



**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:** Dept of Ag. - Weights & Measures  
84627 550th Ave.  
Norfolk, NE 68701-

**Date:** 10/25/2010  
**Agency ID:** 10  
**NE Cert No:** 20100142  
**P.O. No:**

**Submitted By:** Eugene Haase

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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance Class</u>
50 lb	C-C1	1	F
50 lb	C-C10	1	F
50 lb	C-C13	1	F
50 lb	C-C14	1	F
50 lb	C-C15	1	F
50 lb	C-C16	1	F
50 lb	C-C17	1	F
50 lb	C-C18	1	F
50 lb	C-C19	1	F
50 lb	C-C2	1	F
50 lb	C-C3	1	F
50 lb	C-C4	1	F
50 lb	C-C5	1	F
50 lb	C-C6	1	F
50 lb	C-C8	1	F
2 kg	K1	1	F
50 lb	OPI-C62	1	F
50 lb	OPI-C89	1	F
25 lb	WM25-24	1	F
1 kg	WM-2-89-5	1	F
500 g	WM-2-89-5	2	F
200 g	WM-2-89-5	3	F
200 g*	WM-2-89-5	4	F
100 g	WM-2-89-5	5	F
50 g	WM-2-89-5	6	F

**Department of Agriculture, 301 Centennial Mall South**  
**Web Site: [www.agr.ne.gov](http://www.agr.ne.gov)**

Administration  
P.O. Box 94947  
Lincoln, NE 68509-4947  
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FAX: (402) 471-6876

Agriculture Laboratories  
3703 South 14<sup>th</sup> Street  
Lincoln, NE 68502-5399  
(402) 471-2176  
FAX: (402) 471-0091

Bureau of Animal Industry  
P.O. Box 94987  
Lincoln, NE 68509-4787  
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FAX: (402) 471-6893

Bureau of Dairies & Foods  
P.O. Box 95064  
Lincoln, NE 68509-5064  
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Bureau of Plant Industry  
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Lincoln, NE 68509-4756  
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Weights and Measures  
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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance Class</u>
20 g	WM-2-89-5	7	F
20 g*	WM-2-89-5	8	F
10 g	WM-2-89-5	9	F
5 g	WM-2-89-5	10	F
2 g	WM-2-89-5	11	F
2 g*	WM-2-89-5	12	F
1 g	WM-2-89-5	13	F
500 mg	WM-2-89-5	14	F
200 mg	WM-2-89-5	15	F
200 mg*	WM-2-89-5	16	F
100 mg	WM-2-89-5	17	F
5 lb	WM-2C86	1	F
5 lb	WM-2C86	2	F
5 lb	WM-2C86	3	F
5 lb	WM-2C86	4	F
5 lb	WM-2C86	5	F
1 lb	WM-2C86	6	F
1 lb	WM-2C86	7	F
1 lb	WM-2C86	8	F
1 lb	WM-2C86	9	F
1 lb	WM-2C86	10	F
8 oz	WM-2C86	11	F
4 oz	WM-2C86	12	F
2 oz	WM-2C86	13	F
1 oz	WM-2C86	14	F
0.5 oz	WM-2C86	15	F
0.25 oz	WM-2C86	16	F
0.125 oz	WM-2C86	17	F
0.0625 oz	WM-2C86	18	F
50 lb	WM50-42	1	F
50 lb	WM50-48	1	F
50 lb	WM50-71	1	F
25 lb	WM-D51	1	F
25 lb	WM-D52	1	F
25 lb	WM-D53	1	F
25 lb	WM-D54	1	F

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Denomination	Serial Number	Weight Number	Tolerance Class
25 lb	WM-D55	1	F
25 lb	WM-D56	1	F
25 lb	WM-D57	1	F
25 lb	WM-D58	1	F
25 lb	WM-D59	1	F
25 lb	WM-D60	1	F
25 lb	WM-D61	1	F
1000 lb	WME1	1	F
1000 lb	WME10	1	F
1000 lb	WME11	1	F
1000 lb	WME12	1	F
1000 lb	WME13	1	F
1000 lb	WME14	1	F
1000 lb	WME15	1	F
1000 lb	WME17	1	F
1000 lb	WME19	1	F
1000 lb	WME2	1	F
1000 lb	WME20	1	F
1000 lb	WME21	1	F
1000 lb	WME22	1	F
1000 lb	WME23	1	F
1000 lb	WME24	1	F
1000 lb	WME3	1	F
1000 lb	WME4	1	F
1000 lb	WME5	1	F
1000 lb	WME6	1	F
1000 lb	WME7	1	F
1000 lb	WME9	1	F

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
C-C1	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.0898491 g	2.3 g	0.0518742 g	A
C-C10	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.7198491 g	2.3 g	0.0518742 g	A
C-C13	1	0	50 lb	KA30-3_50lb	NSL-50-1	1.0001509 g	2.3 g	0.0518742 g	A
C-C14	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.4098491 g	2.3 g	0.0518742 g	A
C-C15	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.2201509 g	2.3 g	0.0518742 g	A
C-C16	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.2201509 g	2.3 g	0.0518742 g	A
C-C17	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.0698491 g	2.3 g	0.0518742 g	A
C-C18	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.0948491 g	2.3 g	0.0518742 g	A
C-C19	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.1298491 g	2.3 g	0.0518742 g	A
C-C2	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.3448491 g	2.3 g	0.0518742 g	A
C-C3	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.2248491 g	2.3 g	0.0518742 g	A
C-C4	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.7601509 g	2.3 g	0.0518742 g	A
C-C5	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.5198491 g	2.3 g	0.0518742 g	A
C-C6	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.6698491 g	2.3 g	0.0518742 g	A
C-C8	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.9101509 g	2.3 g	0.0518742 g	A
K1	1	0	2 kg	CC1000S-2 kg	2kgd	-0.0285774 g	0.2 g	0.0011048 g	A
OPI-C62	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.9998491 g	2.3 g	0.0518742 g	A
OPI-C89	1	0	50 lb	KA30-3_50lb	NSL-50-1	-1.9398491 g	2.3 g	0.0518742 g	A
OPI-C89	1	1	50 lb	KA30-3_50lb	NSL-50-1	0.7201509 g	2.3 g	0.0518742 g	A
WM25-24	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.8781902 g	1.1 g	0.0329709 g	A
WM25-24	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.6118098 g	1.1 g	0.0329709 g	A
WM-2-89-5	1	0	1 kg	CC1201-kg	1kgd	0.0699716 g	0.1 g	0.0004024 g	A
WM-2-89-5	2	0	500 g	CC1201-kg	500gd	0.0375294 g	0.07 g	0.0003983 g	A
WM-2-89-5	3	0	200 g	CC1201-kg	200gd	0.0155214 g	0.04 g	0.0003971 g	A
WM-2-89-5	4	0	200 g*	CC1201-kg	200gd	0.0075214 g	0.04 g	0.0003971 g	A
WM-2-89-5	5	0	100 g	AT106-gm	100gv	-0.0059285 g	0.02 g	0.0000366 g	A

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

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**"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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 Norfolk, NE 68701-

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 Observer: CEO

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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	6	0	50 g	AT106-gm	50gv	-0.0025322 g	0.01 g	0.0000332 g	A
WM-2-89-5	7	0	20 g	AT106-gm	20gv	-0.0005044 g	0.004 g	0.0000320 g	A
WM-2-89-5	8	0	20 g*	AT106-gm	20gv	-0.0004804 g	0.004 g	0.0000320 g	A
WM-2-89-5	9	0	10 g	AT106-gm	10gv	0.0002922 g	0.002 g	0.0000321 g	A
WM-2-89-5	10	0	5 g	UMT5/6-gm	5gv	-0.0004294 g	0.0015 g	0.0000089 g	A
WM-2-89-5	11	0	2 g	UMT5/6-gm	2gv	-0.0003054 g	0.0011 g	0.0000084 g	A
WM-2-89-5	12	0	2 g*	UMT5/6-gm	2gv	0.0006086 g	0.0011 g	0.0000084 g	A
WM-2-89-5	13	0	1 g	UMT5/6-gm	1gv	0.0001324 g	0.0009 g	0.0000083 g	A
WM-2-89-5	14	0	500 mg	UMT5/6-gm	500mgv	0.0003970 g	0.00072 g	0.0000083 g	A
WM-2-89-5	15	0	200 mg	UMT5/6-gm	200mgv	-0.0000004 g	0.00054 g	0.0000083 g	A
WM-2-89-5	16	0	200 mg*	UMT5/6-gm	200mgv	0.0003548 g	0.00054 g	0.0000083 g	A
WM-2-89-5	17	0	100 mg	UMT5/6-gm	100mgv	-0.0000917 g	0.00043 g	0.0000083 g	A
WM-2C86	1	0	5 lb	CC1000S-5 lb	NSL-5-1	-0.1221297 g	0.23 g	0.0016699 g	A
WM-2C86	2	0	5 lb	CC1000S-5 lb	NSL-5-1	-0.0972297 g	0.23 g	0.0016699 g	A
WM-2C86	3	0	5 lb	CC1000S-5 lb	NSL-5-1	-0.1190297 g	0.23 g	0.0016699 g	A
WM-2C86	4	0	5 lb	CC1000S-5 lb	NSL-5-1	-0.1340297 g	0.23 g	0.0016699 g	A
WM-2C86	5	0	5 lb	CC1000S-5 lb	NSL-5-1	-0.1359297 g	0.23 g	0.0016699 g	A
WM-2C86	6	0	1 lb	CC1201-lb	NSL-1-1	-0.0186241 g	0.07 g	0.0007427 g	A
WM-2C86	7	0	1 lb	CC1201-lb	NSL-1-1	0.0053759 g	0.07 g	0.0007427 g	A
WM-2C86	8	0	1 lb	CC1201-lb	NSL-1-1	-0.0026241 g	0.07 g	0.0007427 g	A
WM-2C86	9	0	1 lb	CC1201-lb	NSL-1-1	0.0163759 g	0.07 g	0.0007427 g	A
WM-2C86	10	0	1 lb	CC1201-lb	NSL-1-1	0.0103759 g	0.07 g	0.0007427 g	A
WM-2C86	11	0	8 oz	CC1201-lb	NSL-8-1	0.0042735 g	0.045 g	0.0007356 g	A
WM-2C86	12	0	4 oz	CC1201-lb	NSL-Z	0.0050960 g	0.023 g	0.0007272 g	A
WM-2C86	13	0	2 oz	AT106-lb	NSL-Y	0.0039762 g	0.011 g	0.0000616 g	A
WM-2C86	14	0	1 oz	AT106-lb	2A9-1oz	0.0004419 g	0.0054 g	0.0003667 g	A
WM-2C86	15	0	0.5 oz	AT106-lb	2A9-1.2oz	0.0008049 g	0.0028 g	0.0003666 g	A
WM-2C86	16	0	0.25 oz	AT106-lb	2A9-1.4oz	-0.0000765 g	0.0017 g	0.0000532 g	A
WM-2C86	17	0	0.125 oz	AT106-lb	2A9-1.8oz	-0.0004002 g	0.0013 g	0.0000510 g	A
WM-2C86	18	0	0.0625 oz	AT106-lb	2A9-1.16oz	0.0003920 g	0.0011 g	0.0000510 g	A
WM50-42	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.2098491 g	2.3 g	0.0518742 g	A
WM50-48	1	0	50 lb	KA30-3_50lb	NSL-50-1	0.2901509 g	2.3 g	0.0518742 g	A
WM50-71	1	0	50 lb	KA30-3_50lb	NSL-50-1	-0.8598491 g	2.3 g	0.0518742 g	A

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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-D51	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.2981902 g	1.1 g	0.0329709 g	A
WM-D52	1	0	25 lb	KA30-3_25lb	NSL-25-1	-1.2081902 g	1.1 g	0.0329709 g	R
WM-D52	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.5018098 g	1.1 g	0.0329709 g	A
WM-D53	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.5318098 g	1.1 g	0.0329709 g	A
WM-D54	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.1981902 g	1.1 g	0.0329709 g	A
WM-D55	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.1818098 g	1.1 g	0.0329709 g	A
WM-D56	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.2181902 g	1.1 g	0.0329709 g	A
WM-D57	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.1581902 g	1.1 g	0.0329709 g	A
WM-D58	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.3918098 g	1.1 g	0.0329709 g	A
WM-D59	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4681902 g	1.1 g	0.0329709 g	A
WM-D60	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.2281902 g	1.1 g	0.0329709 g	A
WM-D61	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4481902 g	1.1 g	0.0329709 g	A
WME1	1	0	1000 lb	KC500-1	C24	-79.0925817 g	45 g	2.5855327 g	R
WME1	1	1	1000 lb	KC500-1	C24	20.1074183 g	45 g	2.5855327 g	A
WME10	1	0	1000 lb	KC500-1	C24	3.7074183 g	45 g	2.5855327 g	A
WME11	1	0	1000 lb	KC500-1	C24	1.1074183 g	45 g	2.5855327 g	A
WME12	1	0	1000 lb	KC500-1	C24	16.8074183 g	45 g	2.5855327 g	A
WME13	1	0	1000 lb	KC500-1	C24	-34.2925817 g	45 g	2.5855327 g	A
WME14	1	0	1000 lb	KC500-1	C24	-71.4925817 g	45 g	2.5855327 g	R
WME14	1	1	1000 lb	KC500-1	C24	5.9074183 g	45 g	2.5855327 g	A
WME15	1	0	1000 lb	KC500-1	C24	-24.5925817 g	45 g	2.5855327 g	A
WME17	1	0	1000 lb	KC500-1	C24	-28.8925817 g	45 g	2.5855327 g	A
WME19	1	0	1000 lb	KC500-1	C24	4.4074183 g	45 g	2.5855327 g	A
WME2	1	0	1000 lb	KC500-1	C24	-30.9925817 g	45 g	2.5855327 g	A
WME20	1	0	1000 lb	KC500-1	C24	21.1074183 g	45 g	2.5855327 g	A
WME21	1	0	1000 lb	KC500-1	C24	8.8074183 g	45 g	2.5855327 g	A
WME22	1	0	1000 lb	KC500-1	C24	-17.1925817 g	45 g	2.5855327 g	A
WME23	1	0	1000 lb	KC500-1	C24	-30.3925817 g	45 g	2.5855327 g	A
WME24	1	0	1000 lb	KC500-1	C24	-54.7925817 g	45 g	2.5855327 g	R
WME24	1	1	1000 lb	KC500-1	C24	18.8074183 g	45 g	2.5855327 g	A
WME3	1	0	1000 lb	KC500-1	C24	-39.3925817 g	45 g	2.5855327 g	A
WME3	1	1	1000 lb	KC500-1	C24	22.5074183 g	45 g	2.5855327 g	A
WME4	1	0	1000 lb	KC500-1	C24	-14.3925817 g	45 g	2.5855327 g	A

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WME5	1	0	1000 lb	KC500-1	C24	-42.9925817 g	45 g	2.5855327 g	A
WME5	1	1	1000 lb	KC500-1	C24	16.4074183 g	45 g	2.5855327 g	A
WME6	1	0	1000 lb	KC500-1	C24	48.4074183 g	45 g	2.5855327 g	R
WME6	1	1	1000 lb	KC500-1	C24	22.8074183 g	45 g	2.5855327 g	A
WME7	1	0	1000 lb	KC500-1	C24	-34.3925817 g	45 g	2.5855327 g	A
WME9	1	0	1000 lb	KC500-1	C24	-31.3925817 g	45 g	2.5855327 g	A

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