



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 35

Date: 9/8/2014
Agency ID: 35
NE Cert No: 20140082
P.O. No:

Submitted By: Mike Boehler

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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
50 lb	A5C-1	1	F	A
50 lb	A5C-11	1	F	A
50 lb	A5C-4	1	F	A
1000 lb	B10	1	F	A
1000 lb	B12	1	F	A
1000 lb	B13	1	F	A
1000 lb	B14	1	F	A
1000 lb	B17	1	F	A
1000 lb	B18	1	F	A
1000 lb	B19	1	F	A
1000 lb	B2	1	F	A
1000 lb	B20	1	F	A
1000 lb	B21	1	F	A
1000 lb	B22	1	F	A
1000 lb	B23	1	F	A
1000 lb	B3	1	F	A
1000 lb	B4	1	F	A
1000 lb	B5	1	F	A
1000 lb	B6	1	F	A
1000 lb	B7	1	F	A
1000 lb	B8	1	F	A
1000 lb	B9	1	F	A
50 lb	B-C-1	1	F	A
50 lb	B-C-10	1	F	A
50 lb	B-C-11	1	F	A

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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
50 lb	B-C-12	1	F	A
50 lb	B-C-2	1	F	A
50 lb	B-C-3	1	F	A
50 lb	B-C-4	1	F	A
50 lb	B-C-5	1	F	A
50 lb	B-C-6	1	F	A
50 lb	B-C-7	1	F	A
50 lb	B-C-8	1	F	A
50 lb	B-C-9	1	F	A
1000 lb	C-20	1	F	A
2 kg	K2	1	F	A
1000 lb	OA20	1	F	A
1 kg	WM-2-89-3	1	F	A
500 g	WM-2-89-3	2	F	A
200 g	WM-2-89-3	3	F	A
200 g*	WM-2-89-3	4	F	A
100 g	WM-2-89-3	5	F	A
50 g	WM-2-89-3	6	F	A
20 g	WM-2-89-3	7	F	A
20 g*	WM-2-89-3	8	F	A
10 g	WM-2-89-3	9	F	A
5 g	WM-2-89-3	10	F	A
2 g*	WM-2-89-3	12	F	A
1 g	WM-2-89-3	13	F	A
500 mg	WM-2-89-3	14	F	A
200 mg	WM-2-89-3	15	F	A
200 mg*	WM-2-89-3	16	F	A
100 mg	WM-2-89-3	17	F	A
5 lb	WM-2B86	1	F	A
5 lb	WM-2B86	2	F	A
5 lb	WM-2B86	3	F	A
5 lb	WM-2B86	4	F	A
5 lb	WM-2B86	5	F	A
1 lb	WM-2B86	6	F	A
1 lb	WM-2B86	7	F	A
1 lb	WM-2B86	8	F	A

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Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
1 lb	WM-2B86	9	F	A
1 lb	WM-2B86	10	F	A
8 oz	WM-2B86	11	F	A
4 oz	WM-2B86	12	F	A
4 oz	WM-2B86	13	F	A
2 oz	WM-2B86	14	F	A
1 oz	WM-2B86	15	F	A
0.5 oz	WM-2B86	16	F	A
0.25 oz	WM-2B86	17	F	A
0.125 oz	WM-2B86	18	F	A
50 lb	WM50-12	1	F	A
50 lb	WM50-16	1	F	A
50 lb	WM50-52	1	F	A
50 lb	WM50-53	1	F	A
50 lb	WM50-7	1	F	A
25 lb	WM-D15	1	F	A
25 lb	WM-D23	1	F	A
25 lb	WM-D24	1	F	A
25 lb	WM-D25	1	F	A
25 lb	WM-D26	1	F	A
25 lb	WM-D28	1	F	A
25 lb	WM-D29	1	F	A
25 lb	WM-D44	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

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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-1	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.6640000 g	2.3 g	0.0528057 g	A
A5C-11	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.4540000 g	2.3 g	0.0528057 g	A
A5C-4	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.8740000 g	2.3 g	0.0528057 g	A
B10	1	0	1000 lb	XP604KM_1K lb	C24	-50.4201000 g	45 g	3.3136624 g	R
B10	1	1	1000 lb	XP604KM_1K lb	C24	0.2799000 g	45 g	3.3136624 g	A
B12	1	0	1000 lb	XP604KM_1K lb	C24	-20.4201000 g	45 g	3.3136624 g	A
B13	1	0	1000 lb	XP604KM_1K lb	C24	-14.6201000 g	45 g	3.3136624 g	A
B14	1	0	1000 lb	XP604KM_1K lb	C24	-21.6201000 g	45 g	3.3136624 g	A
B17	1	0	1000 lb	XP604KM_1K lb	C24	-24.3201000 g	45 g	3.3136624 g	A
B18	1	0	1000 lb	XP604KM_1K lb	C24	-67.2201000 g	45 g	3.3136624 g	R
B18	1	1	1000 lb	XP604KM_1K lb	C24	8.4799000 g	45 g	3.3136624 g	A
B19	1	0	1000 lb	XP604KM_1K lb	C24	-55.9201000 g	45 g	3.3136624 g	R
B19	1	1	1000 lb	XP604KM_1K lb	C24	18.8799000 g	45 g	3.3136624 g	A
B2	1	0	1000 lb	XP604KM_1K lb	C24	-54.4201000 g	45 g	3.3136624 g	R
B2	1	1	1000 lb	XP604KM_1K lb	C24	20.5799000 g	45 g	3.3136624 g	A
B20	1	0	1000 lb	XP604KM_1K lb	C24	-61.4201000 g	45 g	3.3136624 g	R
B20	1	1	1000 lb	XP604KM_1K lb	C24	22.4799000 g	45 g	3.3136624 g	A
B21	1	0	1000 lb	XP604KM_1K lb	C24	-50.4201000 g	45 g	3.3136624 g	R
B21	1	1	1000 lb	XP604KM_1K lb	C24	17.6799000 g	45 g	3.3136624 g	A
B22	1	0	1000 lb	XP604KM_1K lb	C24	-71.2201000 g	45 g	3.3136624 g	R
B22	1	1	1000 lb	XP604KM_1K lb	C24	23.3799000 g	45 g	3.3136624 g	A
B23	1	0	1000 lb	XP604KM_1K lb	C24	-89.4201000 g	45 g	3.3136624 g	R
B23	1	1	1000 lb	XP604KM_1K lb	C24	37.1799000 g	45 g	3.3136624 g	A
B3	1	0	1000 lb	XP604KM_1K lb	C24	-2.9201000 g	45 g	3.3136624 g	A
B4	1	0	1000 lb	XP604KM_1K lb	C24	-63.7201000 g	45 g	3.3136624 g	R
B4	1	1	1000 lb	XP604KM_1K lb	C24	20.6799000 g	45 g	3.3136624 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.

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 Area 35

NE Cert No: 20140082
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 P.O. No:
 Observer: CEO

Submitted By: Mike Boehler

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Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
B5	1	0	1000 lb	XP604KM_1K lb	C24	-49.7201000 g	45 g	3.3136624 g	R
B5	1	1	1000 lb	XP604KM_1K lb	C24	19.4799000 g	45 g	3.3136624 g	A
B6	1	0	1000 lb	XP604KM_1K lb	C24	-83.5201000 g	45 g	3.3136624 g	R
B6	1	1	1000 lb	XP604KM_1K lb	C24	22.8799000 g	45 g	3.3136624 g	A
B7	1	0	1000 lb	XP604KM_1K lb	C24	-41.7201000 g	45 g	3.3136624 g	A
B7	1	1	1000 lb	XP604KM_1K lb	C24	29.9799000 g	45 g	3.3136624 g	A
B8	1	0	1000 lb	XP604KM_1K lb	C24	-41.0201000 g	45 g	3.3136624 g	A
B8	1	1	1000 lb	XP604KM_1K lb	C24	18.9799000 g	45 g	3.3136624 g	A
B9	1	0	1000 lb	XP604KM_1K lb	C24	-7.0201000 g	45 g	3.3136624 g	A
B-C-1	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.8990000 g	2.3 g	0.0528057 g	A
B-C-10	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.0440000 g	2.3 g	0.0528057 g	A
B-C-11	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.6190000 g	2.3 g	0.0528057 g	A
B-C-12	1	0	50 lb	KA30-3_50lb	NSL-50-1	2.0440000 g	2.3 g	0.0528057 g	A
B-C-2	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.2640000 g	2.3 g	0.0528057 g	A
B-C-3	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.7840000 g	2.3 g	0.0528057 g	A
B-C-4	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.8640000 g	2.3 g	0.0528057 g	A
B-C-5	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.9610000 g	2.3 g	0.0528057 g	A
B-C-6	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.7340000 g	2.3 g	0.0528057 g	A
B-C-7	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.0160000 g	2.3 g	0.0528057 g	A
B-C-8	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.6240000 g	2.3 g	0.0528057 g	A
B-C-9	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.8240000 g	2.3 g	0.0528057 g	A
C-20	1	0	1000 lb	XP604KM_1K lb	C24	-22.7201000 g	45 g	3.3136624 g	A
K2	1	0	2 kg	CC10000S_2kg	2kgd	-0.1823800 g	0.2 g	0.0008625 g	A
OA20	1	0	1000 lb	XP604KM_1K lb	C24	-48.3201000 g	45 g	3.3136624 g	R
OA20	1	1	1000 lb	XP604KM_1K lb	C24	18.7799000 g	45 g	3.3136624 g	A
WM-2-89-3	1	0	1 kg	CC1201_1 kg	1kgd	0.0495700 g	0.1 g	0.0004694 g	A
WM-2-89-3	2	0	500 g	CC1201_1 kg	500gd	0.0377780 g	0.07 g	0.0004360 g	A
WM-2-89-3	3	0	200 g	CC1201_1 kg	200gd	0.0220140 g	0.04 g	0.0004353 g	A
WM-2-89-3	4	0	200 g*	CC1201_1 kg	200gd	0.0206140 g	0.04 g	0.0004353 g	A
WM-2-89-3	5	0	100 g	AT106_100g	100gv	-0.0014550 g	0.02 g	0.0000588 g	A
WM-2-89-3	6	0	50 g	AT106_50g	50gv	0.0058150 g	0.01 g	0.0000362 g	A
WM-2-89-3	7	0	20 g	AT106_20g	20gv	-0.0000980 g	0.004 g	0.0000252 g	A
WM-2-89-3	8	0	20 g*	AT106_20g	20gv	-0.0010820 g	0.004 g	0.0000252 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-2-89-3	9	0	10 g	AT106_10g	10gv	0.0007717 g	0.002 g	0.0000221 g	A
WM-2-89-3	10	0	5 g	CCE6_5 gm	5gv	-0.0005926 g	0.0015 g	0.0000166 g	A
WM-2-89-3	12	0	2 g*	CCE6_5 gm	2gv	0.0005735 g	0.0011 g	0.0000164 g	A
WM-2-89-3	13	0	1 g	CCE6_1 gm	1gv	0.0004797 g	0.0009 g	0.0000165 g	A
WM-2-89-3	14	0	500 mg	CCE6_1 gm	500mgv	0.0004825 g	0.00072 g	0.0000165 g	A
WM-2-89-3	15	0	200 mg	CCE6_1 gm	200mgv	0.0003052 g	0.00054 g	0.0000164 g	A
WM-2-89-3	16	0	200 mg*	CCE6_1 gm	200mgv	0.0003578 g	0.00054 g	0.0000164 g	A
WM-2-89-3	17	0	100 mg	CCE6_100 mg	100mgv	-0.0001059 g	0.00043 g	0.0000164 g	A
WM-2B86	1	0	5 lb	CC10000S_5lb	NSL-5-1	-0.0260000 g	0.23 g	0.0017179 g	A
WM-2B86	2	0	5 lb	CC10000S_5lb	NSL-5-1	-0.0045000 g	0.23 g	0.0017179 g	A
WM-2B86	3	0	5 lb	CC10000S_5lb	NSL-5-1	-0.0582000 g	0.23 g	0.0017179 g	A
WM-2B86	4	0	5 lb	CC10000S_5lb	NSL-5-1	-0.0238000 g	0.23 g	0.0017179 g	A
WM-2B86	5	0	5 lb	CC10000S_5lb	NSL-5-1	0.0023000 g	0.23 g	0.0017179 g	A
WM-2B86	6	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0090200 g	0.07 g	0.0004591 g	A
WM-2B86	7	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0307200 g	0.07 g	0.0004591 g	A
WM-2B86	8	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0068200 g	0.07 g	0.0004591 g	A
WM-2B86	9	0	1 lb	CC1201_1 lb	NSL-1-1	-0.0315200 g	0.07 g	0.0004591 g	A
WM-2B86	10	0	1 lb	CC1201_1 lb	NSL-1-1	0.0031800 g	0.07 g	0.0004591 g	A
WM-2B86	11	0	8 oz	CC1201_8 oz	NSL-8-1	-0.0095700 g	0.045 g	0.0005132 g	A
WM-2B86	12	0	4 oz	CC1201_8 oz	NSL-Z	-0.0186560 g	0.023 g	0.0005104 g	A
WM-2B86	13	0	4 oz	CC1201_8 oz	NSL-Z	0.0102440 g	0.023 g	0.0005104 g	A
WM-2B86	14	0	2 oz	AT106_0.2 lb	NSL-Y	0.0066060 g	0.011 g	0.0000514 g	A
WM-2B86	15	0	1 oz	AT106_0.2 lb	2A9-1oz	-0.0004180 g	0.0054 g	0.0000485 g	A
WM-2B86	16	0	0.5 oz	AT106_0.2 lb	2A9-1.2oz	-0.0001990 g	0.0028 g	0.0000456 g	A
WM-2B86	17	0	0.25 oz	AT106_0.05 lb	2A9-1.4oz	-0.0001950 g	0.0017 g	0.0000231 g	A
WM-2B86	18	0	0.125 oz	CCE6_0.01 lb	2A9-1.8oz	0.0001514 g	0.0013 g	0.0001934 g	A
WM50-12	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.4860000 g	2.3 g	0.0528057 g	A
WM50-16	1	0	50 lb	KA30-3_50lb	NSL-50-1	2.5390000 g	2.3 g	0.0528057 g	R
WM50-16	1	1	50 lb	KA30-3_50lb	NSL-50-1	1.2590000 g	2.3 g	0.0528057 g	A
WM50-52	1	0	50 lb	KA30-3_50lb	NSL-50-1	4.6390000 g	2.3 g	0.0528057 g	R
WM50-52	1	1	50 lb	KA30-3_50lb	NSL-50-1	1.9090000 g	2.3 g	0.0528057 g	A
WM50-53	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.9090000 g	2.3 g	0.0528057 g	A
WM50-7	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.4310000 g	2.3 g	0.0528057 g	A

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WM-D15	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4420000 g	1.1 g	0.0419651 g	A
WM-D23	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.5720000 g	1.1 g	0.0419651 g	A
WM-D24	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.1770000 g	1.1 g	0.0419651 g	R
WM-D24	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.3270000 g	1.1 g	0.0419651 g	A
WM-D25	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.2630000 g	1.1 g	0.0419651 g	A
WM-D26	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4370000 g	1.1 g	0.0419651 g	A
WM-D28	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.0470000 g	1.1 g	0.0419651 g	A
WM-D29	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.1530000 g	1.1 g	0.0419651 g	A
WM-D44	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.0670000 g	1.1 g	0.0419651 g	R
WM-D44	1	1	25 lb	KA30-3_25lb	NSL-25-1	-0.1380000 g	1.1 g	0.0419651 g	A

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