



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  
Area 45  
Not assigned, NE -

Date: 8/15/2011  
Agency ID: 45  
NE Cert No: 20110096  
P.O. No:

Submitted By:

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Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
5 gal	0247	1	VL	A
5 gal	0248	1	VL	A
5 gal	0249	1	VL	A
0.3 lb	11570	1	F	A
0.2 lb	11570	2	F	A
0.1 lb	11570	3	F	A
0.05 lb	11570	4	F	A
0.03 lb	11570	5	F	A
0.02 lb	11570	6	F	A
0.01 lb	11570	7	F	A
0.005 lb	11570	8	F	A
0.003 lb	11570	9	F	A
0.002 lb	11570	10	F	A
0.001 lb	11570	11	F	A
0.001 lb*	11570	12	F	A
2 lb	11-OPI-85	1	F	A
2 lb	11-OPI-85	2	F	A
2 lb	11-OPI-85	3	F	A
2 lb	11-OPI-85	4	F	A
2 lb	11-OPI-85	5	F	A
2 lb	11-OPI-85	6	F	A
2 lb	11-OPI-85	7	F	A
2 lb	11-OPI-85	8	F	A
2 lb	11-OPI-85	9	F	A
2 lb	11-OPI-85	10	F	A

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  
(402) 471-2341  
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  
(402) 471-2351  
FAX: (402) 471-6893

Bureau of Dairies & Foods  
P.O. Box 95064  
Lincoln, NE 68509-5064  
(402) 471-2536  
FAX: (402) 471-2759

Bureau of Plant Industry  
P.O. Box 94956  
Lincoln, NE 68509-4756  
(402) 471-2394  
FAX: (402) 471-6892

Weights and Measures  
P.O. Box 94757  
Lincoln, NE 68509-4757  
(402) 471-4292  
FAX: (402) 471-2759

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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
2 lb	11-OPI-85	11	F	A
2 lb	11-OPI-85	12	F	A
2 lb	11-OPI-85	13	F	A
2 lb	11-OPI-85	14	F	A
1 lb	11-OPI-85	15	F	A
1 lb	11-OPI-85	16	F	A
8 oz	11-OPI-85	17	F	A
4 oz	11-OPI-85	18	F	A
2 oz	11-OPI-85	19	F	A
1 oz	11-OPI-85	20	F	A
0.5 oz	11-OPI-85	21	F	A
0.25 oz	11-OPI-85	22	F	A
0.125 oz	11-OPI-85	23	F	A
0.0625 oz	11-OPI-85	24	F	A
0.0625 oz*	11-OPI-85	25	F	A
5 gal	4393-5-E	1	VL	A
5 gal	4393-5-F	1	VL	A
0.2 lb	N-99-B	1	F	A
0.2 lb*	N-99-B	2	F	A
0.1 lb	N-99-B	3	F	A
0.05 lb	N-99-B	4	F	A
0.02 lb	N-99-B	5	F	A
0.02 lb*	N-99-B	6	F	A
0.01 lb	N-99-B	7	F	A
0.005 lb	N-99-B	8	F	A
0.002 lb	N-99-B	9	F	A
0.002 lb*	N-99-B	10	F	A
0.001 lb	N-99-B	11	F	A
25 lb	NE-21	1	F	A
25 lb	NE-22	1	F	A
25 lb	NE-24	1	F	A
25 lb	NE-25	1	F	A
25 lb	NE-26	1	F	A
25 lb	NE-30	1	F	A
25 lb	NE-31	1	F	A
25 lb	NE-32	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>
25 lb	NE-33	1	F	A
25 lb	NE-34	1	F	A
25 lb	NE-35	1	F	A
25 lb	NE-36	1	F	A
25 lb	NE-37	1	F	A
25 lb	NE-40	1	F	A
4 kg	WM-1	1	F	A
15 lb	WM15-10	1	6	A
15 lb	WM15-9	1	6	A
25 lb	WM25-114	1	F	A
25 lb	WM25-116	1	F	A
25 lb	WM25-117	1	F	A
25 lb	WM25-119	1	F	A
25 lb	WM25-121	1	F	A
25 lb	WM25-122	1	F	A
25 lb	WM25-124	1	F	A
25 lb	WM25-127	1	F	A
25 lb	WM25-131	1	F	A
25 lb	WM25-42	1	F	A
25 lb	WM25-43	1	F	A
25 lb	WM25-44	1	F	A
300 g	WM-G89-3	1	4	A
200 g	WM-G89-3	2	4	A
100 g	WM-G89-3	3	4	A
50 g	WM-G89-3	4	4	A
30 g	WM-G89-3	5	4	A
20 g	WM-G89-3	6	4	A
10 g	WM-G89-3	7	4	A
5 g	WM-G89-3	8	4	A
3 g	WM-G89-3	9	4	A
2 g	WM-G89-3	10	4	A
1 g	WM-G89-3	11	4	A
500 mg	WM-G89-3	12	4	A
200 mg	WM-G89-3	13	4	A
200 mg*	WM-G89-3	14	4	A
100 mg	WM-G89-3	15	4	A
50 mg	WM-G89-3	16	4	A
20 mg	WM-G89-3	17	4	A
20 mg*	WM-G89-3	18	4	A
10 mg	WM-G89-3	19	4	A
5 mg	WM-G89-3	20	4	A
2 mg	WM-G89-3	21	4	A

**Agency:** Dept of Ag. - Weights & Measures  
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<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
2 mg*	WM-G89-3	22	4	A
1 mg	WM-G89-3	23	4	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 4 - Double Substitution - Summary Of Test Results**

Agency ID: 45  
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Area 45  
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NE Cert No: 20110096  
Date: 8/15/2011  
P.O. No:  
Observer: CEO

Form No.: NE04LF7-R00

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Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
300 g	WM-G89-3	1	300.00619701	300.00527848	0.00014956	CC1201 / 1 kg	300gd
200 g	WM-G89-3	2	200.00128059	200.00066825	0.00014876	CC1201 / 1 kg	200gd
100 g	WM-G89-3	3	100.00064245	100.00033628	0.00006764	AT106_100G	100grl
50 g	WM-G89-3	4	50.00010713	49.99995404	0.00004616	AT106_100G	50grl
30 g	WM-G89-3	5	30.00068416	30.00059231	0.00003999	AT106_100G	30grl
20 g	WM-G89-3	6	20.00026053	20.00019930	0.00003508	AT106_100G	20grl
10 g	WM-G89-3	7	10.00021913	10.00018851	0.00001808	AT106_10G	10grl
5 g	WM-G89-3	8	5.00021887	5.00020356	0.00000721	CCE6_5G	5grl
3 g	WM-G89-3	9	3.00024969	3.00024051	0.00000632	CCE6_5G	3grl
2 g	WM-G89-3	10	2.00007244	2.00006632	0.00000632	CCE6_5G	2grl
1 g	WM-G89-3	11	1.00000034	0.99999728	0.00000355	CCE6_1G	1grl
500 mg	WM-G89-3	12	0.50003340	0.50003187	0.00000271	CCE6_1G	500mgrl
200 mg	WM-G89-3	13	0.19998321	0.19998260	0.00000235	CCE6_1G	200mgrl
200 mg*	WM-G89-3	14	0.19997491	0.19997430	0.00000235	CCE6_1G	200mgrl
100 mg	WM-G89-3	15	0.09992165	0.09992134	0.00000209	CCE6_100MG	100mgrl
50 mg	WM-G89-3	16	0.05000836	0.05000821	0.00000208	CCE6_100MG	50mgrl
20 mg	WM-G89-3	17	0.02003001	0.02002411	0.00000205	CCE6_100MG	20mgrl
20 mg*	WM-G89-3	18	0.02001990	0.02001401	0.00000205	CCE6_100MG	20mgrl
10 mg	WM-G89-3	19	0.00998240	0.00997947	0.00000205	CCE6_10MG	10mgrl
5 mg	WM-G89-3	20	0.00501950	0.00501802	0.00000203	CCE6_10MG	5mg

*Due to handling, storage and/or environmental factors, the reported values are valid only while test items are within our control. No calibration periods or intervals are given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.*

*True Mass is the mass value in a vacuum. Conventional Mass is the mass value in a normal air environment. All values are "as found" unless stated differently in an attachment to the certification.*

*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.*

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**SOP 4 - Double Substitution - Summary Of Test Results**

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Observer: CEO

Form No.: NE04LF7-R00

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Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
2 mg	WM-G89-3	21	0.00200824	0.00200765	0.00000202	CCE6_10MG	2mg
2 mg*	WM-G89-3	22	0.00200419	0.00200360	0.00000202	CCE6_10MG	2mg
1 mg	WM-G89-3	23	0.00099964	0.00099934	0.00000203	CCE6_10MG	1mg*

*Due to handling, storage and/or environmental factors, the reported values are valid only while test items are within our control. No calibration periods or intervals are given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.*

*True Mass is the mass value in a vacuum. Conventional Mass is the mass value in a normal air environment. All values are "as found" unless stated differently in an attachment to the certification.*

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**Nebraska Standards Laboratory  
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**SOP 8 - Modified Substitution Test Results**

*Form No.: NE04LF9-R00*

Agency ID: 45  
Agency: Dept of Ag. - Weights & Measures  
Area 45  
Not assigned, NE -

NE Cert No: 20110096  
Date: 8/15/2011  
P.O. No:  
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
11570	1	0	0.3 lb	CC1201-lb	NSL-WK1	0.0096900 g	0.027 g	0.0023334 g	A
11570	2	0	0.2 lb	AT106-lb	NSL-WK2	0.0076089 g	0.018 g	0.0000666 g	A
11570	3	0	0.1 lb	AT106-lb	NSL-WK3	-0.0039763 g	0.0091 g	0.0000606 g	A
11570	4	0	0.05 lb	AT106-lb	NSL-WK4	0.0016201 g	0.0045 g	0.0000593 g	A
11570	5	0	0.03 lb	AT106-lb	NSL-WK5	0.0012163 g	0.0027 g	0.0000551 g	A
11570	6	0	0.02 lb	AT106-lb	NSL-WK6	0.0002914 g	0.0018 g	0.0000564 g	A
11570	7	0	0.01 lb	CCE6_lb	NSL-WK7	0.0005616 g	0.0015 g	0.0000090 g	A
11570	8	0	0.005 lb	CCE6_lb	NSL-WK8	0.0004737 g	0.0012 g	0.0000075 g	A
11570	9	0	0.003 lb	CCE6_lb	NSL-WK9	0.0003644 g	0.00099 g	0.0000070 g	A
11570	10	0	0.002 lb	CCE6_lb	NSL-WK10	0.0005457 g	0.00087 g	0.0000063 g	A
11570	11	0	0.001 lb	CCE6_lb	NSL-WK11	0.0001500 g	0.0007 g	0.0000061 g	A
11570	12	0	0.001 lb*	CCE6_lb	NSL-WK11	0.0003067 g	0.0007 g	0.0000061 g	A
11-OPI-85	1	0	2 lb	CC1201-lb	NSL-2-1	0.0477043 g	0.091 g	0.0023481 g	A
11-OPI-85	2	0	2 lb	CC1201-lb	NSL-2-1	-0.0851957 g	0.091 g	0.0023481 g	A
11-OPI-85	3	0	2 lb	CC1201-lb	NSL-2-1	-0.0816957 g	0.091 g	0.0023481 g	A
11-OPI-85	4	0	2 lb	CC1201-lb	NSL-2-1	-0.0884957 g	0.091 g	0.0023481 g	A
11-OPI-85	5	0	2 lb	CC1201-lb	NSL-2-1	-0.0767957 g	0.091 g	0.0023481 g	A
11-OPI-85	6	0	2 lb	CC1201-lb	NSL-2-1	-0.0519957 g	0.091 g	0.0023481 g	A
11-OPI-85	7	0	2 lb	CC1201-lb	NSL-2-1	-0.0489957 g	0.091 g	0.0023481 g	A
11-OPI-85	8	0	2 lb	CC1201-lb	NSL-2-1	-0.0717957 g	0.091 g	0.0023481 g	A
11-OPI-85	9	0	2 lb	CC1201-lb	NSL-2-1	-0.0687957 g	0.091 g	0.0023481 g	A
11-OPI-85	10	0	2 lb	CC1201-lb	NSL-2-1	-0.0517957 g	0.091 g	0.0023481 g	A
11-OPI-85	11	0	2 lb	CC1201-lb	NSL-2-1	-0.0834957 g	0.091 g	0.0023481 g	A
11-OPI-85	12	0	2 lb	CC1201-lb	NSL-2-1	-0.0796957 g	0.091 g	0.0023481 g	A
11-OPI-85	13	0	2 lb	CC1201-lb	NSL-2-1	-0.0766957 g	0.091 g	0.0023481 g	A
11-OPI-85	14	0	2 lb	CC1201-lb	NSL-2-1	-0.0791957 g	0.091 g	0.0023481 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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Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
11-OPI-85	15	0	1 lb	CC1201-lb	NSL-1-1	-0.0479727 g	0.07 g	0.0023373 g	A
11-OPI-85	16	0	1 lb	CC1201-lb	NSL-1-1	-0.0492727 g	0.07 g	0.0023373 g	A
11-OPI-85	17	0	8 oz	CC1201-lb	NSL-8-1	-0.0293671 g	0.045 g	0.0023351 g	A
11-OPI-85	18	0	4 oz	CC1201-lb	NSL-Z	-0.0199040 g	0.023 g	0.0023325 g	A
11-OPI-85	19	0	2 oz	AT106-lb	NSL-Y	-0.0100038 g	0.011 g	0.0000638 g	A
11-OPI-85	20	0	1 oz	AT106-lb	2A9-1oz	0.0004479 g	0.0054 g	0.0003671 g	A
11-OPI-85	21	0	0.5 oz	AT106-lb	2A9-1.2oz	0.0009559 g	0.0028 g	0.0003670 g	A
11-OPI-85	22	0	0.25 oz	AT106-lb	2A9-1.4oz	0.0007075 g	0.0017 g	0.0000557 g	A
11-OPI-85	23	0	0.125 oz	CCE6_lb	2A9-1.8oz	0.0002475 g	0.0013 g	0.0000075 g	A
11-OPI-85	24	0	0.0625 oz	CCE6_lb	2A9-1.16oz	0.0001622 g	0.0011 g	0.0000074 g	A
11-OPI-85	25	0	0.0625 oz*	CCE6_lb	2A9-1.16oz	0.0004480 g	0.0011 g	0.0000074 g	A
N-99-B	1	0	0.2 lb	AT106-lb	NSL-WK2	0.0079669 g	0.018 g	0.0000666 g	A
N-99-B	2	0	0.2 lb*	AT106-lb	NSL-WK2	0.0081149 g	0.018 g	0.0000666 g	A
N-99-B	3	0	0.1 lb	AT106-lb	NSL-WK3	0.0034717 g	0.0091 g	0.0000606 g	A
N-99-B	4	0	0.05 lb	AT106-lb	NSL-WK4	-0.0000189 g	0.0045 g	0.0000593 g	A
N-99-B	5	0	0.02 lb	AT106-lb	NSL-WK6	-0.0006916 g	0.0018 g	0.0000564 g	A
N-99-B	6	0	0.02 lb*	AT106-lb	NSL-WK6	-0.0003516 g	0.0018 g	0.0000564 g	A
N-99-B	7	0	0.01 lb	CCE6_lb	NSL-WK7	0.0001551 g	0.0015 g	0.0000090 g	A
N-99-B	8	0	0.005 lb	CCE6_lb	NSL-WK8	0.0001029 g	0.0012 g	0.0000075 g	A
N-99-B	9	0	0.002 lb	CCE6_lb	NSL-WK10	-0.0002524 g	0.00087 g	0.0000063 g	A
N-99-B	10	0	0.002 lb*	CCE6_lb	NSL-WK10	-0.0003554 g	0.00087 g	0.0000063 g	A
N-99-B	11	0	0.001 lb	CCE6_lb	NSL-WK11	-0.0003035 g	0.0007 g	0.0000061 g	A
NE-21	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.2668098 g	1.1 g	0.0353136 g	A
NE-22	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.3681902 g	1.1 g	0.0353136 g	A
NE-24	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.9981902 g	1.1 g	0.0353136 g	A
NE-25	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.3231902 g	1.1 g	0.0353136 g	A
NE-26	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.2731902 g	1.1 g	0.0353136 g	A
NE-30	1	0	25 lb	KA30-3_25lb	NSL-25-1	-1.1781902 g	1.1 g	0.0353136 g	R
NE-30	1	1	25 lb	KA30-3_25lb	NSL-25-1	-0.2381902 g	1.1 g	0.0353136 g	A
NE-31	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4481902 g	1.1 g	0.0353136 g	A
NE-32	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.5481902 g	1.1 g	0.0353136 g	A
NE-33	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.5331902 g	1.1 g	0.0353136 g	A
NE-34	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.3831902 g	1.1 g	0.0353136 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
NE-35	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.1831902 g	1.1 g	0.0353136 g	A
NE-36	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.3318098 g	1.1 g	0.0353136 g	A
NE-37	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4581902 g	1.1 g	0.0353136 g	A
NE-40	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.4881902 g	1.1 g	0.0353136 g	A
WM-1	1	0	4 kg	CC10000S-5 kg	4kg	-0.0323918 g	0.4 g	0.0007797 g	A
WM15-10	1	0	15 lb	KA30-3_25lb	NEBR-STD-15	-0.3307971 g	0.68 g	0.0328026 g	A
WM15-9	1	0	15 lb	KA30-3_25lb	NEBR-STD-15	-0.4907971 g	0.68 g	0.0328026 g	A
WM25-114	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.3568098 g	1.1 g	0.0353136 g	R
WM25-114	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.3218098 g	1.1 g	0.0353136 g	A
WM25-116	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.8768098 g	1.1 g	0.0353136 g	A
WM25-117	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4768098 g	1.1 g	0.0353136 g	A
WM25-119	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.6768098 g	1.1 g	0.0353136 g	A
WM25-121	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.2768098 g	1.1 g	0.0353136 g	A
WM25-122	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.2268098 g	1.1 g	0.0353136 g	A
WM25-124	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.8468098 g	1.1 g	0.0353136 g	A
WM25-127	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.1968098 g	1.1 g	0.0353136 g	R
WM25-127	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.2368098 g	1.1 g	0.0353136 g	A
WM25-131	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4618098 g	1.1 g	0.0353136 g	A
WM25-42	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.2318098 g	1.1 g	0.0353136 g	R
WM25-42	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.5318098 g	1.1 g	0.0353136 g	A
WM25-43	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.3468098 g	1.1 g	0.0353136 g	A
WM25-44	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.8668098 g	1.1 g	0.0353136 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.*

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

**SOP 19 - Volume Transfer Test Results**

Agency ID: 45

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures  
Area 45  
Not assigned, NE -

NE Cert No: 20110096

Date: 8/15/2011

P.O. No:

Submitted By:

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Serial #: 0247  
Retest #: 0  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.9 °F	0.998214	0 in3

**Test Measure Information**

Water Temperature: 67.9 °F  
Water Density: 0.998214 g/cm<sup>3</sup>  
Scale Reading: -0.1 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 4.9995 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

Nebraska Standards Laboratory  
3721 West Cuming Street  
Lincoln, NE 68524  
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**SOP 19 - Volume Transfer Test Results**

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NE Cert No: 20110096

Date: 8/15/2011

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Serial #: 0247  
Retest #: 1  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	68.5 °F	0.998145	0 in3

**Test Measure Information**

Water Temperature: 68.5 °F  
Water Density: 0.998145 g/cm<sup>3</sup>  
Scale Reading: -0.1 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 4.9995 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

Nebraska Standards Laboratory  
3721 West Cuming Street  
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**SOP 19 - Volume Transfer Test Results**

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Serial #: 0248  
Retest #: 0  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	69 °F	0.998086	0 in3

**Test Measure Information**

Water Temperature: 69 °F  
Water Density: 0.998086 g/cm<sup>3</sup>  
Scale Reading: 0.6 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 4.9965 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: R

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**SOP 19 - Volume Transfer Test Results**

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Serial #: 0248  
Retest #: 1  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.8 °F	0.998225	0 in3

**Test Measure Information**

Water Temperature: 67.8 °F  
Water Density: 0.998225 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

Nebraska Standards Laboratory  
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**SOP 19 - Volume Transfer Test Results**

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Serial #: 0248  
Retest #: 2  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.5 °F	0.998259	0 in3

**Test Measure Information**

Water Temperature: 67.5 °F  
Water Density: 0.998259 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

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**SOP 19 - Volume Transfer Test Results**

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Serial #: 0249  
Retest #: 0  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.4 °F	0.998271	0 in3

**Test Measure Information**

Water Temperature: 67.4 °F  
Water Density: 0.998271 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

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Serial #: 0249  
Retest #: 1  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67 °F	0.998315	0 in3

**Test Measure Information**

Water Temperature: 67 °F  
Water Density: 0.998315 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A



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Serial #: 4393-5-E  
Retest #: 0  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	68.1 °F	0.998191	0 in3

**Test Measure Information**

Water Temperature: 68.1 °F  
Water Density: 0.998191 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

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**SOP 19 - Volume Transfer Test Results**

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Serial #: 4393-5-E  
Retest #: 1  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.9 °F	0.998214	0 in3

**Test Measure Information**

Water Temperature: 67.9 °F  
Water Density: 0.998214 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

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Serial #: 4393-5-F  
Retest #: 0  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	67.7 °F	0.998237	0 in3

**Test Measure Information**

Water Temperature: 67.7 °F  
Water Density: 0.998237 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A

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Serial #: 4393-5-F  
Retest #: 1  
Denomination: 5 gal  
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.  
Tolerance Class: VL  
Material: SS  
Coef of Expansion: 0.0000265 °F

**Test Data**

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	66.5 °F	0.998371	0 in3

**Test Measure Information**

Water Temperature: 66.5 °F  
Water Density: 0.998371 g/cm<sup>3</sup>  
Scale Reading: -0.25 cu.in.

**Test Results**

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.  
Tolerance: 0.0025 gal.  
Uncertainty: 0.0012 gal.  
Accepted/Rejected: A