DEPARTMENT OF COMMERCE
WEIGHTS & MEASURES DIVISION

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Receipt Date:	March 31, 2025	Certificate No.:	403470-2
Calibration Date:	April 1, 2025	Set Serial No.:	1 to 9
Certificate Date:	April 1, 2025	Barcode:	204419

Calibration Certificate

HAWKEYE STATE SCALE
1357 HWY 965 NW
SWISHER, IA 52338

Contact:	ANGIE WELCHER	Item(s) Submitted:	8 oz Fuel Sub Weights
Phone:	319-364-4173	Manufacturer:	Rice Lake
PO Number:	None	Weight Type:	II
Procedure:	NIST SOP 8B (2019)	Equipment ID:	None
Technician ID:	23	Condition:	Acceptable
		Temperature:	20.2 °C
		Pressure:	737.5 mmHg
		Relative Humidity:	47.6 %

Nominal Value	Serial No.	CM Correction (mg)		ASTM E617 (2018) Class			
		As Received	As Left	As Received	As Left	k	U (mg)
8 oz	1	16.76	16.76	6	6	2.03	0.54
8 oz	2	21.68	21.68	6	6	2.03	0.54
8 oz	3	25.44	5.23	*	5	2.03	0.54
8 oz	4	11.63	11.63	5	5	2.03	0.54
8 oz	5	11.55	11.55	5	5	2.03	0.54
8 oz	6	8.04	8.04	5	5	2.03	0.54
8 oz	7	18.08	18.08	6	6	2.03	0.54
8 oz	8	21.33	21.33	6	6	2.03	0.54
8 oz	9	21.56	21.56	6	6	2.03	0.54

Weight(s) as received (*) exceed ASTM class 6 tolerance.

Artifact conformance to ASTM E617 (2018) specifications of shape, material, markings, and type were evaluated. Tolerances were evaluated using ASTM E617 (2018) and MN SAP 20 (2020), which combines the conventional mass (CM) correction of the weight and the uncertainty of the measurement to evaluate the class. No other specifications were evaluated. The above CM corrections correspond to the mass scale versus 8.0 g/cm³ density and an air density of 1.2 mg/cm³ at 20 °C. Uncertainty calculations contain the components in NIST SOP 8 (2019) combined using the root-sum-square method and conform to the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008), including coverage factors (k) calculated at the approximate 95.45 % confidence level. Calibration of items listed above used State of Minnesota Standards, which are currently in control. These standards are traceable to the SI through NIST. Calibration processes are monitored and in control at the time of calibration. Densities reported above are assumed unless noted. This calibration certificate shall not be reproduced, except in full, without written approval from the state of MN metrology laboratory, and the results only apply to items identified on this certificate.

Eric Johnson
Metrologist

Reviewed by:
Anna Pierce
Quality Manager, Signatory

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CALIBRATION
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