

Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163



Company Name & Address:	Date of Test:	Test Number:
Joe Ordile	5/27/2016	2016-050
Fairbanks Scales	Serial Number: Assorted 1000's and 5000 Cart	
4850 Broadway		
Denver, CO 80216		

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Items were in decent condition with no discernable defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
21.95	21.15	666.50	22.36	47.11

Conventional Mass Value: _____ Assumed Density of Artifacts: 7.2 g/cm³

Nominal	Serial No.	As Found (g)	As Left (g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
1000 lb	113-01	13.1	13.1	5.8	45	2.28
1000 lb	113-20	-17.9	-17.9	5.8	45	2.28
1000 lb	113-02	-11.9	-11.9	5.8	45	2.28
1000 lb	113-28	-4.9	-4.9	5.8	45	2.28
1000 lb	113-23	8.1	8.1	5.8	45	2.28
1000 lb	113-05	30.1	30.1	5.8	45	2.28
1000 lb	113-38	8.1	8.1	5.8	45	2.28
1000 lb	116-32	-18.9	-18.9	5.8	45	2.28
1000 lb	113-03	-13.9	-13.9	5.8	45	2.28

Standards and Procedures used for testing:

The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7

All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:

The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:

The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: *Dave Fraser*

David Fraser

Email: dafraser@mt.gov

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Certificate of Mass Calibration

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2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163

Company Name & Address: Joe Ordile Fairbanks Scales 4850 Broadway Denver, CO 80216	Date of Test: 5/27/2016	Test Number: 2016-050
Serial Number: Assorted 1000's and 5000 Cart		

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
Description and condition of artifacts received: Items were in decent condition with no discernable defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
21.95	21.15	666.50	22.36	47.11

Conventional Mass Value: Assumed Density of Artifacts: 7.2 g/cm³

Nominal	Serial No.	As Found (g)	As Left (g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
1000 lb	113-27	-19.9	-19.9	5.8	45	2.28
1000 lb	113-29	-40.9	0.1	5.8	45	2.28
1000 lb	113-04	-8.9	-8.9	5.8	45	2.28
1000 lb	113-06	-4.9	-4.9	5.8	45	2.28
1000 lb	113-37	-13.9	-13.9	5.8	45	2.28
1000 lb	113-31	-12.9	-12.9	5.8	45	2.28
1000 lb	113-25	6.1	6.1	5.8	45	2.28
5000 lb	5000 lb	195	195	15	680	2.28

Standards and Procedures used for testing:

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(406)449-2582 FAX (406)443-8163

Company Name & Address:

Joe Ordile
Fairbanks Scales
4850 Broadway
Denver, CO 80216

Date of Test:

5/25/2016

Test Number:

2016-055

Kit Number

No Kit #

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received:

5/23/2016

Description and condition of artifacts received:

Items were in good condition with no discernable defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
21.23	22.58	669.04	41.54	42.42

Conventional Mass Value:

Assumed Density of Artifacts:

7.2 g/cm³

Nominal	Serial No.	As Found ± (g)	As Left ± (g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
50 lb	4	2.33	0.16	0.30	2.3	2.28
50 lb	10	-0.02	-0.02	0.30	2.3	2.28
50 lb	7	0.13	0.13	0.30	2.3	2.28
50 lb	F-103	-5.37	0.04	0.30	2.3	2.28
50 lb	D-01	2.84	-0.22	0.30	2.3	2.28
50 lb	FWS-D-31	2.88	0.26	0.30	2.3	2.28
50 lb	FWS-D-21	-0.73	-0.73	0.30	2.3	2.28
50 lb	8	0.34	0.34	0.30	2.3	2.28
50 lb	5	0.68	0.68	0.30	2.3	2.28

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State Metrologist: Dave Fraser

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(406)449-2582 FAX (406)443-8163

Company Name & Address:

Joe Ordile
Fairbanks Scales
4850 Broadway
Denver, CO 80216

Date of Test:

5/25/2016

Test Number:

2016-055

Kit Number

No Kit #

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Date these weights were received:

5/23/2016

Description and condition of artifacts received:

Items were in good condition with no discernable defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
21.23	22.58	669.04	41.54	42.42

Conventional Mass Value:

Assumed Density of Artifacts:

7.2 g/cm³

Nominal	Serial No.	As Found ± (g)	As Left ± (g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
50 lb	260-M	-4.68	0.14	0.30	2.3	2.28
50 lb	1-D-255	-0.82	0.10	0.30	2.3	2.28

Standards and Procedures used for testing:

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(406)449-2582 FAX (406)443-8163



Company Name & Address:		Date of Test:	Test Number:
Joe Ordile		5/25/2016	2016-051
Fairbanks Scales		Kit Number No I.D. #	
4850 Broadway			
Denver, CO 80216			

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Items were in poor condition. Crushed case, filthy weights, no cover for box.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
22.05	23.23	676.15	45.90	47.51

Conventional Mass Value: _____ Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ±(g)	NIST 105-1 Class F ±(g)	k factor
5 lb 1	No I.D. #	-0.248	-0.039	0.017	0.23	2.28
5 lb 2	No I.D. #	-0.247	-0.021	0.017	0.23	2.28
5 lb 3	No I.D. #	-0.194	0.006	0.017	0.23	2.28
5 lb 4	No I.D. #	-0.119	-0.119	0.017	0.23	2.28
5 lb 5	No I.D. #	-0.295	-0.005	0.017	0.23	2.28
1 lb 1	No I.D. #	-0.0055	-0.0055	0.002 2	0.07	2.28
1 lb 2	No I.D. #	0.0055	0.0055	0.002 2	0.07	2.28
1 lb 3	No I.D. #	-0.0123	-0.0123	0.002 2	0.07	2.28
1 lb 4	No I.D. #	-0.0085	-0.0085	0.0022	0.07	2.28

Standards and Procedures used for testing:

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(406)449-2582 FAX (406)443-8163

Company Name & Address: Joe Ordile Fairbanks Scales 4850 Broadway Denver, CO 80216	Date of Test: 5/25/2016	Test Number: 2016-051
	Kit Number No I.D. #	

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Items were in poor condition. Crushed case, filthy weights, no cover for box.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
23.00	24.47	676.15	58.80	47.10

Conventional Mass Value: Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
1 lb 5	No I.D. #	-0.0177	-0.0177	0.0022	0.07	2.28
8 oz	No I.D. #	0.0052	0.0052	0.0022	0.045	2.28
0.2 lb	No I.D. #	0.0025	0.0025	0.0019	0.0180	2.28
0.2 lb *	No I.D. #	0.0030	0.0030	0.0019	0.0180	2.28
0.1 lb	No I.D. #	0.0011	0.0011	0.0010	0.0091	2.28
0.05 lb	No I.D. #	0.00059	0.00059	0.00053	0.00450	2.28
0.02 lb	No I.D. #	0.00035	0.00035	0.00034	0.00180	2.28
0.02 lb *	No I.D. #	0.00029	0.00029	0.00034	0.00180	2.28
0.01 lb	No I.D. #	-0.00055	-0.00055	0.00027	0.00150	2.28

Standards and Procedures used for testing:
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 (406)449-2582 FAX (406)443-8163



Company Name & Address:	Date of Test:	Test Number:
Joe Ordile	5/25/2016	2016-051
Fairbanks Scales		Kit Number
4850 Broadway		No I.D. #
Denver, CO 80216		

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim-product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Items were in poor condition. Crushed case, filthy weights, no cover for box.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
23.00	24.47	676.15	58.80	47.10

Conventional Mass Value:		Assumed Density of Artifacts:		7.84 g/cm ³		
Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
0.005 lb	No I.D. #	-0.00018	-0.00018	0.00031	0.00120	2.28
0.002 lb	No I.D. #	-0.00011	-0.00011	0.00014	0.00087	2.28
0.002 lb *	No I.D. #	0.00067	0.00067	0.00014	0.00087	2.28
0.001 lb	No I.D. #	-0.00009	-0.00009	0.00014	0.0007	2.28

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 (406)449-2582 FAX (406)443-8163

Company Name & Address:	Date of Test:	Test Number:
Joe Ordile	5/25/2016	2016-051
Fairbanks Scales		Kit Number
4850 Broadway		No I.D. #
Denver, CO 80216		

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Date these weights were received: 5/23/2016

Description and condition of artifacts received: Items were in poor condition. Crushed case, filthy weights, no cover for box

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
24.06	48.00	664.46	34.00	42.00

Conventional Mass Value: Assumed Density of Artifacts: 2.70 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor

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 (406)449-2582 FAX (406)443-8163

Company Name & Address: Joe Ordile Fairbanks Scales 4850 Broadway Denver, CO 80216	Date of Test: 5/26/2016	Test Number: 2016-056
	Kit Number FB01G	

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Larger weights had some scratches, smaller weights had few defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
21.23	22.19	671.83	41.52	42.38

Conventional Mass Value: _____ Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ±(g)	k factor
1 kg	FB01G	0.037	0.037	0.012	0.1	2.28
500 g	FB01G	0.008 2	0.008 2	0.008 3	0.07	2.28
200 g - 1	FB01G	0.017 3	0.017 3	0.005 1	0.04	2.28
200 g - 2	FB01G	0.006 1	0.006 1	0.005 1	0.04	2.28
100 g	FB01G	0.006 9	0.006 9	0.000 7	0.02	2.28
50 g	FB01G	0.001 9	0.001 9	0.000 7	0.01	2.28
20 g -1	FB01G	0.000 6	0.000 6	0.000 1	0.004	2.28
20 g -2	FB01G	0.000 9	0.000 9	0.000 1	0.004	2.28
10 g	FB01G	0.000 5	0.000 5	0.000 1	0.002	2.28

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(406)449-2582 FAX (406)443-8163



Company Name & Address:	Date of Test:	Test Number:
Joe Ordile	5/26/2016	2016-056
Fairbanks Scales		
4850 Broadway	Kit Number	
Denver, CO 80216	FB01G	

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Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Larger weights had some scratches, smaller weights had few defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
20.44	20.90	661.92	40.43	40.56

Conventional Mass Value: _____ Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
5 g	FB01G	0.000 18	0.000 18	0.000 27	0.001 5	2.28
2 g -1	FB01G	0.000 15	0.000 15	0.000 27	0.001 1	2.28
2 g -2	FB01G	0.000 47	0.000 47	0.000 27	0.001 1	2.28
1 g	FB01G	0.000 35	0.000 35	0.000 04	0.000 9	2.28

Standards and Procedures used for testing:

The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7

All procedures used in this laboratory are in accordance with National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:

The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:

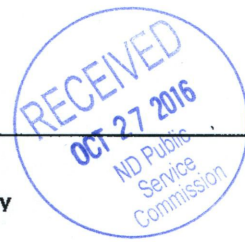
The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty In Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: *Dave Fraser*

David Fraser

Email: dafraser@mt.gov

This document shall not be reproduced except in full without prior written agreement given by the State Metrologist.



Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163

Company Name & Address:

Joe Ordile
Fairbanks Scales
4850 Broadway
Denver, CO 80216

Date of Test:

5/25/2016

Test Number:

2016-052

Kit Number

#2

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received:

5/23/2016

Description and condition of artifacts received:

Items were in good condition.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
22.26	23.23	666.75	41.00	42.56

Conventional Mass Value:

Assumed Density of Artifacts:

7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
8 oz	#2	0.0132	0.0132	0.0022	0.045	2.28
8 oz	#2	0.0080	0.0080	0.0022	0.045	2.28
8 oz	#2	0.0090	0.0090	0.0022	0.045	2.28
8 oz	#2	0.0166	0.0166	0.0022	0.045	2.28
8 oz	#2	0.0122	0.0122	0.0022	0.045	2.28
8 oz	#2	0.0100	0.0100	0.0022	0.045	2.28
8 oz	#2	0.0136	0.0136	0.0022	0.045	2.28
8 oz	#2	0.0110	0.0110	0.0022	0.045	2.28
8 oz	#2	0.0128	0.0128	0.0022	0.045	2.28

Standards and Procedures used for testing:

The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7

All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:

The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:

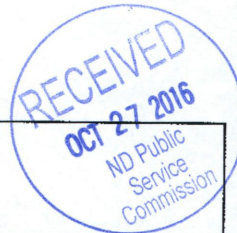
The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: *Dave Fraser*

David Fraser

Email: dafraser@mt.gov

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Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163

Company Name & Address:

Joe Ordile
Fairbanks Scales
4850 Broadway
Denver, CO 80216

Date of Test:

5/25/2016

Test Number:

2016-052

Kit Number

#2

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received:

5/23/2016

Description and condition of artifacts received:

Items were in good condition.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
23.00	24.47	666.75	58.80	47.10

Conventional Mass Value:

Assumed Density of Artifacts:

7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
8 oz	#2	0.0208	0.0208	0.0022	0.045	2.28
8 oz	#2	0.0204	0.0204	0.0022	0.045	2.28
8 oz	#2	0.0124	0.0124	0.0022	0.045	2.28
8 oz	#2	0.0162	0.0162	0.0022	0.045	2.28
8 oz	#2	0.0102	0.0102	0.0022	0.045	2.28

Standards and Procedures used for testing:

The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7

All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:

The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:

The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated *k* factor, for a confidence level of 95.45%.

State Metrologist: Dave Fraser

David Fraser

Email: dafraser@mt.gov

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Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163

Company Name & Address:

Joe Ordile
Fairbanks Scales
4850 Broadway
Denver, CO 80216

Date of Test:

5/23/2016

Test Number:

2016-053

Kit Number

FB026

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received:

5/25/2016

Description and condition of artifacts received:

Items were in good condition with no discernable defects.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
20.44	22.64	666.75	40.43	42.57

Conventional Mass Value:

Assumed Density of Artifacts:

7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ±(g)	NIST 105-1 Class F ±(g)	k factor
500 g	FB026	0.0084	0.0084	0.0083	0.07	2.28
200 g	FB026	0.0171	0.0171	0.0051	0.04	2.28
200 g *	FB026	0.0066	0.0066	0.0051	0.04	2.28
100 g	FB026	0.00590	0.00590	0.00073	0.02	2.28
50 g	FB026	0.00085	0.00085	0.00073	0.01	2.28
20 g	FB026	0.00141	0.00141	0.00014	0.004	2.28
20 g *	FB026	0.00119	0.00119	0.00014	0.004	2.28
10 g	FB026	0.00090	0.00090	0.00014	0.002	2.28
2 g	FB026	0.00017	0.00017	0.00027	0.0011	2.28

Standards and Procedures used for testing:

The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7

All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:

The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:

The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: Dave Fraser

David Fraser

Email: dafrazer@mt.gov

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Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163



Company Name & Address:	Date of Test:	Test Number:
Joe Ordile	5/26/2016	2016-054
Fairbanks Scales		
4850 Broadway	Kit Number	
Denver, CO 80216	FB01A	

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
Description and condition of artifacts received: Items were scratched but in overall good condition.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
22.34	23.23	674.12	40.25	41.57

Conventional Mass Value: _____ Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ±(g)	k factor
5 lb A	FB01A	0.056	0.056	0.017	0.23	2.28
5 lb B	FB01A	0.077	0.077	0.017	0.23	2.28
5 lb C	FB01A	0.101	0.101	0.017	0.23	2.28
5 lb D	FB01A	0.095	0.095	0.017	0.23	2.28
5 lb E	FB01A	0.101	0.101	0.017	0.23	2.28
1 lb A	FB01A	0.0224	0.0224	0.002 2	0.07	2.28
1 lb B	FB01A	0.0193	0.0193	0.002 2	0.07	2.28
1 lb C	FB01A	0.0149	0.0149	0.002 2	0.07	2.28
1 lb D	FB01A	0.0109	0.0109	0.0022	0.07	2.28

Standards and Procedures used for testing:
The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7
All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, Issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:
The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:
The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, Issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: *Dave Fraser*

David Fraser

Email: dafraser@mt.gov

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Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163



Company Name & Address: Joe Ordile Fairbanks Scales 4850 Broadway Denver, CO 80216	Date of Test: 5/26/2016	Test Number: 2016-054
	Kit Number FB01A	

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
Description and condition of artifacts received: Items were scratched but in overall good condition.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
23.00	24.47	674.12	58.80	47.10

Conventional Mass Value:		Assumed Density of Artifacts:		7.84 g/cm ³		
Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ±(g)	NIST 105-1 Class F ±(g)	k factor
1 lb E	FB01A	0.0221	0.0221	0.0022	0.07	2.28
8 oz	FB01A	0.0114	0.0114	0.0022	0.045	2.28
0.2 lb	FB01A	0.0055	0.0055	0.0019	0.0180	2.28
0.2 lb *	FB01A	0.0077	0.0077	0.0019	0.0180	2.28
0.1 lb	FB01A	0.0029	0.0029	0.0010	0.0091	2.28
0.05 lb	FB01A	0.00097	0.00097	0.00053	0.00450	2.28
0.02 lb	FB01A	0.00036	0.00036	0.00034	0.00180	2.28
0.02 lb *	FB01A	-0.00045	-0.00045	0.00034	0.00180	2.28
0.01 lb	FB01A	-0.00043	-0.00043	0.00027	0.00150	2.28

Standards and Procedures used for testing:
The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7
All procedures used in this laboratory are in accordance with National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:
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Uncertainty Statement:
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State Metrologist: *Dave Fraser*

David Fraser

Email: dafraser@mt.gov
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Certificate of Mass Calibration

Montana Department of Labor & Industry Metrology Laboratory
2801 N Cooke St. Helena, Montana 59601
(406)449-2582 FAX (406)443-8163

Company Name & Address: Joe Ordile Fairbanks Scales 4850 Broadway Denver, CO 80216	Date of Test: 5/26/2016	Test Number: 2016-054
	Kit Number FB01A	

All results contained within this report only relate to the item(s) listed in this report. This calibration report must not be used to claim product endorsement by the State of Montana or any other government agency.

Date these weights were received: 5/23/2016
 Description and condition of artifacts received: Items were scratched but in overall good condition.

Environmental Conditions at Time of Test:

Temperature °C		Pressure mmHg	Relative Humidity %	
Start	End	Duration of Test	Start	End
23.00	24.47	674.12	58.80	47.10

Conventional Mass Value: Assumed Density of Artifacts: 7.84 g/cm³

Nominal	Serial No.	As Found ±(g)	As Left ±(g)	Uncertainty ± (g)	NIST 105-1 Class F ± (g)	k factor
0.005 lb	FB01A	-0.00116	-0.00116	0.00031	0.00120	2.28
0.002 lb *	FB01A	-0.00008	-0.00008	0.00014	0.00087	2.28
0.002 lb **	FB01A	-0.00021	-0.00021	0.00014	0.00087	2.28
0.001 lb	FB01A	0.00010	0.00010	0.00014	0.0007	2.28

Standards and Procedures used for testing:
 The Standards used for this comparison are continuously monitored by a measurement control program for ensuring continued accuracy and traceability within the level of uncertainty reported. These standards were calibrated by a nationally accredited laboratory on 10/2009 (Reports on File) and are traceable to the SI. The test number listed above is traceable to National Standards through an unbroken chain of comparison each having stated uncertainties. This information is on file and available upon request.

Procedure Used: SOP-7
 All procedures used in this laboratory are in accordance to National Institute of Standards and Technology Intermediate Report (NISTIR) 6969, issue February 2012, and the *Quality Assurance of Metrological Measurements*.

Traceability Statement:
 The equipment in this report has been compared to the standards of the State of Montana. The States equipment complies with the specifications and tolerances listed in NIST 105-1 Class F tolerances. The standards of the State of Montana are traceable to the SI through the National Institute of Standards and Technology.

Uncertainty Statement:
 The expanded uncertainty presented in this report is consistent with the 1993 *ISO Guide to Expression of Uncertainty in Measurement* and follows *NISTIR 6969*, issue February 2012, SOP-29. The reported uncertainty is calculated by combining the uncertainty of the standard used, with the uncertainty of the measurement process in a root sum square formula using a calculated k factor, for a confidence level of 95.45%.

State Metrologist: Dave Fraser

Email: dafraser@mt.gov

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United States Department of Commerce

National Institute of Standards and Technology

Certificate of Metrological Traceability For:

Montana

This laboratory has demonstrated evidence of an unbroken chain of metrological traceability of its standards to the international system of units (SI), documented measurement uncertainties, uses documented measurement procedures, successfully completed training and proficiency tests, documented calibration intervals, submitted a quality management system, and demonstrated suitable measurement assurance for the Scope listed on this certificate.

The Office of Weights and Measures Program assesses laboratories to NIST Handbook 143 - Program Handbook for State Weights and Measures Laboratories and ISO/IEC 17025:2005.

Scope

Mass Echelon III	Volume Transfer, II
30 kg to 1 mg	1500 gal to 5 gal
3000 lb to 0.001 lb	100 gal LPG to 25 gal LPG
8 oz to 0.03125 oz	
Weight Carts	
5000 lb to 2000 lb	



2016

A handwritten signature in black ink, appearing to read "Carol T. Hockerl".

Carol T. Hockerl, Chief
NIST Office of Weights and Measures

Effective Dates: 2016-01-01 to 2016-12-31