SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory
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ACCREDITED
Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Submitted By: DIV20
Address: B57
Contact: DON BANNON
Manufacturer / Model: SARTORIUS / ME215S
Description: BALANCE
Serial No: 12809099
Asset No: 008780
Procedure: BALANCES AND SCALES - 1 DEC 2006

Work Order: 303074506
Date Issued: May 11, 2007
Calibration Date: May 11, 2007
***Calibration Due:** Nov 11, 2007
Calibration Location: B57
Environment: Temp. 70.1°F Hum. 56 %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
001708	C863	RICE LAKE	10G	WEIGHT, CLASS S	Aug 15, 07
001709	C864	RICE LAKE	20G	WEIGHT, CLASS S	Aug 16, 07
001710	C865	RICE LAKE	20G	WEIGHT, CLASS S	Aug 15, 07
001711	C866	RICE LAKE	50G	WEIGHT, CLASS S	Aug 15, 07
001712	C867	RICE LAKE	100G	WEIGHT, CLASS S	Aug 16, 07
001713	C868	RICE LAKE	200G	WEIGHT, CLASS S	Aug 15, 07

Reviewed by: ( ) wgh ( ) srk ( ) jrg ( ) blt ( ) pwl
Metrology Technician

Measurements by: Mark Romero
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303074506	Mfr:	Sartorius	Technician:	Mark Romero
Asset No:	008780	Model:	ME215S		
Serial No:	12809099	Type:	Balance	Cal Date:	11-May-07
Remarks:					
Ambient Conditions	69.9 °F		48 % RH		14.28 PSIA

Function/Range	Applied	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
Reference	100.00000					
Front	0.00000	0.00000	0.00000	0.00020		Pass
Rear	0.00000	-0.00011	-0.00011	0.00020		Pass
Left	0.00000	0.00000	0.00000	0.00020		Pass
Right	0.00000	0.00002	0.00002	0.00020		Pass
Repeatability						
1	100.00000	99.99992				
2	100.00000	99.99996				
3	100.00000	99.99998				
4	100.00000	99.99998				
5	100.00000	99.99998				
6	100.00000	99.99996				
7	100.00000	99.99996				
8	100.00000	99.99996				
9	100.00000	99.99996				
10	100.00000	99.99998				
Std Deviation		0.000018		0.000050		Pass
Linearity						
Nominal	Conventional					
Value (g)	Mass					
0.00000	0.00000	0.00000	0.00000	0.00020	0.00008	Pass
20.00000	20.00003	20.00003	0.00000	0.00020	0.00008	Pass
40.00000	40.00007	40.00003	-0.00004	0.00020	0.00008	Pass
60.00000	59.99997	59.99992	-0.00005	0.00020	0.00008	Pass
80.00000	80.00000	80.00000	0.00000	0.00020	0.00008	Pass
100.00000	100.00008	99.99990	-0.00018	0.00020	0.00008	Pass
120.00000	120.00011	119.99996	-0.00015	0.00020	0.00008	Pass
140.00000	140.00015	140.00004	-0.00011	0.00020	0.00008	Pass
160.00000	160.00005	159.99992	-0.00013	0.00020	0.00008	Pass
180.00000	180.00008	180.00002	-0.00006	0.00020	0.00008	Pass
200.00000	199.99959	199.99961	0.00002	0.00020	0.00008	Pass

End of Report