



# 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:** VAISALA HMP77B

**Description:** HUMIDITY/TEMPERATURE PROBE

**Serial No:** Z0750006

**Asset No:** 010700

**Procedure:** HYGROTHERMOGRAPH - 28 MAR, 2006

**Work Order:** 303068479

**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 M170 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 # Z0750006, Asset No.:  
010700 (04/11/2006)

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

Measurements by: Bob Trollinger  
Metrology Technician

Southwest Research Institute  
Calibration Laboratory  
Measurement Report

Work Order:	303068479	Mfr:	Vaisala	Technician:	blt
Asset No:	010700	Model:	HMP77B w- MI70 Meter	Cal Date:	11-Apr-06
Serial No:	Z0750006	Type:	Temp/Humidity Meter		
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	19.24	-0.8	2.0	0.58	Pass
	40.01	39.39	-0.6	2.0	0.58	Pass
	60.40	59.62	-0.8	2.0	0.58	Pass
	79.87	78.44	-1.4	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
25 °C at %RH	25.160	25.05	-0.1	0.2	0.062	Pass
Set Points	25.163	25.09	-0.1	0.2	0.062	Pass
	25.142	25.06	-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	19.99	19.11	-0.9	2.0	0.58	Pass
	40.00	39.77	-0.2	2.0	0.58	Pass
	60.06	59.27	-0.8	2.0	0.58	Pass
	80.55	78.85	-1.7	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
50 °C at %RH	48.880	48.79	-0.1	0.2	0.062	Pass
Set Points	49.141	48.96	-0.2	0.2	0.062	Pass
	49.895	49.97	0.1	0.2	0.062	Pass
	49.361	49.17	-0.2	0.2	0.062	Pass
Humidity	%RH	%RH	%RH	%RH	%RH	
at 70 °C	19.96	19.92	0.0	2.0	0.58	Pass
	40.00	40.07	0.1	2.0	0.58	Pass
	60.41	60.70	0.3	2.0	0.58	Pass
	79.94	79.70	-0.2	2.0	0.58	Pass
Temperature	° C	° C	° C	° C	° C	
70 °C at %RH	68.467	68.44	0.0	0.2	0.062	Pass
Set Points	68.638	68.54	-0.1	0.2	0.062	Pass
	68.683	68.50	-0.2	0.2	0.062	Pass
	68.981	69.00	0.0	0.2	0.062	Pass
Temperature	° C	° C	° C	° C	° C	
100 °C	95.814	94.82	-1.0	1	0.062	Pass
130 °C	125.915	125.71	-0.2	1	0.062	Pass

END OF REPORT