



Calibration Certificate

Certificate Number: 20-191

Calibration Date: 07/13/2020

Calibration Due Date: 07/13/2021

Tested Item(s): 1000 lb, 500 lb, 50 lb, 25 lb, 250 kg, 25 kg, 20 kg, and 10 kg Test Weights

Issued To: Koenig Scale Company
4779 E Margaret Dr
Terra Haute, IN 47803

POC: Kevin Koenig

Phone: 812-877-6121

Calibration Authorized By: Kevin Koenig

Date Received: 07/13/2020

Artifact(s) Description

Test Item(s): 1000 lb, 500 lb, 50 lb, 25 lb, 250 kg, 25 kg, 20 kg, and 10 kg Test Weights

Serial No: Various

Manufacture: Various

Material: Cast Iron

Class Specification: NIST HB 105-1 (1990), Class F

Condition: Good

Calibration Information

Metrologist: Howard Wickersham

Procedure: NIST SOP 8: Modified Substitution (2015)

Temperature: 22.8 °C

Pressure: 738.0 mm Hg

Humidity: 55.7 % RH

Summary Table

Nominal Mass	Serial No. / ID	Manufacture	Correct	Adjusted	Condemned	Confiscated	Total
1000 lb	Various	Rice Lake	21	0	0	0	21
500 lb	Various	Rice Lake	15	1	0	0	16
50 lb	Various	Various	111	0	0	0	111
25 lb	Various	Various	40	3	0	0	43
250 kg	Various	Rice Lake	6	0	0	0	6
25 kg	Various	Rice Lake	35	5	0	0	40
20 kg	Various	Rice Lake	1	0	0	0	1
10 kg	Various	Rice Lake	1	0	0	0	1
			230	9	0	0	239



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Calibration Results

Nominal Mass	Serial No. / ID	Manufacture	Conventional Mass Correction		U ± (g)	k factor	Degrees of Freedom	NIST HB 105-1 (1990), Class F MPE ± (g)	Assumed Density (g/cm ³)
			As Found (g)	As Left (g)					
1000 lb	17	Rice Lake	-15.3	-15.3	7.9	2.014	181	45	7.2
1000 lb	3	Rice Lake	2.5	2.5	7.9	2.014	181	45	7.2
1000 lb	G692	Rice Lake	-12.2	-12.2	7.9	2.014	181	45	7.2
1000 lb	12	Rice Lake	-20.1	-20.1	7.9	2.014	181	45	7.2
1000 lb	20	Rice Lake	0.4	0.4	7.9	2.014	181	45	7.2
1000 lb	7	Rice Lake	2.9	2.9	7.9	2.014	181	45	7.2
1000 lb	1	Rice Lake	-3.4	-3.4	7.9	2.014	181	45	7.2
1000 lb	15	Rice Lake	-19.4	-19.4	7.9	2.014	181	45	7.2
1000 lb	9	Rice Lake	22.5	22.5	7.9	2.014	181	45	7.2
1000 lb	8	Rice Lake	-19.2	-19.2	7.9	2.014	181	45	7.2
1000 lb	5	Rice Lake	-19.8	-19.8	7.9	2.014	181	45	7.2
1000 lb	10	Rice Lake	-16.2	-16.2	7.9	2.014	181	45	7.2
1000 lb	13	Rice Lake	-15.9	-15.9	7.9	2.014	181	45	7.2
1000 lb	14	Rice Lake	-35.3	-35.3	7.9	2.014	181	45	7.2
1000 lb	18	Rice Lake	-12.3	-12.3	7.9	2.014	181	45	7.2
1000 lb	6	Rice Lake	-6.7	-6.7	7.9	2.014	181	45	7.2
1000 lb	2	Rice Lake	-10	-10	7.9	2.014	181	45	7.2
1000 lb	11	Rice Lake	1.2	1.2	7.9	2.014	181	45	7.2
1000 lb	4	Rice Lake	5.2	5.2	7.9	2.014	181	45	7.2
1000 lb	19	Rice Lake	-3.6	-3.6	7.9	2.014	181	45	7.2
1000 lb	16	Rice Lake	-6.8	-6.8	7.9	2.014	181	45	7.2
500 lb	662L	Rice Lake	8.4	8.4	4	2.16	17	23	7.2
500 lb	663L	Rice Lake	-5.5	-5.5	4	2.16	17	23	7.2
500 lb	612	Rice Lake	11.3	11.3	4	2.16	17	23	7.2
500 lb	GL1	Rice Lake	7	7	4	2.16	17	23	7.2
500 lb	650L	Rice Lake	-20.7	-16.7	4	2.16	17	23	7.2
500 lb	6457L	Rice Lake	8.1	8.1	4	2.16	17	23	7.2
500 lb	654L	Rice Lake	3.9	3.9	4	2.16	17	23	7.2
500 lb	65SL	Rice Lake	-14.4	-14.4	4	2.16	17	23	7.2
500 lb	656L	Rice Lake	-14.1	-14.1	4	2.16	17	23	7.2
500 lb	658L	Rice Lake	-3.9	-3.9	4	2.16	17	23	7.2
500 lb	651L	Rice Lake	0.4	0.4	4	2.18	17	23	7.2
500 lb	661L	Rice Lake	-4.7	-4.7	4	2.18	17	23	7.2
500 lb	655L	Rice Lake	-17.4	-17.4	4	2.18	17	23	7.2
500 lb	660L	Rice Lake	1.3	1.3	4	2.18	17	23	7.2
500 lb	652L	Rice Lake	-5.1	-5.1	4	2.18	17	23	7.2
500 lb	653L	Rice Lake	-15.5	-15.5	4	2.18	17	23	7.2
250 kg	84	Rice Lake	2.5	2.5	3	11536	2.5	25	7.2

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250 kg	83	Rice Lake	-5	-5	3	11536	2.5	25	7.2
250 kg	85	Rice Lake	5.9	5.9	3	11536	2.5	25	7.2
250 kg	86	Rice Lake	3	3	3	11536	2.5	25	7.2
250 kg	81	Rice Lake	6.8	6.8	3	11536	2.5	25	7.2
250 kg	82	Rice Lake	9.9	9.9	3	11536	2.5	25	7.2
50 lb	1010RL	Rice Lake	1.04	1.04	0.34	2.002	1174	2.3	7.2
50 lb	408	Rice Lake	-0.06	-0.06	0.34	2.002	1174	2.3	7.2
50 lb	601	Rice Lake	0.08	0.08	0.34	2.002	1174	2.3	7.2
50 lb	710	Rice Lake	0.3	0.3	0.34	2.002	1174	2.3	7.2
50 lb	1013	Rice Lake	0.3	0.3	0.34	2.002	1174	2.3	7.2
50 lb	700	Rice Lake	0.17	0.17	0.34	2.002	1174	2.3	7.2
50 lb	1008	Rice Lake	0.24	0.24	0.34	2.002	1174	2.3	7.2
50 lb	202	Rice Lake	0.8	0.8	0.34	2.002	1174	2.3	7.2
50 lb	201	Rice Lake	0.37	0.37	0.34	2.002	1174	2.3	7.2
50 lb	409	Rice Lake	1.01	1.01	0.34	2.002	1174	2.3	7.2
50 lb	1034	Rice Lake	0.22	0.22	0.34	2.002	1174	2.3	7.2
50 lb	1036	Kohn	0.32	0.32	0.34	2.002	1174	2.3	7.2
50 lb	1025	Troemner	0.36	0.36	0.34	2.002	1174	2.3	7.2
50 lb	903	Toledo	0.56	0.56	0.34	2.002	1174	2.3	7.2
50 lb	714	Rice Lake	0.37	0.37	0.34	2.002	1174	2.3	7.2
50 lb	1019	Troemner	0.41	0.41	0.34	2.002	1174	2.3	7.2
50 lb	604	Rice Lake	1.39	1.39	0.34	2.002	1174	2.3	7.2
50 lb	75	Rice Lake	0.36	0.36	0.34	2.002	1174	2.3	7.2
50 lb	709	Rice Lake	0.4	0.4	0.34	2.002	1174	2.3	7.2
50 lb	704	Rice Lake	0.34	0.34	0.34	2.002	1174	2.3	7.2
50 lb	605	Rice Lake	0.76	0.76	0.34	2.002	1174	2.3	7.2
50 lb	715	Rice Lake	0.98	0.98	0.34	2.002	1174	2.3	7.2
50 lb	706	Rice Lake	0.23	0.23	0.34	2.002	1174	2.3	7.2
50 lb	711	Rice Lake	0.63	0.63	0.34	2.002	1174	2.3	7.2
50 lb	608	Rice Lake	1.13	1.13	0.34	2.002	1174	2.3	7.2
50 lb	716	Rice Lake	0.36	0.36	0.34	2.002	1174	2.3	7.2
50 lb	701	Rice Lake	0.85	0.85	0.34	2.002	1174	2.3	7.2
50 lb	712	Rice Lake	1.06	1.06	0.34	2.002	1174	2.3	7.2
50 lb	713	Rice Lake	0.68	0.68	0.34	2.002	1174	2.3	7.2
50 lb	719	Rice Lake	0.7	0.7	0.34	2.002	1174	2.3	7.2
50 lb	606	Rice Lake	0.97	0.97	0.34	2.002	1174	2.3	7.2
50 lb	1017	Toledo	-0.11	-0.11	0.34	2.002	1174	2.3	7.2
50 lb	1005	Toledo	0.24	0.24	0.34	2.002	1174	2.3	7.2
50 lb	1006	Toledo	1.37	1.37	0.34	2.002	1174	2.3	7.2
50 lb	1003	Toledo	-0.85	-0.85	0.34	2.002	1174	2.3	7.2
50 lb	1016	Toledo	1.06	1.06	0.34	2.002	1174	2.3	7.2
50 lb	1032	Meyer	0.92	0.92	0.34	2.002	1174	2.3	7.2
50 lb	1035	Meyer	0.68	0.68	0.34	2.002	1174	2.3	7.2
50 lb	1000	Toledo	0.55	0.55	0.34	2.002	1174	2.3	7.2

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50 lb	1007	Toledo	-0.38	-0.38	0.34	2.002	1174	2.3	7.2
50 lb	1028	Troemner	1.07	1.07	0.34	2.002	1174	2.3	7.2
50 lb	1014	Toledo	0.62	0.62	0.34	2.002	1174	2.3	7.2
50 lb	1031	Troemner	0.07	0.07	0.34	2.002	1174	2.3	7.2
50 lb	1009	Rice Lake	0.12	0.12	0.34	2.002	1174	2.3	7.2
50 lb	1002	Toledo	0.17	0.17	0.34	2.002	1174	2.3	7.2
50 lb	1022	Toledo	0.49	0.49	0.34	2.002	1174	2.3	7.2
50 lb	1004	Toledo	0.51	0.51	0.34	2.002	1174	2.3	7.2
50 lb	1012	Toledo	-0.08	-0.08	0.34	2.002	1174	2.3	7.2
50 lb	1023	Fairbanks	0.17	0.17	0.34	2.002	1174	2.3	7.2
50 lb	1015	Toledo	-0.28	-0.28	0.34	2.002	1174	2.3	7.2
50 lb	1001	Toledo	1.16	1.16	0.34	2.002	1174	2.3	7.2
50 lb	603	Rice Lake	0.25	0.25	0.34	2.002	1174	2.3	7.2
50 lb	1010	Toledo	0.56	0.56	0.34	2.002	1174	2.3	7.2
50 lb	210	Rice Lake	1.11	1.11	0.34	2.002	1174	2.3	7.2
50 lb	203	Rice Lake	0.39	0.39	0.34	2.002	1174	2.3	7.2
50 lb	208	Rice Lake	0.39	0.39	0.34	2.002	1174	2.3	7.2
50 lb	206	Rice Lake	0.15	0.15	0.34	2.002	1174	2.3	7.2
50 lb	207	Rice Lake	0.4	0.4	0.34	2.002	1174	2.3	7.2
50 lb	205	Rice Lake	0.49	0.49	0.34	2.002	1174	2.3	7.2
50 lb	209	Rice Lake	0.31	0.31	0.34	2.002	1174	2.3	7.2
50 lb	904	Toledo	0	0	0.34	2.002	1174	2.3	7.2
50 lb	907	Toledo	0.56	0.56	0.34	2.002	1174	2.3	7.2
50 lb	901	Toledo	0.42	0.42	0.34	2.002	1174	2.3	7.2
50 lb	910	Toledo	0.4	0.4	0.34	2.002	1174	2.3	7.2
50 lb	906	Toledo	0.24	0.24	0.34	2.002	1174	2.3	7.2
50 lb	204	Rice Lake	-0.07	-0.07	0.34	2.002	1174	2.3	7.2
50 lb	909	Toledo	-0.17	-0.17	0.34	2.002	1174	2.3	7.2
50 lb	902	Toledo	-0.17	-0.17	0.34	2.002	1174	2.3	7.2
50 lb	908	Toledo	0.96	0.96	0.34	2.002	1174	2.3	7.2
50 lb	905	Toledo	0.65	0.65	0.34	2.002	1174	2.3	7.2
50 lb	1037	Troemner	-0.71	-0.71	0.34	2.002	1174	2.3	7.2
50 lb	401	Rice Lake	-0.19	-0.19	0.34	2.002	1174	2.3	7.2
50 lb	404	Rice Lake	0.71	0.71	0.34	2.002	1174	2.3	7.2
50 lb	405	Rice Lake	0.43	0.43	0.34	2.002	1174	2.3	7.2
50 lb	407	Rice Lake	1.15	1.15	0.34	2.002	1174	2.3	7.2
50 lb	402	Rice Lake	0.72	0.72	0.34	2.002	1174	2.3	7.2
50 lb	403	Rice Lake	0.01	0.01	0.34	2.002	1174	2.3	7.2
50 lb	410	Rice Lake	1.06	1.06	0.34	2.002	1174	2.3	7.2
50 lb	406	Rice Lake	0.37	0.37	0.34	2.002	1174	2.3	7.2
50 lb	602	Kohn	1.08	1.08	0.34	2.002	1174	2.3	7.2
50 lb	805	Toledo	0.41	0.41	0.34	2.002	1174	2.3	7.2
50 lb	807	Toledo	-0.11	-0.11	0.34	2.002	1174	2.3	7.2
50 lb	808	Toledo	0.57	0.57	0.34	2.002	1174	2.3	7.2

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50 lb	801	Toledo	0.39	0.39	0.34	2.002	1174	2.3	7.2
50 lb	806	Toledo	0.06	0.06	0.34	2.002	1174	2.3	7.2
50 lb	803	Toledo	-0.16	-0.16	0.34	2.002	1174	2.3	7.2
50 lb	607	Rice Lake	1.1	1.1	0.34	2.002	1174	2.3	7.2
50 lb	810	Toledo	-0.29	-0.29	0.34	2.002	1174	2.3	7.2
50 lb	802	Toledo	0.23	0.23	0.34	2.002	1174	2.3	7.2
50 lb	804	Toledo	0.33	0.33	0.34	2.002	1174	2.3	7.2
50 lb	809	Toledo	0.09	0.09	0.34	2.002	1174	2.3	7.2
50 lb	1026	Troemner	-1.54	-1.54	0.34	2.002	1174	2.3	7.2
50 lb	618	Toledo	-0.37	-0.37	0.34	2.002	1174	2.3	7.2
50 lb	610	Toledo	0.23	0.23	0.34	2.002	1174	2.3	7.2
50 lb	1020	Rice Lake	-0.02	-0.02	0.34	2.002	1174	2.3	7.2
50 lb	614	Toledo	1.94	1.94	0.34	2.002	1174	2.3	7.2
50 lb	617	Toledo	0.41	0.41	0.34	2.002	1174	2.3	7.2
50 lb	615	Toledo	0.2	0.2	0.34	2.002	1174	2.3	7.2
50 lb	611	Toledo	-0.28	-0.28	0.34	2.002	1174	2.3	7.2
50 lb	613	Toledo	0.6	0.6	0.34	2.002	1174	2.3	7.2
50 lb	620	Toledo	-0.03	-0.03	0.34	2.002	1174	2.3	7.2
50 lb	612	Toledo	0.59	0.59	0.34	2.002	1174	2.3	7.2
50 lb	609	Toledo	-0.07	-0.07	0.34	2.002	1174	2.3	7.2
50 lb	1030	Troemner	1.22	1.22	0.34	2.002	1174	2.3	7.2
50 lb	616	Toledo	-0.3	-0.3	0.34	2.002	1174	2.3	7.2
50 lb	1033	Troemner	-0.21	-0.21	0.34	2.002	1174	2.3	7.2
50 lb	1024	Troemner	0.94	0.94	0.34	2.002	1174	2.3	7.2
50 lb	1018	Toledo	0.13	0.13	0.34	2.002	1174	2.3	7.2
50 lb	1027	Troemner	0.16	0.16	0.34	2.002	1174	2.3	7.2
50 lb	1029	Troemner	0.47	0.47	0.34	2.002	1174	2.3	7.2
50 lb	619	Toledo	-0.29	-0.29	0.34	2.002	1174	2.3	7.2
25 lb	911	Toledo	-0.91	-0.91	0.19	2.004	690	1.1	7.2
25 lb	2505	Rice Lake	-0.71	-0.71	0.19	2.004	690	1.1	7.2
25 lb	2510	Rice Lake	0.01	0.01	0.19	2.004	690	1.1	7.2
25 lb	2526	Rice Lake	-0.32	-0.32	0.19	2.004	690	1.1	7.2
25 lb	2512	Rice Lake	-0.76	-0.76	0.19	2.004	690	1.1	7.2
25 lb	2529	Rice Lake	0.37	0.37	0.19	2.004	690	1.1	7.2
25 lb	111	Rice Lake	-0.2	-0.2	0.19	2.004	690	1.1	7.2
25 lb	2502	Rice Lake	0.26	0.26	0.19	2.004	690	1.1	7.2
25 lb	2539	Rice Lake	-0.04	-0.04	0.19	2.004	690	1.1	7.2
25 lb	2513	Rice Lake	0.46	0.46	0.19	2.004	690	1.1	7.2
25 lb	2530	Rice Lake	-0.91	-0.91	0.19	2.004	690	1.1	7.2
25 lb	811	Toledo	-0.11	-0.11	0.19	2.004	690	1.1	7.2
25 lb	2527	Rice Lake	-0.81	-0.81	0.19	2.004	690	1.1	7.2
25 lb	2511	Rice Lake	-0.02	-0.02	0.19	2.004	690	1.1	7.2
25 lb	2524	Rice Lake	-0.18	-0.18	0.19	2.004	690	1.1	7.2
25 lb	2536	Rice Lake	0.83	0.83	0.19	2.004	690	1.1	7.2



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25 lb	2533	Rice Lake	-1.04	-0.04	0.19	2.004	690	1.1	7.2
25 lb	2515	Rice Lake	-0.59	-0.59	0.19	2.004	690	1.1	7.2
25 lb	2525	Rice Lake	-0.55	-0.55	0.19	2.004	690	1.1	7.2
25 lb	2508	Rice Lake	0.54	0.54	0.19	2.004	690	1.1	7.2
25 lb	2516	Rice Lake	0.17	0.17	0.19	2.004	690	1.1	7.2
25 lb	211	Rice Lake	-0.28	-0.28	0.19	2.004	690	1.1	7.2
25 lb	2514	Rice Lake	-0.83	-0.83	0.19	2.004	690	1.1	7.2
25 lb	2509	Rice Lake	0.32	0.32	0.19	2.004	690	1.1	7.2
25 lb	2528	Rice Lake	-0.26	-0.26	0.19	2.004	690	1.1	7.2
25 lb	2537	Rice Lake	-0.37	-0.37	0.19	2.004	690	1.1	7.2
25 lb	2522	Rice Lake	-0.62	-0.62	0.19	2.004	690	1.1	7.2
25 lb	2523	Rice Lake	-0.14	-0.14	0.19	2.004	690	1.1	7.2
25 lb	411	Rice Lake	0.63	0.63	0.19	2.004	690	1.1	7.2
25 lb	2506	Rice Lake	-0.09	-0.09	0.19	2.004	690	1.1	7.2
25 lb	2519	Rice Lake	-0.05	-0.05	0.19	2.004	690	1.1	7.2
25 lb	2538	Rice Lake	-0.81	-0.81	0.19	2.004	690	1.1	7.2
25 lb	2503	Rice Lake	-0.68	-0.68	0.19	2.004	690	1.1	7.2
25 lb	2521	Rice Lake	-1.04	-0.51	0.19	2.004	690	1.1	7.2
25 lb	2517	Rice Lake	-0.1	-0.1	0.19	2.004	690	1.1	7.2
25 lb	2540	Rice Lake	0.09	0.09	0.19	2.004	690	1.1	7.2
25 lb	2520	Rice Lake	-0.01	-0.01	0.19	2.004	690	1.1	7.2
25 lb	2532	Rice Lake	-0.24	-0.24	0.19	2.004	690	1.1	7.2
25 lb	2501	Rice Lake	0.16	0.16	0.19	2.004	690	1.1	7.2
25 lb	2504	Rice Lake	-0.92	-0.07	0.19	2.004	690	1.1	7.2
25 lb	2531	Rice Lake	-0.85	-0.85	0.19	2.004	690	1.1	7.2
25 lb	2507	Rice Lake	-0.55	-0.55	0.19	2.004	690	1.1	7.2
25 lb	518	Rice Lake	0.1	0.1	0.19	2.004	690	1.1	7.2
25 kg	8	Rice Lake	1.76	1.76	0.32	2.2	15	2.5	7.2
25 kg	5	Rice Lake	2.4	1.16	0.32	2.2	15	2.5	7.2
25 kg	32	Rice Lake	0.73	0.73	0.32	2.2	15	2.5	7.2
25 kg	25	Rice Lake	2.37	1.28	0.32	2.2	15	2.5	7.2
25 kg	16	Rice Lake	0.66	0.66	0.32	2.2	15	2.5	7.2
25 kg	23	Rice Lake	0.66	0.66	0.32	2.2	15	2.5	7.2
25 kg	12	Rice Lake	-0.33	-0.33	0.32	2.2	15	2.5	7.2
25 kg	11	Rice Lake	1.04	1.04	0.32	2.2	15	2.5	7.2
25 kg	15	Rice Lake	0.05	0.05	0.32	2.2	15	2.5	7.2
25 kg	10	Rice Lake	0.88	0.88	0.32	2.2	15	2.5	7.2
25 kg	9	Rice Lake	-0.28	-0.28	0.32	2.2	15	2.5	7.2
25 kg	34	Rice Lake	0.7	0.7	0.32	2.2	15	2.5	7.2
25 kg	21	Rice Lake	1.85	1.85	0.32	2.2	15	2.5	7.2
25 kg	19	Rice Lake	0.94	0.94	0.32	2.2	15	2.5	7.2
25 kg	28	Rice Lake	1.68	1.68	0.32	2.2	15	2.5	7.2
25 kg	17	Rice Lake	2.46	1.31	0.32	2.2	15	2.5	7.2
25 kg	14	Rice Lake	1.73	1.73	0.32	2.2	15	2.5	7.2

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Calibration Certificate

Certificate Number: 20-191

Calibration Date: 07/13/2020

Calibration Due Date: 07/13/2021

Tested Item(s): 1000 lb, 500 lb, 50 lb, 25 lb, 250 kg, 25 kg, 20 kg, and 10 kg Test Weights

25 kg	40	Rice Lake	2.1	2.1	0.32	2.2	15	2.5	7.2
25 kg	13	Rice Lake	0.67	0.67	0.32	2.2	15	2.5	7.2
25 kg	18	Rice Lake	1.96	1.96	0.32	2.2	15	2.5	7.2
25 kg	37	Rice Lake	0.61	0.61	0.32	2.2	15	2.5	7.2
25 kg	31	Rice Lake	1	1	0.32	2.2	15	2.5	7.2
25 kg	39	Rice Lake	1.97	1.97	0.32	2.2	15	2.5	7.2
25 kg	30	Rice Lake	0.84	0.84	0.32	2.2	15	2.5	7.2
25 kg	4	Rice Lake	0.14	0.14	0.32	2.2	15	2.5	7.2
25 kg	33	Rice Lake	0.27	0.27	0.32	2.2	15	2.5	7.2
25 kg	27	Rice Lake	-1.33	-1.33	0.32	2.2	15	2.5	7.2
25 kg	38	Rice Lake	0.42	0.42	0.32	2.2	15	2.5	7.2
25 kg	7	Rice Lake	0.21	0.21	0.32	2.2	15	2.5	7.2
25 kg	3	Rice Lake	-0.29	-0.29	0.32	2.2	15	2.5	7.2
25 kg	35	Rice Lake	-0.61	-0.61	0.34	2.2	15	2.5	7.2
25 kg	20	Rice Lake	-1.58	-1.58	0.34	2.2	15	2.5	7.2
25 kg	6	Rice Lake	1.08	1.08	0.34	2.2	15	2.5	7.2
25 kg	24	Rice Lake	2.26	1.34	0.34	2.2	15	2.5	7.2
25 kg	26	Rice Lake	0.93	0.93	0.34	2.2	15	2.5	7.2
25 kg	36	Rice Lake	1.11	1.11	0.34	2.2	15	2.5	7.2
25 kg	2	Rice Lake	0.47	0.47	0.34	2.2	15	2.5	7.2
25 kg	22	Rice Lake	0.95	0.95	0.34	2.2	15	2.5	7.2
25 kg	29	Rice Lake	2.11	2.11	0.34	2.2	15	2.5	7.2
25 kg	1	Rice Lake	-0.23	-0.23	0.34	2.2	15	2.5	7.2
20 kg	1IRK	Rice Lake	1.03	1.03	0.3	2.25	14	2	7.2
10 kg	KS-711	Rice Lake	-0.35	-0.35	0.14	2.16	20	1	7.2

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Calibration Certificate

Certificate Number: 20-191

Calibration Date: 07/13/2020

Calibration Due Date: 07/13/2021

Tested Item(s): 1000 lb, 500 lb, 50 lb, 25 lb, 250 kg, 25 kg, 20 kg, and 10 kg Test Weights

Traceability Statement

The artifact(s) described in this calibration certificate have been compared to the Standards of the State of Indiana. The Standards of the State of Indiana are traceable to the National Institute of Standards and Technology (NIST) and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The International System of Units (SI) for mass is the kilogram (kg) (see Conversion Factors below). The certificate number for this calibration is the only unique number to be used in referencing measurement traceability for the artifact(s) described in this calibration certificate.

Uncertainty Statement

The combined standard uncertainty includes uncertainties reported for the standard, uncertainties associated with the measurement process, uncertainties for any observed deviations from reference values which are less than surveillance limits (previous similar determinations have demonstrated that the maximum permissible errors are sufficiently large that buoyancy corrections are not usually significant [i.e., corrections & their uncertainty will not change the last decimal place of the calibration value or uncertainty (with uncertainty rounded to 2 significant digits)]. The combined standard uncertainty is multiplied by a coverage factor, k , to give the expanded uncertainty, which defines an interval with an approximate 95 % level of confidence. The expanded uncertainty presented in this calibration certificate is consistent with NIST Technical Note 1297. Surface Roughness and Magnetic testing has not been performed, therefore, there are no components for the effects of either in the uncertainty budget.

Conformity Statement

This artifact was evaluated using the NIST Handbook 105-1 "Specifications & Tolerances for Reference and Field Weights", (Feb 2017); NISTIR 6969 "Selected Procedures to Support Basic Mass Calibrations" (2018 Ed), Section SOP 8 "Calibration of Mass Standards by Modified Substitution (June 2008). No other specifications were evaluated on this certificate other than what is listed. Possession of this certificate does imply this artifact meets any other requirements **or statues that may be required**.

Pertinent Information

- In-accordance-with ISO/IEC FDIS 17025, General Requirements for the Competence of Testing and Calibration Laboratories, paragraph 5.10.4.4 'A calibration certificate (or calibration label) shall not contain any recommendation on the calibration interval except where this has been agreed with the client. This requirement may be superseded by legal regulations.'
- In-accordance-with Indiana Code (IC) 24-6-3-2, Division of weights and measures; powers and duties, Section 2(b), '...The division, or inspectors at the divisions direction, shall correct the standards of the several cities and counties, and as often as once in two (2) years compare the same with those in the division's possession, and where not otherwise provided by law the division shall have the general supervision of the weights, measures, and measuring and weighing devices in use in Indiana...'
- The artifact(s) listed above have been found and/or left within the maximum permissible error for the specification stated above, except as noted. An artifact is considered in-compliance when the correction plus the measurement uncertainty is equal to or less than the maximum permissible error. **BOLD** print indicates an out-of-compliance reading.



Calibration Certificate

Certificate Number: 20-191

Calibration Date: 07/13/2020

Calibration Due Date: 07/13/2021

Tested Item(s): 1000 lb, 500 lb, 50 lb, 25 lb, 250 kg, 25 kg, 20 kg, and 10 kg Test Weights

- All corrections stated in this calibration certificate correlate to a "Conventional Mass" (CM), also known as 'apparent mass', scale verses 8.0 g/cm^3 reference mass density and an air density of 1.2 mg/cm^3 at $20 \text{ }^\circ\text{C}$.
- The results listed in this calibration certificate relate only to the artifacts described and extent of calibrations performed.

Conversion Factors

From NIST Special Publication 811, *Guide for the Use of the International System of Units (SI)*

Factors in **boldface** are exact

To convert from	to	multiply by
carat, metric	to kilogram (kg)	2.0 E-04
grain (gr)	to kilogram (kg)	6.479 891 E-05
ounce (avoirdupois) (oz)	to kilogram (kg)	2.834 952 E-02
ounce (troy or apothecary) (oz)	to kilogram (kg)	3.110 348 E-02
dram (apothecary) (dr)	to kilogram (kg)	3.8879346 E-03
scruple (apothecary) (s)	to kilogram (kg)	1.2959782 E-03
pennyweight (dwt)	to kilogram (kg)	1.555 174 E-03
pound (avoirdupois) (lb)	to kilogram (kg)	4.535 923 7 E-01

I declare or certify under penalty of perjury under the laws of the State of Indiana that the foregoing is true and correct:

Signed on this 13th day of July, 2020 in the city of Indianapolis, Marion County, Indiana

Signature: Howard Wickersham

Howard Wickersham, State Metrologist, Technical Manager