



Receipt Date: July 23, 2018
Cal. Date: July 24, 2018
Report Date: July 24, 2018

Report No.: 339691
Set Serial No.: 4 51 - 4 70
Barcode: 201350

Calibration Certificate

HAWKEYE STATE SCALE
5040 BLAIRS FOREST WAY NE
CEDAR RAPIDS, IA 52402
Contact: DUANE SYTSMA
Phone: 319-364-4173
PO Number: NONE
Procedure: NIST SOP 8
Technician ID: 11

Item(s) Submitted: Cast Hand Weights
Manufacturer: Rice Lake
Weight Type: II
Equipment ID: None
Condition: Good
Temperature: 21.2 °C
Pressure: 739.9 mmHg
Relative Humidity: 49.7 %

Nominal Value	Serial No.	CM Correction (mg)		NIST HB105-1 Class		k	U (mg)
		As Found	As Left	As Found	As Left		
50 lb	4 51	-2326	24	*	F	2.01	54
50 lb	4 52	-326	-326	F	F	2.01	54
50 lb	4 53	-2236	414	F	F	2.01	54
50 lb	4 54	-1156	-1156	F	F	2.01	54
50 lb	4 55	-1956	-1956	F	F	2.01	54
50 lb	4 56	-2646	4	*	F	2.01	54
50 lb	4 57	154	154	F	F	2.01	54
50 lb	4 58	-2146	-2146	F	F	2.01	54
50 lb	4 59	-1476	-1476	F	F	2.01	54
50 lb	4 60	-2406	64	*	F	2.01	54
50 lb	4 61	-2896	314	*	F	2.01	54
50 lb	4 62	-2716	14	*	F	2.01	54
50 lb	4 63	-2186	-2186	F	F	2.01	54
50 lb	4 64	-1516	-1516	F	F	2.01	54
50 lb	4 65	-3206	454	*	F	2.01	54
50 lb	4 66	-2676	154	*	F	2.01	54
50 lb	4 67	-4706	144	*	F	2.01	54
50 lb	4 68	-656	-656	F	F	2.01	54
50 lb	4 69	-2466	114	*	F	2.01	54
50 lb	4 70	-1196	-1196	F	F	2.01	54

* Weight(s) as found exceed NIST Class F Tolerance.

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 at 20 °C. The items listed above have been calibrated using the Standards of the State of Minnesota which are currently in control. These standards are traceable to the SI through NIST. Calibration processes were monitored and found to be in control. All of the tolerances and specifications were evaluated according to NIST Handbook 105-1 (1990). Uncertainty calculations contain the components in NIST SOP 8 and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Results apply to items identified in this report only.

Pete Whobbe

Metrologist

Reviewed by:

Heidi Jones

Laboratory Administrator