



SOUTHWEST RESEARCH INSTITUTE®

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



Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Cost Center / Customer: DIV20 / DON BANNON

Mail Stop: B51

Manufacturer/Model: VAISALA / HM34C

Description: HUMIDTY/ TEMPERATURE METER

Serial Number: X2020010

Asset Number: 009456

Procedure: TEMPERATURE, HUMIDITY, DEW-POINT - 3 APR 08

Work Order: 303092756

Date Issued: 11-Feb-2010

Date Calibrated: 11-Feb-2010

*** Date Due :** 11-Aug-2010

**** Results:** FOUND-LEFT

Temperature: 79.0 °F

Humidity: 24 %RH

Barometer: N/A

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: None

Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
006404	THUNDER SCIENTIFIC	2500	HUMIDITY GENERATOR	27-May-2009	27-May-2010
009137	HART SCIENTIFIC	1575	SUPER THERMOMETER	16-Nov-2009	16-May-2010
009414	HART SCIENTIFIC	1502A	TEMPERATURE READOUT	13-Nov-2009	13-May-2010
010281	HART SCIENTIFIC	5628	SPRT	1-Feb-2010	1-Feb-2011
015895	HART SCIENTIFIC	5618B	RTD	13-Nov-2009	13-May-2010


Walt Hill

Laboratory Manager


Mark Romero

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303092756	Mfr.	Vaisala	Technician:	Mark Romero
Asset No.	009456	Model	HM34C	Type Data:	Found-left
Serial No.	X2020010	Type.	Humidity/Temperature Meter	Cal Date:	11-Feb-10
Remarks: One-time special calibration consisting of temperatures -20 °C and 0 °C, per custodian request.					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Result	%Limit
Humidity at 20°C (68°F)	% RH	% RH	% RH	% RH	% RH		
	35.0	35.0	0.0	3	0.68	Pass	0%
	50.0	49.4	-0.6	3	0.68	Pass	21%
	65.0	64.3	-0.7	3	0.68	Pass	25%
Temperature	°C	°C	°C	°C	°C		
	-19.5	-19.7	-0.2	0.7	0.13	Pass	29%
	0.3	0.1	-0.2	0.3	0.13	Pass	61%
	20.1	20.0	-0.1	0.7	0.13	Pass	14%

END OF REPORT