



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: NE Dept of Ag. - Weights & Measures
500 E. Prairie Road
Grand Island, NE 68803-

Date: 3/28/2011
Agency ID: 30
NE Cert No: 20110043
P.O. No:

Submitted By: Jeff Saathoff

Electronic Copy Page 1

<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
5 gal	00-16623-01	1	VL	A
5 gal	00-16623-02	1	VL	A
5 gal	00-16623-03	1	VL	A
5 gal	40702C	1	VL	A
5 gal	40702D	1	VL	A
4 kg	6	1	4	A
2 lb	7A73	1	F	A
2 lb	7A73	2	F	A
2 lb	7A73	3	F	A
2 lb	7A73	4	F	A
2 lb	7A73	5	F	A
2 lb	7A73	6	F	A
2 lb	7A73	7	F	A
2 lb	7A73	8	F	A
2 lb	7A73	9	F	A
2 lb	7A73	10	F	A
2 lb	7A73	11	F	A
2 lb	7A73	12	F	A
2 lb	7A73	13	F	A
2 lb	7A73	14	F	A
1 lb	7A73	15	F	A
1 lb	7A73	16	F	A
8 oz	7A73	17	F	A
4 oz	7A73	18	F	A
2 oz	7A73	19	F	A

Department of Agriculture, 301 Centennial Mall South
Web Site: www.agr.ne.gov

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

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Lincoln, NE 68502-5399
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Lincoln, NE 68509-5064
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Electronic Copy Page 2

<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
1 oz	7A73	20	F	A
0.5 oz	7A73	21	F	A
0.25 oz	7A73	22	F	A
0.125 oz	7A73	23	F	A
0.0625 oz	7A73	24	F	A
0.0625 oz*	7A73	25	F	A
0.3 lb	9-OPI-5	14	F	A
0.2 lb	9-OPI-5	15	F	A
0.1 lb	9-OPI-5	16	F	A
0.05 lb	9-OPI-5	17	F	A
0.03 lb	9-OPI-5	18	F	A
0.02 lb	9-OPI-5	19	F	A
0.01 lb	9-OPI-5	20	F	A
0.005 lb	9-OPI-5	21	F	A
0.003 lb	9-OPI-5	22	F	A
0.002 lb	9-OPI-5	23	F	A
0.001 lb	9-OPI-5	24	F	A
0.001 lb*	9-OPI-5	25	F	A
25 lb	WM25-132	1	F	A
25 lb	WM25-133	1	F	A
25 lb	WM25-135	1	F	A
25 lb	WM25-136	1	F	A
25 lb	WM25-137	1	F	A
25 lb	WM25-138	1	F	A
25 lb	WM25-139	1	F	A
25 lb	WM25-140	1	F	A
25 lb	WM25-22	1	F	A
25 lb	WM25-26	1	F	A
25 lb	WM25-31	1	F	A
25 lb	WM25-34	1	F	A
25 lb	WM25-35	1	F	A
25 lb	WM25-41	1	F	A
25 lb	WM25-54	1	F	A
25 lb	WM25-60	1	F	A
25 lb	WM25-61	1	F	A
25 lb	WM25-62	1	F	A

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Electronic Copy Page 3

Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
25 lb	WM25-63	1	F	A
25 lb	WM25-64	1	F	A
8 oz	WM-30-1	1	F	A
300 g	WM-G89-2	1	4	A
200 g	WM-G89-2	2	4	A
100 g	WM-G89-2	3	4	A
50 g	WM-G89-2	4	4	A
30 g	WM-G89-2	5	4	A
20 g	WM-G89-2	6	4	A
10 g	WM-G89-2	7	4	A
5 g	WM-G89-2	8	4	A
3 g	WM-G89-2	9	4	A
2 g	WM-G89-2	10	4	A
1 g	WM-G89-2	11	4	A
500 mg	WM-G89-2	12	4	A
200 mg	WM-G89-2	13	4	A
200 mg*	WM-G89-2	14	4	A
100 mg	WM-G89-2	15	4	A
50 mg	WM-G89-2	16	4	A
20 mg	WM-G89-2	17	4	A
20 mg*	WM-G89-2	18	4	A
10 mg	WM-G89-2	19	4	A
5 mg	WM-G89-2	20	4	A
2 mg	WM-G89-2	21	4	A
2 mg*	WM-G89-2	22	4	A
1 mg	WM-G89-2	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: 30

Agency: NE Dept of Ag. - Weights & Measures
500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043

Date: 3/28/2011

P.O. No:

Observer: CEO

Form No.: NE04LF7-R00

Submitted By: Jeff Saathoff

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Page 1 of 2

Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
300 g	WM-G89-2	1	300.00373645	300.00281794	0.00014956	CC1201 / 1 kg	300gd
200 g	WM-G89-2	2	200.00148413	200.00087179	0.00014876	CC1201 / 1 kg	200gd
100 g	WM-G89-2	3	100.00185453	100.00154835	0.00006764	AT106_100G	100grl
50 g	WM-G89-2	4	50.00043281	50.00027972	0.00004616	AT106_100G	50grl
30 g	WM-G89-2	5	30.00071852	30.00062666	0.00003999	AT106_100G	30grl
20 g	WM-G89-2	6	20.00032523	20.00026400	0.00003508	AT106_100G	20grl
10 g	WM-G89-2	7	10.00044578	10.00041516	0.00001787	AT106_10G	10grl
5 g	WM-G89-2	8	5.00020699	5.00019168	0.00000721	CCE6_5G	5grl
3 g	WM-G89-2	9	3.00003546	3.00002627	0.00000632	CCE6_5G	3grl
2 g	WM-G89-2	10	2.00006163	2.00005550	0.00000632	CCE6_5G	2grl
1 g	WM-G89-2	11	1.00001784	1.00001477	0.00000607	CCE6_5G	1grl
500 mg	WM-G89-2	12	0.49998775	0.49998622	0.00000562	CCE6_5G	500mgrl
200 mg	WM-G89-2	13	0.19998731	0.19998670	0.00000545	CCE6_5G	200mgrl
200 mg*	WM-G89-2	14	0.19998061	0.19998000	0.00000545	CCE6_5G	200mgrl
100 mg	WM-G89-2	15	0.09992774	0.09992743	0.00000542	CCE6_5G	100mgrl
50 mg	WM-G89-2	16	0.04999176	0.04999161	0.00000541	CCE6_5G	50mgrl
20 mg	WM-G89-2	17	0.02002660	0.02002070	0.00000540	CCE6_5G	20mgrl
20 mg*	WM-G89-2	18	0.02004410	0.02003820	0.00000540	CCE6_5G	20mgrl
10 mg	WM-G89-2	19	0.00999628	0.00999334	0.00000540	CCE6_5G	10mgrl
5 mg	WM-G89-2	20	0.00500143	0.00499995	0.00000540	CCE6_5G	5mgrl

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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Page 2 of 2

Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
2 mg	WM-G89-2	21	0.00200684	0.00200625	0.00000540	CCE6_5G	2mgrl
2 mg*	WM-G89-2	22	0.00201720	0.00201660	0.00000540	CCE6_5G	2mgrl
1 mg	WM-G89-2	23	0.00099685	0.00099656	0.00000540	CCE6_5G	1mgrl

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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SOP 8 - Modified Substitution Test Results

Form No.: NE04LF9-R00

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 500 E. Prairie Road
 Grand Island, NE 68803-

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Page 1 of 3

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
6	1	0	4 kg	CC10000S-5 kg	4kg	-0.0074918 g	0.08 g	0.0008089 g	A
7A73	1	0	2 lb	CC1201-lb	NSL-2-1	0.0165819 g	0.091 g	0.0005150 g	A
7A73	2	0	2 lb	CC1201-lb	NSL-2-1	0.0480819 g	0.091 g	0.0005150 g	A
7A73	3	0	2 lb	CC1201-lb	NSL-2-1	-0.0600181 g	0.091 g	0.0005150 g	A
7A73	4	0	2 lb	CC1201-lb	NSL-2-1	0.0105819 g	0.091 g	0.0005150 g	A
7A73	5	0	2 lb	CC1201-lb	NSL-2-1	-0.0829181 g	0.091 g	0.0005150 g	A
7A73	6	0	2 lb	CC1201-lb	NSL-2-1	-0.0380181 g	0.091 g	0.0005150 g	A
7A73	7	0	2 lb	CC1201-lb	NSL-2-1	0.0287819 g	0.091 g	0.0005150 g	A
7A73	8	0	2 lb	CC1201-lb	NSL-2-1	0.0518819 g	0.091 g	0.0005150 g	A
7A73	9	0	2 lb	CC1201-lb	NSL-2-1	-0.0708181 g	0.091 g	0.0005150 g	A
7A73	10	0	2 lb	CC1201-lb	NSL-2-1	0.0770819 g	0.091 g	0.0005150 g	A
7A73	11	0	2 lb	CC1201-lb	NSL-2-1	0.0780819 g	0.091 g	0.0005150 g	A
7A73	12	0	2 lb	CC1201-lb	NSL-2-1	-0.0149181 g	0.091 g	0.0005150 g	A
7A73	13	0	2 lb	CC1201-lb	NSL-2-1	0.0455819 g	0.091 g	0.0005150 g	A
7A73	14	0	2 lb	CC1201-lb	NSL-2-1	-0.0735181 g	0.091 g	0.0005150 g	A
7A73	15	0	1 lb	CC1201-lb	NSL-1-1	-0.0389241 g	0.07 g	0.0004635 g	A
7A73	16	0	1 lb	CC1201-lb	NSL-1-1	-0.0377241 g	0.07 g	0.0004635 g	A
7A73	17	0	8 oz	CC1201-lb	NSL-8-1	-0.0107265 g	0.045 g	0.0004521 g	A
7A73	18	0	4 oz	CC1201-lb	NSL-Z	0.0012960 g	0.023 g	0.0004384 g	A
7A73	19	0	2 oz	AT106-lb	NSL-Y	0.0009332 g	0.011 g	0.0000536 g	A
7A73	20	0	1 oz	AT106-lb	2A9-1oz	-0.0050931 g	0.0054 g	0.0003655 g	A
7A73	21	0	0.5 oz	AT106-lb	2A9-1.2oz	0.0012409 g	0.0028 g	0.0003654 g	A
7A73	22	0	0.25 oz	AT106-lb	2A9-1.4oz	0.0006565 g	0.0017 g	0.0000437 g	A
7A73	23	0	0.125 oz	CCE6_lb	2A9-1.8oz	-0.0010596 g	0.0013 g	0.0000075 g	A
7A73	24	0	0.0625 oz	CCE6_lb	2A9-1.16oz	-0.0003288 g	0.0011 g	0.0000074 g	A
7A73	25	0	0.0625 oz*	CCE6_lb	2A9-1.16oz	0.0007747 g	0.0011 g	0.0000074 g	A

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

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Page 2 of 3

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
9-OPI-5	14	0	0.3 lb	CC1201-lb	NSL-WK1	-0.0015100 g	0.027 g	0.0004432 g	A
9-OPI-5	15	0	0.2 lb	AT106-lb	NSL-WK2	-0.0067931 g	0.018 g	0.0000569 g	A
9-OPI-5	16	0	0.1 lb	AT106-lb	NSL-WK3	-0.0090183 g	0.0091 g	0.0000498 g	A
9-OPI-5	17	0	0.05 lb	AT106-lb	NSL-WK4	0.0026541 g	0.0045 g	0.0000481 g	A
9-OPI-5	18	0	0.03 lb	AT106-lb	NSL-WK5	0.0006633 g	0.0027 g	0.0000429 g	A
9-OPI-5	19	0	0.02 lb	AT106-lb	NSL-WK6	0.0005864 g	0.0018 g	0.0000445 g	A
9-OPI-5	20	0	0.01 lb	CCE6_lb	NSL-WK7	-0.0002688 g	0.0015 g	0.0000090 g	A
9-OPI-5	21	0	0.005 lb	CCE6_lb	NSL-WK8	-0.0003845 g	0.0012 g	0.0000075 g	A
9-OPI-5	22	0	0.003 lb	CCE6_lb	NSL-WK9	-0.0001666 g	0.00099 g	0.0000070 g	A
9-OPI-5	23	0	0.002 lb	CCE6_lb	NSL-WK10	0.0003011 g	0.00087 g	0.0000063 g	A
9-OPI-5	24	0	0.001 lb	CCE6_lb	NSL-WK11	-0.0004145 g	0.0007 g	0.0000061 g	A
9-OPI-5	25	0	0.001 lb*	CCE6_lb	NSL-WK11	-0.0000021 g	0.0007 g	0.0000061 g	A
WM25-132	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.7018098 g	1.1 g	0.0353136 g	A
WM25-133	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.9168098 g	1.1 g	0.0353136 g	A
WM25-135	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.9518098 g	1.1 g	0.0353136 g	A
WM25-136	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4818098 g	1.1 g	0.0353136 g	A
WM25-137	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.3568098 g	1.1 g	0.0353136 g	R
WM25-137	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.4968098 g	1.1 g	0.0353136 g	A
WM25-138	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.7768098 g	1.1 g	0.0353136 g	A
WM25-139	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.3018098 g	1.1 g	0.0353136 g	R
WM25-139	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.5818098 g	1.1 g	0.0353136 g	A
WM25-140	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.9068098 g	1.1 g	0.0353136 g	A
WM25-22	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.5081902 g	1.1 g	0.0353136 g	A
WM25-26	1	0	25 lb	KA30-3_25lb	NSL-25-1	-1.0481902 g	1.1 g	0.0353136 g	A
WM25-31	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.7931902 g	1.1 g	0.0353136 g	A
WM25-34	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.1868098 g	1.1 g	0.0353136 g	A
WM25-35	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.4418098 g	1.1 g	0.0353136 g	A
WM25-41	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.8368098 g	1.1 g	0.0353136 g	A
WM25-54	1	0	25 lb	KA30-3_25lb	NSL-25-1	-0.5781902 g	1.1 g	0.0353136 g	A
WM25-60	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.2018098 g	1.1 g	0.0353136 g	A
WM25-61	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.2068098 g	1.1 g	0.0353136 g	R
WM25-61	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.4018098 g	1.1 g	0.0353136 g	A
WM25-62	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.7368098 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
WM25-63	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.9268098 g	1.1 g	0.0353136 g	A
WM25-64	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.1818098 g	1.1 g	0.0353136 g	R
WM25-64	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.4068098 g	1.1 g	0.0353136 g	A
WM-30-1	1	0	8 oz	CC1201-lb	NSL-8-1	-0.0076265 g	0.045 g	0.0025995 g	A

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3721 West Cuming Street
Lincoln, NE 68524
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SOP 19 - Volume Transfer Test Results

Agency ID: 30

Form No.: NE03LF12-R00

Agency: NE Dept of Ag. - Weights & Measures
500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043
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Page 1 of 11

Serial #: 00-16623-01
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	49.3 °F	0.999732	0 in3

Test Measure Information

Water Temperature: 49.3 °F
Water Density: 0.999732 g/cm³
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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Lincoln, NE 68524
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SOP 19 - Volume Transfer Test Results

Agency ID: 30

Form No.: NE03LF12-R00

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500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 2 of 11

Serial #: 00-16623-01
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	46.5 °F	0.999845	0 in3

Test Measure Information

Water Temperature: 46.5 °F
Water Density: 0.999845 g/cm³
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
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 30

Form No.: NE03LF12-R00

Agency: NE Dept of Ag. - Weights & Measures
500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 3 of 11

Serial #: 00-16623-02
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	46.1 °F	0.999858	0 in3

Test Measure Information

Water Temperature: 46.1 °F
Water Density: 0.999858 g/cm³
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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500 E. Prairie Road
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NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 4 of 11

Serial #: 00-16623-02
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	45.6 °F	0.999874	0 in3

Test Measure Information

Water Temperature: 45.6 °F
Water Density: 0.999874 g/cm³
Scale Reading: -0.3 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0004 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

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NE Cert No: 20110043
Date: 3/28/2011
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Page 5 of 11

Serial #: 00-16623-03
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	45.7 °F	0.999871	0 in3

Test Measure Information

Water Temperature: 45.7 °F
Water Density: 0.999871 g/cm³
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

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500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 6 of 11

Serial #: 00-16623-03
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	45.6 °F	0.999874	0 in3

Test Measure Information

Water Temperature: 45.6 °F
Water Density: 0.999874 g/cm³
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

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SOP 19 - Volume Transfer Test Results

Agency ID: 30

Form No.: NE03LF12-R00

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500 E. Prairie Road
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NE Cert No: 20110043

Date: 3/28/2011

P.O. No:

Submitted By: Jeff Saathoff

Page 7 of 11

Serial #: 40702C
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	47.2 °F	0.999820	0 in3

Test Measure Information

Water Temperature: 47.2 °F
Water Density: 0.999820 g/cm³
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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Agency ID: 30

Form No.: NE03LF12-R00

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500 E. Prairie Road
Grand Island, NE 68803-

NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 8 of 11

Serial #: 40702C
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	48.3 °F	0.999776	0 in3

Test Measure Information

Water Temperature: 48.3 °F
Water Density: 0.999776 g/cm³
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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Form No.: NE03LF12-R00

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500 E. Prairie Road
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NE Cert No: 20110043

Date: 3/28/2011

P.O. No:

Submitted By: Jeff Saathoff

Page 9 of 11

Serial #: 40702D
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	46.9 °F	0.999831	0 in3

Test Measure Information

Water Temperature: 46.9 °F
Water Density: 0.999831 g/cm³
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

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500 E. Prairie Road
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NE Cert No: 20110043
Date: 3/28/2011
P.O. No:

Submitted By: Jeff Saathoff

Page 10 of 11

Serial #: 40702D
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	46.9 °F	0.999831	0 in3

Test Measure Information

Water Temperature: 46.9 °F
Water Density: 0.999831 g/cm³
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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NE Cert No: 20110043

Date: 3/28/2011

P.O. No:

Submitted By: Jeff Saathoff

Page 11 of 11

Serial #: 40702D
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	46 °F	0.999861	0 in3

Test Measure Information

Water Temperature: 46 °F
Water Density: 0.999861 g/cm³
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