SOUTHWEST RESEARCH INSTITUTE®

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

ACCREDITED
Certificate #
0972-01

Certificate of Calibration

Submitted By: DIV20
Address: B57
Contact: DARRELL DUNN
Manufacturer Model: SARTORIUS ME215S
Description: BALANCE
Serial No: 12809099
Asset No: 008780
Procedure: BALANCES & SCALES, DEC/04

Work Order: 303064221
Date Issued: May 11, 2005
Calibration Date: May 11, 2005
***Calibration Due:** Nov 11, 2005
Calibration Location: B57
Environment: Temp. 72.0°F Hum. 60 %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
001708	C863	RICE LAKE	10G	WEIGHT, CLASS S	Jun 23, 05
001709	C864	RICE LAKE	20G	WEIGHT, CLASS S	Jun 23, 05
001710	C865	RICE LAKE	20G	WEIGHT, CLASS S	Jun 23, 05
001711	C866	RICE LAKE	50G	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

Approved by: Walt Hill
Manager

Measurements by: Scott Kester
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303064221	Manufacturer:	Sartorius	Technician:	SRK
Asset Number:	008780	Model:	ME215S		
Serial Number:	12809099	Type:	Balance	Cal Date:	11-May-05
Remarks:	Manufacturer does not provide corner load specifications. Corner load readings are without pass or fail indications.				
Ambient Conditions	72 ° F		60 % RH		14.21 PSIA

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
Reference	100.00000	99.99972				
Front	99.99972	99.99972	0.00000		0.000045	
Rear	99.99972	99.99976	0.00004		0.000045	
Left	99.99972	99.99972	0.00000		0.000045	
Right	99.99972	99.99975	0.00003		0.000045	
Repeatability						
1	100.00000	99.99966				
2	100.00000	99.99965				
3	100.00000	99.99963				
4	100.00000	99.99964				
5	100.00000	99.99962				
6	100.00000	99.99963				
7	100.00000	99.99962				
8	100.00000	99.99961				
9	100.00000	99.99960				
10	100.00000	99.99963				
Std Deviation		0.000018		0.000030		Pass
Linearity	0.00000	0.00000	0.00000	0.00010	0.000071	Pass
	20.00000	19.99996	-0.00004	0.00010	0.000071	Pass
	40.00000	39.99996	-0.00004	0.00010	0.000071	Pass
	60.00000	59.99996	-0.00004	0.00010	0.000071	Pass
	80.00000	79.99995	-0.00005	0.00010	0.000071	Pass
	100.00000	99.99996	-0.00004	0.00010	0.000071	Pass
	120.00000	119.99995	-0.00005	0.00010	0.000071	Pass
	140.00000	139.99995	-0.00005	0.00010	0.000071	Pass
	160.00000	159.99996	-0.00004	0.00010	0.000071	Pass
	180.00000	179.99994	-0.00006	0.00010	0.000071	Pass
	200.00000	199.99992	-0.00008	0.00010	0.000071	Pass

End of Report