0.062	Pass
Humidity	%RH	%RH	%RH	%RH	%RH	
at 50 °C	20.00	19.13	-0.9	2.0	0.58	Pass
	40.00	39.32	-0.7	2.0	0.58	Pass
	60.04	60.09	0.1	2.0	0.58	Pass
	80.59	81.39	0.8	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
50 °C at %RH	49.036	49.20	0.2	0.2	0.062	Pass
Set Points	48.878	49.00	0.1	0.2	0.062	Pass
	49.895	49.92	0.0	0.2	0.062	Pass
	51.494	51.30	-0.2	0.2	0.062	Pass
Humidity	%RH	%RH	%RH	%RH	%RH	
at 70 °C	19.98	19.64	-0.3	2.0	0.58	Pass
	40.00	39.81	-0.2	2.0	0.58	Pass
	58.92	58.95	0.0	2.0	0.58	Pass
	79.94	79.03	-0.9	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
70 °C at %RH	68.28	68.11	-0.2	0.2	0.062	Pass
Set Points	68.64	68.53	-0.1	0.2	0.062	Pass
	68.91	68.86	-0.1	0.2	0.062	Pass
	68.98	69.00	0.0	0.2	0.062	Pass
Temperature	° C	° C	° C	° C	° C	
100 °C	95.520	95.28	-0.2	1	0.062	Pass
130 °C	125.994	125.85	-0.1	1	0.062	Pass

END OF REPORT