

Traceable Certificate Number: 3047645
Contractor: ILLIANA INSTRUMENTATION SERV
 1831 GOVERT DR
 SCHERERVILLE, IN 46375-2298

Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
 1831 GOVERT DR
 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020 to 01 May 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.83 °C to 20.94 °C
Pressure Range: 729.10 mmHg to 729.52 mmHg
Relative Humidity Range: 51 % to 53 %
Air Density Range: 1.1460 mg/cm³ to 1.1473 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

if there are two NIST numbers, one or both may apply

Calibrated By: 27
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 1 g Polished Weight, ASTM Class 1, S/N 12336



Indicates Corr + Unc >= MPE

Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Corr	MPE	Conv. Mass	Conv. Corr	MPE						
1 g	12336	0.9999680	-0.0320	N <input checked="" type="checkbox"/>	1.0000215	0.0215	Y	0.0025	2	0.034	650Q	L595Q	7.85

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Check with your local state agency for certification of compliance on Legal for Trade items. *The weight accuracy class is referenced in the Description of Weights. Unless otherwise noted, the weights calibrated meet the requirements of the accuracy class. Results relate only to weights calibrated. The Uncertainty of Measurement is included in the determination of Maximum Permissible Error (MPE) Pass/Fail Criteria. The specifications for Maximum Permissible Error (MPE) can be found in NIST Handbook 105-1 (2019), NIST Handbook 105-1 (1990), ASTM E617-18 or OIML R111-1 (2004), manufacturer specifications or customer specifications.

Prepared By:
Rice Lake Weighing Systems
 230 West Coleman Street, Rice Lake, WI 54868 • USA • PN 64787 • 6/19
 TEL: 715-234-9171 • FAX: 715-234-6967 • www.ricelake.com
 Definitions: <http://certs.ricelake.com/certs/DefinitionsV2.docx>

Dated 01 May 2020

Dan Demers
 Dan Demers, Metrologist



The Uncertainty assigned to the Conventional Mass values are the result of the root-sum-square of the type A and type B components, calculated in accordance with NIST SOP 29 and ISO GUM, with a coverage factor (k), to express the expanded uncertainty with an approximate 95.45 % confidence level. This Report is not to be used to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA or any agency of the U.S. Government. This document shall not be reproduced, except in full, without the written approval of Rice Lake Weighing Systems' Metrology Laboratory.



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Contractor: ILLIANA INSTRUMENTATION SERV
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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020 to 01 May 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.87 °C to 20.94 °C
Pressure Range: 729.09 mmHg to 729.52 mmHg
Relative Humidity Range: 50 % to 54 %
Air Density Range: 1.1463 mg/cm³ to 1.1468 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

if there are two NIST numbers, one or both may apply

Calibrated By: 27
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 5 g Polished Weight, ASTM Class 1, S/N 12335



Indicates Corr + Unc >= MPE

Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	MPE	Conv. Mass	Conv. Mass	MPE					
5 g	12335	4.9999676	-0.0324 N	<input checked="" type="checkbox"/> 5.0000106	0.0106 Y	0.0047 2	0.034	650Q	L595Q	7.85		

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Purchase Order Number: 4075
 Client: ILLIANA INSTRUMENTATION SERV
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Date Received: 28 Apr 2020
 Date Calibrated: 01 May 2020
 Recall Date: 01 May 2022
 Temperature Range: 20.87 °C to 20.96 °C
 Pressure Range: 728.65 mmHg to 728.98 mmHg
 Relative Humidity Range: 50 % to 52 %
 Air Density Range: 1.1457 mg/cm³ to 1.1461 mg/cm³
 NIST Certificate Number: 684/291344-18 & 684/292805-19

if there are two NIST numbers, one or both may apply

Calibrated By: 17
 Procedure: Inter-comparison Method (WI05-0095 Rev. D)
 Condition of Weights: Acceptable for Calibration
 Description of Weights: 10 g Polished Weight, ASTM Class 1, S/N 12334



Indicates Corr + Unc >= MPE

Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	MPE	Conv. Mass	Conv. Mass	MPE						
10 g	12334	9.999927	-0.073	N <input checked="" type="checkbox"/>	10.000020	0.020	Y	0.012	2	0.050	1470Q	L595Q	7.85

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Dated 01 May 2020

Dan Demers, Metrologist



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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 01 May 2020
Recall Date: 01 May 2022
Temperature Range: 20.98 °C
Pressure Range: 728.98 mmHg
Relative Humidity Range: 50 %
Air Density Range: 1.1459 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

if there are two NIST numbers, one or both may apply

Calibrated By: 17
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 100 g Polished Weight, ASTM Class 1, S/N 39736



Nominal Value	ID or S/N	As Found				As Left				Unc. (mg)	k (mg)	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	Corr	Corr	Conv. Mass	Conv. Mass	Corr	Corr						
100 g	39736	99.999826	-0.174	Y	99.999826	-0.174	Y	0.035	2	0.25	1470Q	L595Q	7.85		

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Dated 01 May 2020

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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.91 °C
Pressure Range: 728.98 mmHg
Relative Humidity Range: 48 %
Air Density Range: 1.1465 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19
 if there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 500 g Satin Finish Weight, ASTM Class 1, S/N 6037.

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found				As Left				Balance Used	k	MPE* (mg)	Unc. (mg)	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Corr (mg)	Mass	MPE	Conv. Mass	Corr (mg)	Mass	MPE						
500 g	6037. *	500.000600	0.600	Y	500.000600	0.600	Y	0.600	Y	699Q	1.2	0.088	2	L595Q	7.85

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Dated 30 Apr 2020

Dan Demers
 Dan Demers, Metrologist



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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.91 °C
Pressure Range: 728.90 mmHg
Relative Humidity Range: 53 %
Air Density Range: 1.1458 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 500 g Satin Finish Weight, ASTM Class 1, S/N 6036

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k (mg)	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	Corr (mg)	Conv. Mass	Conv. Mass	Corr (mg)						
500 g 6036 *		499.999497	-0.503 Y	-0.503 Y	499.999497	-0.503 Y	0.088 2	1.2			699Q	L595Q	7.85

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Dated 30 Apr 2020

Dan Demers
 Dan Demers, Metrologist



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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.94 °C
Pressure Range: 729.05 mmHg
Relative Humidity Range: 49 %
Air Density Range: 1.1464 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 1 kg Satin Finish Weight, ASTM Class 1, S/N 6034

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found				As Left				Unc. (mg)	k (mg)	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)	
		Conv. Mass	Conv. Mass	Corr	Corr	Conv. Mass	Conv. Mass	Corr	Corr							
1 kg 6034. *		0.99999873	-1.27	Y	0.99999873	-1.27	Y	0.99999873	-1.27	Y	0.12	2	2.5	699Q	L595Q	7.85

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Traceable Certificate Number: 3047645G
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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.91 °C
Pressure Range: 729.01 mmHg
Relative Humidity Range: 50 %
Air Density Range: 1.1463 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 1 kg Satin Finish Weight, ASTM Class 1, S/N 85067

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class

Nominal Value	ID or S/N	As Found				As Left				Unc. (mg)	k	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)	
		Conv. Mass	Conv. Mass	Corr	Corr	Conv. Mass	Conv. Mass	Corr	Corr							
1 kg 85067 *		0.99999958	0.99999958	-0.42	-0.42	Y	Y	0.99999958	-0.42	Y	0.12	2	2.5	699Q	L595Q	7.85

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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 20.94 °C
Pressure Range: 728.94 mmHg
Relative Humidity Range: 54 %
Air Density Range: 1.1457 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19
 if there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 1 kg Satin Finish Weight, ASTM Class 1, S/N 17727

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class

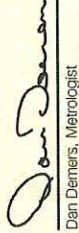
Nominal Value	ID or S/N	As Found				As Left				Unc. (mg)	k	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	Corr	Corr	Conv. Mass	Conv. Mass	Corr	Corr						
1 kg 17727 *		0.99999839	-1.61	Y	0.99999839	-1.61	Y	0.12	2	2.5	699Q	L595Q	7.85		

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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
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 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 21.02 °C
Pressure Range: 728.87 mmHg
Relative Humidity Range: 47 %
Air Density Range: 1.1459 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 5 kg Satin Finish Weight, ASTM Class 1, S/N 17726

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k (mg)	MPE* (mg)	Balance Used	Standard Assumed Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Corr	MPE	Conv. Mass	Corr	MPE						
5 kg 17726 *		4.99999735	-2.65	Y	4.99999735	-2.65	Y	0.68	2	12	124Q	L595Q	7.85

This report contains data not covered by the NVLAP Accreditation if the box is checked.

Check with your local state agency for certification of compliance on Legal for Trade items. *The weight accuracy class is referenced in the Description of Weights. Unless otherwise noted, the weights calibrated meet the requirements of the accuracy class. Results relate only to weights calibrated. The Uncertainty of Measurement is included in the determination of Maximum Permissible Error (MPE) Pass/Fail Criteria. The specifications for Maximum Permissible Error (MPE) can be found in NIST Handbook 106-1 (2019), NIST Handbook 105-1 (1990), ASTM E617-18 or OIML R111-1 (2004), manufacturer specifications or customer specifications.

Prepared By:
Rice Lake Weighing Systems
 230 West Coleman Street, Rice Lake, WI 54868 • USA • PN 64787 • 6/19
 TEL: 715-234-9171 • FAX: 715-234-6987 • www.ricelake.com
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Dated 30 Apr 2020

Dan Demers
 Dan Demers, Metrologist



The Uncertainty assigned to the Conventional Mass values are the result of the root-sum-square of the type A and type B components, calculated in accordance with NIST SOP 28 and ISO GUM, with a coverage factor (k), to express the expanded uncertainty with an approximate 95.45 % confidence level. This Report is not to be used to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA or any agency of the U.S. Government. This document shall not be reproduced, except in full, without the written approval of Rice Lake Weighing Systems' Metrology Laboratory.



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Purchase Order Number: 4075
Client: ILLIANA INSTRUMENTATION SERV
 1831 GOVERT DR
 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 21.06 °C
Pressure Range: 728.87 mmHg
Relative Humidity Range: 50 %
Air Density Range: 1.1454 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 5 kg Satin Finish Weight, ASTM Class 1, S/N 6033

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)	
		Conv. Mass	Conv. Mass	MPE	Conv. Mass	Conv. Mass	MPE						
5 kg 6033 *		4.99999573	-4.27	Y	4.99999573	-4.27	Y	0.68	2	12	124Q	L595Q	7.85

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 230 West Coleman Street, Rice Lake, WI 54868 • USA • PN 64787 • 6/19
 TEL: 715-234-9171 • FAX: 715-234-6967 • www.ricelake.com
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Dan Demers
 Dan Demers, Metrologist



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Date Received: 28 Apr 2020
Date Calibrated: 30 Apr 2020
Recall Date: 30 Apr 2022
Temperature Range: 21.08 °C
Pressure Range: 728.79 mmHg
Relative Humidity Range: 48 %
Air Density Range: 1.1455 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 28
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 10 kg Satin Finish Weight, ASTM Class 1, S/N 91823

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found			As Left			Unc. (mg)	k	MPE* (mg)	Balance Used	Standard Set Used	Assumed Density (g/cm ³)
		Conv. Mass	Conv. Mass	MPE	Conv. Mass	Conv. Mass	MPE						
10 kg 91823 *		9.9999992	-0.8	Y	9.9999992	-0.8	Y	1.4	2	25	124Q	L595Q	7.85

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Dated 30 Apr 2020

Dan Demers
 Dan Demers, Metrologist



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 SCHERERVILLE, IN 46375-2298

Date Received: 28 Apr 2020
Date Calibrated: 01 May 2020
Recall Date: 01 May 2022
Temperature Range: 20.85 °C
Pressure Range: 728.86 mmHg
Relative Humidity Range: 49 %
Air Density Range: 1.1464 mg/cm³
NIST Certificate Number: 684/291344-18 & 684/292805-19

If there are two NIST numbers, one or both may apply

Calibrated By: 17
Procedure: Inter-comparison Method (WI05-0095 Rev. D)
Condition of Weights: Acceptable for Calibration
Description of Weights: 100 g Satin Finish Weight, ASTM Class 1, S/N 91787 with dot

* Although this test weight has been tested for the tolerance of the class for which it was submitted, it does not meet the finish requirements for that class



Nominal Value	ID or S/N	As Found				As Left				Balance Used	Standard Set Used	Assumed Density (g/cm ³)	
		Conv. Mass	Conv. Mass	MPE	Pass	Conv. Mass	Conv. Mass	MPE	Pass				
100 g 91787. *		100.000014	0.014	Y	100.000014	0.014	Y	0.035	2	0.25	1470Q	L595Q	7.85

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Dated 01 May 2020

Dan Demers
 Dan Demers, Metrologist



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