



# Calibration Certificate 14482

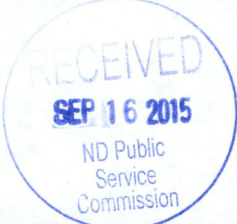
Missouri Department of Agriculture

Weights, Measures & Consumer Protection Division, Metrology Laboratory

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Certificate Expires  
June 2017

**FarmChem Corporation; 616 Madison St; Floyd, IA; 50435; Phone:**

Rev(6/15)

Submission Date: 6/29/15 Customer Number: 708 Calibration Date: 6/29/15

### Test Item(s) Description

(1 - 30 lb weight set; fractional oz; Material Type: stainless steel; Tolerance: NIST Class F; Manufacturer: Rice Lake; Serial: 5FB7; Condition: good; Weight Range: 10 lb to 1 oz)

### Method and Traceability

The SI unit for mass is the kilogram (kg) 1 kg = 1000 g and 1 lb = 453.59237 g

National Institute of Standards and Technology (NIST) modified substitution procedure SOP 8 compares a standard and an unknown weight once to determine the difference. The Missouri metrology laboratory has demonstrated measurement proficiency through training and interlaboratory comparisons compliant to NIST HB 143:2007 (ISO/IEC 17025:2010); Laboratory standards used for comparison are traceable to the international system of units (SI) through NIST.

### Uncertainty Information

[Link NIST SOPs](#)

The reported uncertainty is the root sum square of the uncertainty of the standard, the standard deviation of the process (obtained using a check standard which characterizes balance performance), and an uncorrected systematic error for lack of buoyancy corrections, multiplied by a coverage factor<sup>1</sup> from the t distribution table which is based on the measurement degrees of freedom<sup>2</sup> for a 95.45% confidence interval. Magnetism was not included in the uncertainty evaluation.

Conditions During Test: (Temperature 20.0 °C) (Barometric Pressure 743.0 mmHg) (Humidity 45 %)

Calibrating Metrologist: Kevin Hanson

Lab Manager: *Kevin Hanson*

Date Calibrated: 6/29/15

Weights are not checked for magnetism with this procedure. The weight surface finish was visually inspected with a Flexbar surface finish comparator and is considered adequate for the tolerance class listed unless otherwise noted in the "Remarks" section. This document shall not be reproduced except in full or used to claim product endorsement by this laboratory without written approval from the Missouri Metrology Lab. The results listed in this report only apply to the items calibrated.

Please follow this link and fill out our online survey.

[Metrology-Customer-Survey](#)

FarmChem Corporation Cert No. 14482 Weight Set Serial: 5FB7

Nominal Value	Units	Standard Serial/ID	As Found Value	Value If Adjusted	± Tolerance NIST Class F	± Measurement Uncertainty	<sup>1</sup> t Table k factor	<sup>2</sup> Degrees of Freedom
10 lb		●●	127 mg		450 mg	54 mg	2.03	100
5 lb		A	93 mg		230 mg	28 mg	2.03	100
5 lb		B	83 mg		230 mg	28 mg	2.03	100
5 lb		C	104 mg		230 mg	28 mg	2.03	100
5 lb		D	91 mg		230 mg	28 mg	2.03	100
2 lb			26 mg		91 mg	11 mg	2.03	100
1 lb			26 mg		70 mg	8.4 mg	2.03	100
1 lb		E	18 mg		70 mg	8.4 mg	2.03	100
8 oz			7 mg		45 mg	5.4 mg	2.03	100
4 oz			6.7 mg		23 mg	2.2 mg	2.03	100
2 oz			3.2 mg		11 mg	1.1 mg	2.03	100
1 oz			0.77 mg		5.4 mg	0.54 mg	2.03	100