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:**	303069103
Address:	B57	**Date Issued:**	May 9, 2006
Contact:	DON BANNON	**Calibration Date:**	May 9, 2006
Manufacturer Model:	SARTORIUS 3808-MP8	***Calibration Due:**	Nov 9, 2006
Description:	BALANCE	**Calibration Location:**	B57
Serial No:	39030006	**Environment:**	Temp. 72.0°F Hum. 45 %RH
Asset No:	001444	****Data Type:**	FOUND-LEFT
Procedure:	BALANCES & SCALES - 11 APR, 2006		

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
001716	C871	RICE LAKE	1KG	WEIGHT, CLASS S	Jul 06, 06
001717	C872	RICE LAKE	2KG	WEIGHT, CLASS 1	Jul 06, 06
001718	C873	RICE LAKE	2KG	WEIGHT, CLASS 1	Jul 06, 06
001719	C874	RICE LAKE	5KG	WEIGHT, CLASS 1	Jul 06, 06
011230	21QW	RICE LAKE	25KG	WEIGHT, CLASS 1	Sep 14, 06
011231	21QX	RICE LAKE	10KG	WEIGHT, CLASS 1	Sep 14, 06
011232	21QY	RICE LAKE	5KG	WEIGHT, CLASS 1	Sep 14, 06

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Instrument calibration record for Sartorius Balance, Model # 3808-MP8, Serial # 39030006 (05/09/2006)

Reviewed by: blt ( ) jrg ( ) pwc ( ) wgh ( )
Metrology Technician

Measurements by: Leo Salazar
Metrology Technician

m:\a2la1.rpt Rev date August 15, 2005

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303069103	Manufacturer:	Sartorius	Technician:	lgs
Asset Number:	001444	Model:	3808-MP8		
Serial Number:	3808-MP8	Type:	Balance	Cal Date:	09-May-06
Remarks:	Manufacturer does not provide corner load specifications. Corner load readings are without pass or fail indications.				
Ambient Conditions	72 ° F		45 % RH		14.33 PSIA

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
Reference	15000.0	14999.9				
Front	14999.9	14999.8	-0.1		0.075	
Rear	14999.9	14999.9	0.0		0.075	
Left	14999.9	15000.0	0.1		0.075	
Right	14999.9	14999.9	0.0		0.075	
Repeatability						
1	15000.0	14999.9				
2	15000.0	14999.8				
3	15000.0	14999.9				
4	15000.0	15000.0				
5	15000.0	14999.9				
6	15000.0	14999.9				
7	15000.0	14999.8				
8	15000.0	14999.9				
9	15000.0	15000.0				
10	15000.0	14999.9				
Std Deviation		0.07		0.20		Pass
Linearity	0.0	0.0	0.0	0.4	0.075	Pass
	3000.0	3000.1	0.1	0.4	0.075	Pass
	6000.0	6000.2	0.2	0.4	0.075	Pass
	9000.0	9000.2	0.2	0.4	0.075	Pass
	12000.0	12000.2	0.2	0.4	0.075	Pass
	15000.0	15000.2	0.2	0.4	0.075	Pass
	18000.0	17999.8	-0.2	0.4	0.075	Pass
	21000.0	20999.8	-0.2	0.4	0.075	Pass
	24000.0	23999.9	-0.1	0.4	0.075	Pass
	27000.0	26999.8	-0.2	0.4	0.075	Pass
	30000.0	29999.9	-0.1	0.4	0.075	Pass

End of Report