SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory
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ACCREDITED
Certificate #
0972-01

Certificate of Calibration

Submitted By:	DIV20	**Work Order:**	303064366
Address:	B57	**Date Issued:**	May 23, 2005
Contact:	JIM PRIKRYL	**Calibration Date:**	May 23, 2005
Manufacturer Model:	METTLER AE240	***Calibration Due:**	Nov 23, 2005
Description:	BALANCE	**Calibration Location:**	B57
Serial No:	101237	**Environment:**	Temp. 70.3°F Hum. 59 %RH
Asset No:	001439	****Data Type:**	FOUND-LEFT
Procedure:	BALANCES & SCALES, DEC/04		

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
001709	C864	RICE LAKE	20G	WEIGHT, CLASS S	Jun 23, 05
001712	C867	RICE LAKE	100G	WEIGHT, CLASS S	Jun 23, 05
001713	C868	RICE LAKE	200G	WEIGHT, CLASS S	Jun 23, 05
005566	B0113L004	MERIAN	A0030P	PRESSURE GAUGE, ABSOLUTE	Oct 13, 05
007290	T4830007	VAISALA	HM34F	HUMIDTY/ TEMPERATURE METER	Apr 11, 06
007385	73855	TROEMNER	1 MG TO 100 G	WEIGHT SET, CLASS 1	Oct 05, 05

Approved by: Walt Hill
Manager

Measurements by: Curtis Laurence
Metrology Technician

m:\a2la1.rpt Rev date March 6, 2005

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303064366	Mfr.	Mettler	Technician	WCL
Asset No.	001439	Model	AE240		
Serial No.	101237	Type.	Balance	Cal Date.	23-May-05
Remarks:	Manufacturer does not provide corner load specifications. Corner load readings are without pass or fail indications.				
Ambient Conditions	70.3 °F		59 % RH		14.24 PSIA

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
	Ref	20.0000				
Front	20.0000	20.0002	0.0002		0.00012	
Rear	20.0000	20.0001	0.0001		0.00012	
Left	20.0000	20.0006	0.0006		0.00012	
Right	20.0000	20.0002	0.0002		0.00012	
Repeatability						
1	100.0000	100.0000				
2	100.0000	100.0000				
3	100.0000	99.9999				
4	100.0000	99.9999				
5	100.0000	99.9999				
6	100.0000	100.0000				
7	100.0000	99.9999				
8	100.0000	99.9999				
9	100.0000	100.0000				
10	100.0000	100.0000				
Std Deviation		0.00005		0.00010		Pass
Linearity	0.00000	0.00000	0.00000	0.00003	0.000012	Pass
Low Range	4.00000	4.00001	0.00001	0.00003	0.000012	Pass
	8.00000	8.00002	0.00002	0.00003	0.000012	Pass
	12.00000	12.00001	0.00001	0.00003	0.000012	Pass
	16.00000	16.00002	0.00002	0.00003	0.000012	Pass
	20.00000	20.00003	0.00003	0.00003	0.000012	Pass
	24.00000	24.00003	0.00003	0.00003	0.000012	Pass
	28.00000	28.00002	0.00002	0.00003	0.000012	Pass
	32.00000	32.00002	0.00002	0.00003	0.000012	Pass
	36.00000	36.00002	0.00002	0.00003	0.000012	Pass
	40.00000	40.00002	0.00002	0.00003	0.000012	Pass
Linearity	0.0000	0.0000	0.0000	0.0002	0.00012	Pass
High Range	20.0000	20.0001	0.0001	0.0002	0.00012	Pass
	40.0000	40.0001	0.0001	0.0002	0.00012	Pass
	60.0000	60.0001	0.0001	0.0002	0.00012	Pass
	80.0000	80.0001	0.0001	0.0002	0.00012	Pass
	100.0000	100.0000	0.0000	0.0002	0.00012	Pass
	120.0000	120.0002	0.0002	0.0002	0.00012	Pass
	140.0000	140.0001	0.0001	0.0002	0.00012	Pass
	160.0000	160.0001	0.0001	0.0002	0.00012	Pass
	180.0000	180.0002	0.0002	0.0002	0.00012	Pass
	200.0000	199.9999	-0.0001	0.0002	0.00012	Pass

End of Report