



SOUTHWEST RESEARCH INSTITUTE®

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



Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Cost Center / Customer: DIV20 / DON BANNON

Mail Stop: B51

Manufacturer/Model: OHAUS / AV3102

Description: BALANCE

Serial Number: 8028091195

Asset Number: 012867

Procedure: BALANCES & SCALES - 1 DEC 06

Work Order: 303091238

Date Issued: 10-Nov-2009

Date Calibrated: 10-Nov-2009

*** Date Due :** 10-May-2010

**** Results:** FOUND-LEFT

Temperature: 73.0 °F

Humidity: 64 %RH

Barometer: 14.42 psia

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. **Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired. As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of $k=2$.

Remarks: None

Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
001712	RICE LAKE	100 G	WEIGHT, CLASS 1	4-Aug-2009	4-Aug-2010
001713	RICE LAKE	200 G	WEIGHT, CLASS 1	4-Aug-2009	4-Aug-2010
001714	RICE LAKE	200 G	WEIGHT, CLASS S	4-Aug-2009	4-Aug-2010
001715	RICE LAKE	500 G	WEIGHT, CLASS S	4-Aug-2009	4-Aug-2010
001716	RICE LAKE	1 KG	WEIGHT, CLASS 1	5-Jun-2009	5-Jun-2010
001717	RICE LAKE	2 KG	WEIGHT, CLASS 1	5-Jun-2009	5-Jun-2010


Walt Henn

Laboratory Manager


Carlos Mendoza

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303091238	Mfr:	Ohaus	Technician:	com
Asset No:	012867	Model:	AV3102	Type Data:	Found-left
Serial No:	8028091195	Type:	Balance	Cal Date:	10-Nov-09

Remarks:

Function/Range	Applied	TI Reading	Difference	± Limit	Result	% Limit
Corner Load	grams	grams	grams	grams		
Reference	2000					
Front		1999.98	-0.02	0.04	Pass	50%
Rear		2000.01	0.01		Pass	25%
Left		2000.00	0.00		Pass	0%
Right		2000.00	0.00		Pass	0%
Repeatability	grams	grams				
1	2000	2000.00				
2		1999.99				
3		1999.99				
4		2000.00				
5		1999.99				
6		1999.99				
7		1999.99				
8		2000.00				
9		2000.00				
10		2000.00				
Std Deviation		0.005		0.020	Pass	26%

Function/Range	Applied	TI Reading	Difference	± Limit	± Uncertainty	Result	% Limit
Direct Weighing	grams	grams	grams	grams	grams		
	0	0.00	0.00	0.04	0.013	Pass	0%
	300	299.99	-0.01			Pass	25%
	600	599.99	-0.01			Pass	25%
	900	899.99	-0.01			Pass	25%
	1200	1200.00	0.00			Pass	0%
	1500	1499.99	-0.01			Pass	25%
	1800	1800.01	0.01			Pass	25%
	2100	2100.01	0.01			Pass	25%
	2400	2400.01	0.01			Pass	25%
	2700	2700.02	0.02			Pass	50%
	3000	3000.02	0.02			Pass	50%

END OF REPORT