



2005

Weights & Measures Metrology Laboratory
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Receipt Date: December 9, 2011
Test Date: December 13, 2011
Report Date: December 13, 2011

State Test No.: 328638
Set Serial No.: 3-1 to 3-20

Calibration Report

HAWKEYE STATE SCALE
5040 BLAIRS FOREST WAY NE
CEDAR RAPIDS, IA 52402
Contact: JOHN FISHBECK
Phone: 319-364-4173
PO Number: None
SOP: 12
Technician ID: 08

Item(s) Submitted: 1000 lb Cast Weights
Manufacturer: Rice Lake
ASTM E617 Type: II
Equipment ID#: None
Condition: Good
Temperature: 20.2°C
Pressure: 744.2 mmHg
Relative Humidity: 39. %

| Nominal Value | lb | Serial No. | Correction (g) | | NIST HB105-1 Class | | Unc. (g) (k=2) |
|---------------|----|------------|----------------|---------|--------------------|---------|----------------|
| | | | As Found | As Left | As Found | As Left | |
| 1000 | lb | 3-1 | 6. | 6. | F | F | 1.4 |
| 1000 | lb | 3-2 | -29.6 | -29.6 | F | F | 1.4 |
| 1000 | lb | 3-3 | -14.7 | -14.7 | F | F | 1.4 |
| 1000 | lb | 3-4 | -21.6 | -21.6 | F | F | 1.4 |
| 1000 | lb | 3-5 | -25.7 | -25.7 | F | F | 1.4 |
| 1000 | lb | 3-6 | -11.5 | -11.5 | F | F | 1.4 |
| 1000 | lb | 3-7 | 15.7 | 15.7 | F | F | 1.4 |
| 1000 | lb | 3-8 | -36. | -36. | F | F | 1.4 |
| 1000 | lb | 3-9 | -25.2 | -25.2 | F | F | 1.4 |
| 1000 | lb | 3-10 | -5. | -5. | F | F | 1.4 |
| 1000 | lb | 3-11 | -18.3 | -18.3 | F | F | 1.4 |
| 1000 | lb | 3-12 | -38.7 | -38.7 | F | F | 1.4 |
| 1000 | lb | 3-13 | 24.1 | 24.1 | F | F | 1.4 |
| 1000 | lb | 3-14 | -41.1 | -41.1 | F | F | 1.4 |
| 1000 | lb | 3-15 | -36. | -36. | F | F | 1.4 |
| 1000 | lb | 3-16 | -37.1 | -37.1 | F | F | 1.4 |
| 1000 | lb | 3-17 | 29.4 | 29.4 | F | F | 1.4 |
| 1000 | lb | 3-18 | 14.5 | 14.5 | F | F | 1.4 |
| 1000 | lb | 3-19 | -4.3 | -4.3 | F | F | 1.4 |
| 1000 | lb | 3-20 | -43.2 | -43.2 | F | F | 1.4 |

When used as a set these weights meet NIST HB 105-1 class F tolerances.

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³. The items listed above have been compared to the Standards of the State of Minnesota which are currently in control. These standards are traceable to the National Institute of Standards and Technology (NIST) through NIST Test Number 822/277846-09 and/or 822/263029-00. Calibration processes were monitored and found to be in control. Uncertainty calculations conform to NIST Technical Note 1297. Results apply to items identified in this report only.

Nils Fleming

Metrologist

Reviewed by:
Bruce Adams

Approved Signatory



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2005

Receipt Date: December 9, 2011 State Test No.: 328639
Test Date: December 12 & 13, 2011 Set Serial No.: 3-21 to 3-40
Report Date: December 13, 2011

Calibration Report

HAWKEYE STATE SCALE
5040 BLAIRS FOREST WAY NE
CEDAR RAPIDS, IOWA 52402
Contact: JOHN FISHBECK
Phone: 319-364-4173
PO Number: none
SOP: 12
Technician ID: 02

Item(s) Submitted: Cast hand weights
Manufacturer: Asst Cast Mfg
ASTM E617 Type: II
Equipment ID#: None
Condition: Poor
Temperature: 20.1°C
Pressure: 742.9 mmHg
Relative Humidity: 35. %

| Nominal Value | Serial No. | Correction (mg) | | NIST HB105-1 Class | | Unc. (mg) (k=2) |
|---------------|------------|-----------------|---------|--------------------|---------|-----------------|
| | | As Found | As Left | As Found | As Left | |
| 50 lb | 3 - 22 | -1300 | -1300. | F | F | 62. |
| 50 lb | 3 - 23 | -3870 | 1880. | * | F | 62. |
| 50 lb | 3 - 24 | -2610 | -90. | * | F | 62. |
| 50 lb | 3 - 25 | -970 | -970. | F | F | 62. |
| 50 lb | 3 - 26 | -430 | -430. | F | F | 62. |
| 50 lb | 3 - 27 | -2690 | 480. | * | F | 62. |
| 50 lb | 3 - 28 | -2860 | 100. | * | F | 62. |
| 50 lb | 3 - 29 | -3710 | 120. | * | F | 62. |
| 50 lb | 3 - 30 | -4570 | 190. | * | F | 62. |
| 50 lb | 3 - 31 | -6410 | 30. | * | F | 62. |
| 50 lb | 3 - 32 | -1880 | -1880. | F | F | 62. |
| 50 lb | 3 - 33 | 3590 | -60. | * | F | 62. |
| 50 lb | 3 - 34 | -4450 | 10. | * | F | 62. |
| 50 lb | 3 - 35 | -3200 | -340. | * | F | 62. |
| 50 lb | 3 - 36 | -3150 | 1490. | * | F | 62. |
| 50 lb | 3 - 37 | -9080 | 420. | * | F | 62. |
| 50 lb | 3 - 38 | -3970 | 350. | * | F | 62. |
| 50 lb | 3 - 39 | 0 | 0. | F | F | 62. |
| 50 lb | 3 - 40 | -3470 | 80. | * | F | 62. |
| 50 lb | 3 - 2? | -2070 | -120. | F | F | 62. |
| 20 lb | 3 - 40 | -1460 | 230. | * | F | 61. |

* Weight(s) as found exceed NIST HB 105-1 Class F tolerance.

These weights meet NIST HB 105-1 class F tolerances, but do NOT meet NIST HB 105-1 Class F specifications.

The resulting tolerance class of the weight is determined by combining the correction of the weight and the uncertainty of the measurement. The corrections given above correlate to a conventional mass scale versus 8.0 g/cm3 density and an air density of 1.2 mg/cm3. The items listed above have been compared to the Standards of the State of Minnesota which are currently in control. These standards are traceable to the National Institute of Standards and Technology (NIST) through NIST Test Number 822/277846-09 and/or 822/263029-00. Calibration processes were monitored and found to be in control. Uncertainty calculations conform to NIST Technical Note 1297. Results apply to items identified in this report only.

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NVLAP LAB CODE 105003

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