SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
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Certificate of Calibration

ACCREDITED
Calibration Laboratory
Certificate #0972-01

Submitted By: DIV20
Address: B51
Contact: DON BANNON
Manufacturer / Model: METTLER / AE240
Description: BALANCE
Serial No: 101237
Asset No: 001439
Procedure: BALANCES & SCALES - 1 DEC 06

Work Order: 303081041
Date Issued: May 13, 2008
Calibration Date: May 13, 2008
***Calibration Due:** Nov 13, 2008
Calibration Location: B57
Environment: Temp. 72.0°F Hum. 55 %RH
****Data Type:** FOUND-LEFT
DivID/Location: 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. **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
001704	C859	RICE LAKE	1G	WEIGHT, CLASS 1	Jun 14, 08
001705	C860	RICE LAKE	2G	WEIGHT, CLASS 1	Jun 14, 08
001706	C861	RICE LAKE	2G	WEIGHT, CLASS 1	Aug 09, 08
001707	C862	RICE LAKE	5G	WEIGHT, CLASS 1	Jun 14, 08
001708	C863	RICE LAKE	10G	WEIGHT, CLASS S	Aug 09, 08
001709	C864	RICE LAKE	20G	WEIGHT, CLASS 1	Aug 09, 08
001710	C865	RICE LAKE	20G	WEIGHT, CLASS 1	Aug 09, 08
001711	C866	RICE LAKE	50G	WEIGHT, CLASS 1	Aug 09, 08
001712	C867	RICE LAKE	100G	WEIGHT, CLASS S	Aug 09, 08
001714	C869	RICE LAKE	200G	WEIGHT, CLASS S	Aug 09, 08

Reviewed by: (✓) srk ( ) mar ( ) wgh

Measurements by: Mark Romero
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303081041	Mfr:	Mettler	Technician:	Mark Romero
Asset No:	001439	Model:	AE240		
Serial No:	101237	Type:	Balance	Cal Date:	13-May-08
Remarks:					
Ambient Conditions	72 °F		55 % RH	14.20 PSIA	

Function/Range	Applied	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
Reference	80.0000					
Front	0.0000	0.0000	0.0000	0.0006		Pass
Rear	0.0000	0.0000	0.0000	0.0006		Pass
Left	0.0000	-0.0001	-0.0001	0.0006		Pass
Right	0.0000	0.0001	0.0001	0.0006		Pass
Repeatability						
<41g Range						
1	20.00000	20.00010				
2	20.00000	20.00011				
3	20.00000	20.00011				
4	20.00000	20.00011				
5	20.00000	20.00010				
6	20.00000	20.00009				
7	20.00000	20.00010				
8	20.00000	20.00011				
9	20.00000	20.00009				
10	20.00000	20.00012				
Std Deviation		0.000010		0.000040		Pass
Repeatability						
<205g Range						
1	100.0000	99.9999				
2	100.0000	99.9999				
3	100.0000	99.9999				
4	100.0000	99.9999				
5	100.0000	99.9999				
6	100.0000	99.9999				
7	100.0000	99.9999				
8	100.0000	100.0000				
9	100.0000	100.0000				
10	100.0000	99.9998				
Std Deviation		0.00006		0.00020		Pass

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303081041	Mfr:	Mettler	Technician:	Mark Romero
Asset No:	001439	Model:	AE240		
Serial No:	101237	Type:	Balance	Cal Date:	13-May-08

Function/Range	Applied	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Linearity	grams	grams	grams	grams	grams	Result
<41g Range						
Nominal	Conventional					
Value (g)	Mass					
0.00000	0.00000	0.00000	0.00000	0.00008	0.00013	Pass
4.00000	4.00001	3.99999	-0.00002	0.00008	0.00013	Pass
8.00000	7.99997	7.99995	-0.00002	0.00008	0.00013	Pass
12.00000	11.99994	11.99992	-0.00002	0.00008	0.00013	Pass
16.00000	15.99989	15.99987	-0.00002	0.00008	0.00013	Pass
20.00000	20.00003	20.00009	0.00006	0.00008	0.00013	Pass
24.00000	24.00004	24.00006	0.00002	0.00008	0.00013	Pass
28.00000	28.00000	28.00000	0.00000	0.00008	0.00013	Pass
32.00000	31.99997	31.99999	0.00002	0.00008	0.00013	Pass
36.00000	34.99995	34.99999	0.00004	0.00008	0.00013	Pass
40.00000	40.00012	40.00010	-0.00002	0.00008	0.00013	Pass
Linearity						
<205g Range						
Nominal	Conventional					
Value (g)	Mass					
0.0000	0.0000	0.0000	0.0000	0.0006	0.00015	Pass
20.0000	20.0000	20.0000	0.0000	0.0006	0.00015	Pass
40.0000	40.0001	40.0001	0.0000	0.0006	0.00015	Pass
60.0000	59.9999	59.9999	0.0000	0.0006	0.00015	Pass
80.0000	80.0000	80.0000	0.0000	0.0006	0.00015	Pass
100.0000	99.9999	100.0000	0.0001	0.0006	0.00015	Pass
120.0000	119.9999	120.0000	0.0001	0.0006	0.00015	Pass
140.0000	140.0000	140.0002	0.0002	0.0006	0.00015	Pass
160.0000	159.9998	159.9999	0.0001	0.0006	0.00015	Pass
180.0000	179.9999	180.0001	0.0002	0.0006	0.00015	Pass
200.0000	200.0000	200.0002	0.0002	0.0006	0.00015	Pass

End of Report