



SOUTHWEST RESEARCH INSTITUTE®

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Institute Quality Systems
Institute Calibration Laboratory
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Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: OHAUS / AV3102

Description: BALANCE

Serial No: 8028091195

Asset No: 012867

Procedure: BALANCES & SCALES - 1 DEC 06

Work Order: 303077323

Date Issued: Nov 5, 2007

Calibration Date: Nov 5, 2007

*Calibration Due: May 5, 2008

Calibration Location: B51

Environment: Temp. 70.0°F Hum. 40 %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
001712	C867	RICE LAKE	100G	WEIGHT, CLASS S	Aug 09, 08
001713	C868	RICE LAKE	200G	WEIGHT, CLASS S	Aug 09, 08
001714	C869	RICE LAKE	200G	WEIGHT, CLASS S	Aug 09, 08
001715	C870	RICE LAKE	500G	WEIGHT, CLASS S	Jun 14, 08
001716	C871	RICE LAKE	1KG	WEIGHT, CLASS 1	Jun 12, 08
001717	C872	RICE LAKE	2KG	WEIGHT, CLASS 1	Jun 12, 08

Scott Kerk

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

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

Mark Romero

Measurements by: Mark Romero
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303077323	Mfr:	Ohaus	Technician:	Mark Romero
Asset No:	012867	Model:	AV3102		
Serial No:	8028091195	Type:	Balance	Cal Date:	05-Nov-07

Remarks:

Ambient Conditions 70 °F 40 % RH 14.40 PSIA

Function/Range	Applied	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
Corner Load	grams	grams	grams	grams	grams	Result
Reference	2000.00					
Front	0.00	-0.03	-0.03	0.04		Pass
Rear	0.00	0.00	0.00	0.04		Pass
Left	0.00	0.01	0.01	0.04		Pass
Right	0.00	-0.02	-0.02	0.04		Pass
Repeatability						
1	2000.00	2000.01				
2	2000.00	2000.00				
3	2000.00	2000.00				
4	2000.00	2000.00				
5	2000.00	2000.00				
6	2000.00	2000.01				
7	2000.00	2000.00				
8	2000.00	2000.00				
9	2000.00	2000.00				
10	2000.00	2000.00				
Std Deviation		0.004		0.020		Pass
Linearity	0.00	0.00	0.00	0.04	0.015	Pass
	300.00	300.01	0.01	0.04	0.015	Pass
	600.00	600.00	0.00	0.04	0.015	Pass
	900.00	900.00	0.00	0.04	0.015	Pass
	1200.00	1200.00	0.00	0.04	0.015	Pass
	1500.00	1500.00	0.00	0.04	0.015	Pass
	1800.00	1800.00	0.00	0.04	0.015	Pass
	2100.00	2100.00	0.00	0.04	0.015	Pass
	2400.00	2400.00	0.00	0.04	0.015	Pass
	2700.00	2700.00	0.00	0.04	0.015	Pass
	3000.00	2999.98	-0.02	0.04	0.015	Pass

End of Report