



Dave Heineman
Governor

State of Nebraska

DEPARTMENT OF AGRICULTURE
GREGORY A. IBACH
Director

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524

CERTIFICATION FOR STANDARDS OF MEASUREMENT

Agency: Food Safety & Consumer Protection
Area 10

Date: 9/15/2014
Agency ID: 10
NE Cert No: 20140083
P.O. No:

Submitted By: Eugene Haase

Electronic Copy Page 1

Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
50 lb	A5C-5	1	F	A
50 lb	C-C1	1	F	A
50 lb	C-C10	1	F	A
50 lb	C-C13	1	F	A
50 lb	C-C14	1	F	A
50 lb	C-C15	1	F	A
50 lb	C-C16	1	F	A
50 lb	C-C18	1	F	A
50 lb	C-C19	1	F	A
50 lb	C-C2	1	F	A
50 lb	C-C3	1	F	A
50 lb	C-C4	1	F	A
50 lb	C-C6	1	F	A
50 lb	C-C8	1	F	A
2 kg	K1	1	F	A
25 lb	WM25-24	1	F	A
1 kg	WM-2-89-5	1	F	A
500 g	WM-2-89-5	2	F	A
200 g	WM-2-89-5	3	F	A
200 g*	WM-2-89-5	4	F	A
100 g	WM-2-89-5	5	F	A
50 g	WM-2-89-5	6	F	A
20 g	WM-2-89-5	7	F	A
20 g*	WM-2-89-5	8	F	A
10 g	WM-2-89-5	9	F	A

Department of Agriculture, 301 Centennial Mall South
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P.O. Box 94947
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Weights and Measures
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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
5 g	WM-2-89-5	10	F	A
2 g	WM-2-89-5	11	F	A
2 g*	WM-2-89-5	12	F	A
1 g	WM-2-89-5	13	F	A
500 mg	WM-2-89-5	14	F	A
200 mg	WM-2-89-5	15	F	A
200 mg*	WM-2-89-5	16	F	A
100 mg	WM-2-89-5	17	F	A
5 lb	WM-2C86	1	F	A
5 lb	WM-2C86	2	F	A
5 lb	WM-2C86	3	F	A
5 lb	WM-2C86	4	F	A
5 lb	WM-2C86	5	F	A
1 lb	WM-2C86	6	F	A
1 lb	WM-2C86	7	F	A
1 lb	WM-2C86	8	F	A
1 lb	WM-2C86	9	F	A
1 lb	WM-2C86	10	F	A
8 oz	WM-2C86	11	F	A
4 oz	WM-2C86	12	F	A
2 oz	WM-2C86	13	F	A
1 oz	WM-2C86	14	F	A
0.5 oz	WM-2C86	15	F	A
0.25 oz	WM-2C86	16	F	A
0.125 oz	WM-2C86	17	F	A
0.0625 oz	WM-2C86	18	F	A
25 lb	WM-D51	1	F	A
25 lb	WM-D52	1	F	A
25 lb	WM-D53	1	F	A
25 lb	WM-D54	1	F	A
25 lb	WM-D55	1	F	A
25 lb	WM-D56	1	F	A
25 lb	WM-D57	1	F	A
25 lb	WM-D58	1	F	A
25 lb	WM-D59	1	F	A
25 lb	WM-D60	1	F	A

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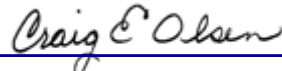
Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
25 lb	WM-D61	1	F	A
1000 lb	WME1	1	F	A
1000 lb	WME10	1	F	A
1000 lb	WME11	1	F	A
1000 lb	WME12	1	F	A
1000 lb	WME13	1	F	A
1000 lb	WME15	1	F	A
1000 lb	WME17	1	F	A
1000 lb	WME19	1	F	A
1000 lb	WME2	1	F	A
1000 lb	WME20	1	F	A
1000 lb	WME21	1	F	A
1000 lb	WME22	1	F	A
1000 lb	WME23	1	F	A
1000 lb	WME24	1	F	A
1000 lb	WME3	1	F	A
1000 lb	WME4	1	F	A
1000 lb	WME5	1	F	A
1000 lb	WME6	1	F	A
1000 lb	WME7	1	F	A
1000 lb	WME9	1	F	A

These field standards have been compared with our reference standards and found to be within the tolerances for their class, or condemned, as prescribed by the National Institute of Standards and Technology. These field standards also meet the required specifications.

The reference standards used are traceable to the National Institute of Standards and Technology (NIST). Our traceability is maintained through control charts, regional inter-comparisons and periodic recertifications. This certificate is issued by the Nebraska Department of Agriculture / Division of Weights and Measures. Reproduction of this certificate must include the entire document (including all attached papers).

See 'Test Results' attached

See report/letter attached



Craig E. Olsen

Nebraska State Metrologist

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 8 - Modified Substitution Test Results

Form No.: NE04LF9-R00

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Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
A5C-5	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.2960000 g	2.3 g	0.0528057 g	A
C-C1	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.6860000 g	2.3 g	0.0528057 g	A
C-C10	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.7940000 g	2.3 g	0.0528057 g	A
C-C13	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.6710000 g	2.3 g	0.0528057 g	A
C-C14	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.1540000 g	2.3 g	0.0528057 g	A
C-C15	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.5310000 g	2.3 g	0.0528057 g	A
C-C16	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.9890000 g	2.3 g	0.0528057 g	A
C-C18	1	0	50 lb	KA30-3_50lb	NSL-50-1	-2.1560000 g	2.3 g	0.0528057 g	A
C-C18	1	1	50 lb	KA30-3_50lb	NSL-50-1	-0.6060000 g	2.3 g	0.0528057 g	A
C-C19	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.6590000 g	2.3 g	0.0528057 g	A
C-C2	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.9690000 g	2.3 g	0.0528057 g	A
C-C3	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.4060000 g	2.3 g	0.0528057 g	A
C-C4	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.0560000 g	2.3 g	0.0528057 g	A
C-C6	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.5840000 g	2.3 g	0.0528057 g	A
C-C8	1	0	50 lb	KA30-3_50lb	NSL-50-1	2.4940000 g	2.3 g	0.0528057 g	R
C-C8	1	1	50 lb	KA30-3_50lb	NSL-50-1	-0.2510000 g	2.3 g	0.0528057 g	A
K1	1	0	2 kg	CC1000S_2kg	2kgd	-0.0281800 g	0.2 g	0.0008625 g	A
WM25-24	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.5980000 g	1.1 g	0.0419651 g	A
WM-2-89-5	1	0	1 kg	CC1201_1 kg	1kgd	0.0682700 g	0.1 g	0.0004694 g	A
WM-2-89-5	2	0	500 g	CC1201_1 kg	500gd	0.0370780 g	0.07 g	0.0004360 g	A
WM-2-89-5	3	0	200 g	CC1201_1 kg	200gd	0.0151140 g	0.04 g	0.0004353 g	A
WM-2-89-5	4	0	200 g*	CC1201_1 kg	200gd	0.0081140 g	0.04 g	0.0004353 g	A
WM-2-89-5	5	0	100 g	AT106_100g	100gv	-0.0065300 g	0.02 g	0.0000588 g	A
WM-2-89-5	6	0	50 g	AT106_50g	50gv	-0.0028050 g	0.01 g	0.0000362 g	A
WM-2-89-5	7	0	20 g	AT106_20g	20gv	-0.0006460 g	0.004 g	0.0000252 g	A
WM-2-89-5	8	0	20 g*	AT106_20g	20gv	-0.0005900 g	0.004 g	0.0000252 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

"As received" values for weights may not be a true "as found" value because these weights could have been cleaned and/or repainted prior to submission to this lab. Due to handling, storage and/or environmental factors; the reported values are valid only while test items are within our control. No calibration period or interval is given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

Agency ID: 10
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 Area 10

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Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
WM-2-89-5	9	0	10 g	AT106_10g	10gv	0.0002917 g	0.002 g	0.0000221 g	A
WM-2-89-5	10	0	5 g	CCE6_5 gm	5gv	-0.0004315 g	0.0015 g	0.0000166 g	A
WM-2-89-5	11	0	2 g	CCE6_5 gm	2gv	-0.0003170 g	0.0011 g	0.0000164 g	A
WM-2-89-5	12	0	2 g*	CCE6_5 gm	2gv	0.0005982 g	0.0011 g	0.0000164 g	A
WM-2-89-5	13	0	1 g	CCE6_1 gm	1gv	0.0001304 g	0.0009 g	0.0000165 g	A
WM-2-89-5	14	0	500 mg	CCE6_1 gm	500mgv	0.0003892 g	0.00072 g	0.0000165 g	A
WM-2-89-5	15	0	200 mg	CCE6_1 gm	200mgv	-0.0000136 g	0.00054 g	0.0000164 g	A
WM-2-89-5	16	0	200 mg*	CCE6_1 gm	200mgv	0.0003522 g	0.00054 g	0.0000164 g	A
WM-2-89-5	17	0	100 mg	CCE6_100 mg	100mgv	-0.0001032 g	0.00043 g	0.0000164 g	A
WM-2C86	1	0	5 lb	CC10000S_5lb	NSL-5-1	-0.1245000 g	0.23 g	0.0017179 g	A
WM-2C86	2	0	5 lb	CC10000S_5lb	NSL-5-1	-0.1000000 g	0.23 g	0.0017179 g	A
WM-2C86	3	0	5 lb	CC10000S_5lb	NSL-5-1	-0.1221000 g	0.23 g	0.0017179 g	A
WM-2C86	4	0	5 lb	CC10000S_5lb	NSL-5-1	-0.1354000 g	0.23 g	0.0017179 g	A
WM-2C86	5	0	5 lb	CC10000S_5lb	NSL-5-1	-0.1377000 g	0.23 g	0.0017179 g	A
WM-2C86	6	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0184200 g	0.07 g	0.0004591 g	A
WM-2C86	7	0	1 lb	CC1201_1 lb	NSL-1-1	0.0048800 g	0.07 g	0.0004591 g	A
WM-2C86	8	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0029200 g	0.07 g	0.0004591 g	A
WM-2C86	9	0	1 lb	CC1201_1 lb	NSL-1-1	0.0141800 g	0.07 g	0.0004591 g	A
WM-2C86	10	0	1 lb	CC1201_1 lb	NSL-1-1	0.0086800 g	0.07 g	0.0004591 g	A
WM-2C86	11	0	8 oz	CC1201_8 oz	NSL-8-1	0.0043300 g	0.045 g	0.0005132 g	A
WM-2C86	12	0	4 oz	CC1201_8 oz	NSL-Z	0.0051440 g	0.023 g	0.0005104 g	A
WM-2C86	13	0	2 oz	AT106_0.2 lb	NSL-Y	0.0040310 g	0.011 g	0.0000514 g	A
WM-2C86	14	0	1 oz	AT106_0.2 lb	2A9-1oz	0.0003860 g	0.0054 g	0.0000485 g	A
WM-2C86	15	0	0.5 oz	AT106_0.05 lb	2A9-1.2oz	0.0007800 g	0.0028 g	0.0000241 g	A
WM-2C86	16	0	0.25 oz	AT106_0.05 lb	2A9-1.4oz	-0.0000950 g	0.0017 g	0.0000231 g	A
WM-2C86	17	0	0.125 oz	CCE6_0.01 lb	2A9-1.8oz	-0.0004056 g	0.0013 g	0.0001934 g	A
WM-2C86	18	0	0.0625 oz	CCE6_0.01 lb	2A9-1.16oz	0.0003828 g	0.0011 g	0.0001933 g	A
WM-D51	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.6580000 g	1.1 g	0.0419651 g	A
WM-D52	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4130000 g	1.1 g	0.0419651 g	A
WM-D53	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.1470000 g	1.1 g	0.0419651 g	A
WM-D54	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4730000 g	1.1 g	0.0419651 g	A
WM-D55	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.0120000 g	1.1 g	0.0419651 g	A
WM-D56	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.6330000 g	1.1 g	0.0419651 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

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Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
WM-D57	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.0220000 g	1.1 g	0.0419651 g	A
WM-D58	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.6070000 g	1.1 g	0.0419651 g	A
WM-D59	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.0620000 g	1.1 g	0.0419651 g	A
WM-D60	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.2770000 g	1.1 g	0.0419651 g	A
WM-D61	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.3570000 g	1.1 g	0.0419651 g	A
WME1	1	0	1000 lb	XP604KM_1K lb	C24	-26.9201000 g	45 g	3.3136624 g	A
WME10	1	0	1000 lb	XP604KM_1K lb	C24	11.7799000 g	45 g	3.3136624 g	A
WME11	1	0	1000 lb	XP604KM_1K lb	C24	-27.0201000 g	45 g	3.3136624 g	A
WME12	1	0	1000 lb	XP604KM_1K lb	C24	-46.5201000 g	45 g	3.3136624 g	R
WME12	1	1	1000 lb	XP604KM_1K lb	C24	18.7799000 g	45 g	3.3136624 g	A
WME13	1	0	1000 lb	XP604KM_1K lb	C24	-26.7201000 g	45 g	3.3136624 g	A
WME15	1	0	1000 lb	XP604KM_1K lb	C24	-62.6201000 g	45 g	3.3136624 g	R
WME15	1	1	1000 lb	XP604KM_1K lb	C24	22.7799000 g	45 g	3.3136624 g	A
WME17	1	0	1000 lb	XP604KM_1K lb	C24	4.0799000 g	45 g	3.3136624 g	A
WME19	1	0	1000 lb	XP604KM_1K lb	C24	6.4799000 g	45 g	3.3136624 g	A
WME2	1	0	1000 lb	XP604KM_1K lb	C24	-28.1201000 g	45 g	3.3136624 g	A
WME20	1	0	1000 lb	XP604KM_1K lb	C24	26.4799000 g	45 g	3.3136624 g	A
WME21	1	0	1000 lb	XP604KM_1K lb	C24	50.5799000 g	45 g	3.3136624 g	R
WME21	1	1	1000 lb	XP604KM_1K lb	C24	28.7799000 g	45 g	3.3136624 g	A
WME22	1	0	1000 lb	XP604KM_1K lb	C24	6.9799000 g	45 g	3.3136624 g	A
WME23	1	0	1000 lb	XP604KM_1K lb	C24	-33.5201000 g	45 g	3.3136624 g	A
WME24	1	0	1000 lb	XP604KM_1K lb	C24	13.5799000 g	45 g	3.3136624 g	A
WME3	1	0	1000 lb	XP604KM_1K lb	C24	11.8799000 g	45 g	3.3136624 g	A
WME4	1	0	1000 lb	XP604KM_1K lb	C24	-46.2201000 g	45 g	3.3136624 g	R
WME4	1	1	1000 lb	XP604KM_1K lb	C24	18.4799000 g	45 g	3.3136624 g	A
WME5	1	0	1000 lb	XP604KM_1K lb	C24	-52.8201000 g	45 g	3.3136624 g	R
WME5	1	1	1000 lb	XP604KM_1K lb	C24	21.3799000 g	45 g	3.3136624 g	A
WME6	1	0	1000 lb	XP604KM_1K lb	C24	-20.9201000 g	45 g	3.3136624 g	A
WME7	1	0	1000 lb	XP604KM_1K lb	C24	-14.7201000 g	45 g	3.3136624 g	A
WME9	1	0	1000 lb	XP604KM_1K lb	C24	-43.0201000 g	45 g	3.3136624 g	A
WME9	1	1	1000 lb	XP604KM_1K lb	C24	18.3799000 g	45 g	3.3136624 g	A

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