



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 of Calibration

0972-01

Submitted By: DIV20
Address: B57
Contact: DON BANNON
Manufacturer Model: METTLER UMT2
Description: BALANCE
Serial No: 211001-142
Asset No: 002028
Procedure: BALANCES & SCALES, DEC/04

Work Order: 303066070
Date Issued: Oct 3, 2005
Calibration Date: Oct 3, 2005
***Calibration Due:** Apr 3, 2006
Calibration Location: B57
Environment: Temp. 73.0°F Hum. 32 %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
005566	B0113L004	MERIAN	A0030P	PRESSURE GAUGE, ABSOLUTE	Oct 13, 05
007290	T4830007	VAISALA	HM34F	HUMIDITY/ TEMPERATURE METER	Apr 11, 06
010442	A007	RICE LAKE	10MG-100G	WEIGHT SET, CLASS 1	Apr 26, 06

Reviewed by: *Jude Morin*
blt () jrg () pwc () wgh ()
Metrology Technician

Jude Morin
Measurements by: Jude Morin
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303066070	Manufacturer:	Mettler	Technician:	jim
Asset Number:	002028	Model:	UMT2	Cal Date:	03-Oct-05
Serial Number:	211001-142	Type:	Balance		
Remarks:	Manufacturer does not provide corner load specifications. Corner load readings are without pass or fail indications.				
Ambient Conditions	73 ° F		32 % RH		14.27 PSIA

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Repeatability	micrograms	micrograms	micrograms	micrograms	micrograms	Result
1	1000000.0	1000013.3				
2	1000000.0	1000013.7				
3	1000000.0	1000013.7				
4	1000000.0	1000013.6				
5	1000000.0	1000013.7				
6	1000000.0	1000013.5				
7	1000000.0	1000013.6				
8	1000000.0	1000013.7				
9	1000000.0	1000013.1				
10	1000000.0	1000013.7				
Std Deviation		0.21		0.50		Pass
Linearity	0.0	0.0	0.0	2.0	0.034	Pass
	199993.8	199994.2	0.4	2.0	0.034	Pass
	399995.7	399993.9	-1.8	2.0	0.034	Pass
	600005.9	600004.3	-1.6	2.0	0.034	Pass
	800007.8	800008.5	0.7	2.0	0.034	Pass
	1000016.2	1000017.6	1.4	2.0	0.034	Pass
	1200010.0	1200011.8	1.8	2.0	0.034	Pass
	1400011.9	1400013.5	1.6	2.0	0.034	Pass
	1600022.1	1600024.0	1.9	2.0	0.034	Pass
	1800024.0	1800023.5	-0.5	2.0	0.034	Pass
	2000022.8	2000024.1	1.3	2.0	0.034	Pass

End of Report