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NIST-suggested Field Standards & Calibration Intervals

Changes to NIST Handbook 130, as adopted by the NCWM in July 2005, will allow the State director to establish a list of suitable standards along with appropriate calibration intervals. A sample list was prepared as a part of the frequently asked questions about the proposals and the changes that were adopted.

The list and calibration intervals are shown below:

Sample List of Documentary Standards That Can Be Used as Specifications and Tolerances for “Field Standards”

Standards	Device	Calibration Interval
HB 105-1, Cast iron	Class III, IIIL, IV scales	6 month to 1 year
HB 105-1, Stainless steel	Class III, IIIL, IV scales	5 year
OIML R111, Class F1 ASTM E 617-97, Class 2	Class II scales	1 year
HB 105-2, glassware	Package testing	10 year
HB 105-3, test measures (hand-held and 5 gal truck/trailer mounted)	Gas pumps	1 year
HB 105-3, large provers	Meters	1 year
HB 105-4, LPG provers	LPG meters	1 year
HB 105-5, stopwatches	Taxi meters, timing devices, parking meters, laundromats	1 year
HB 105-6, thermometers ASTM E1	Temperature corrections, refrigeration specs, package checking	5 year Inspection required annually
HB 105-7, small volume provers	Meters	6 months, extendable to 1 year
API document in development*	Master Meters for petroleum	
ASTM E 74, proving rings and load cells	Wheel load weighers, weight carts, large mass standards	Rings: 5 years Cells: 6 months if used for wheel load weighers; evaluate with use for substitution weighing
HB 105-8, weight carts	Vehicle scales	6 months to 1 year; recalibration for any repair
ASTM E100, hydrometers	Petroleum products; bulk oil	1 year

Standards	Device	Calibration Interval
	meters	
GGG – standard; Length standards, tapes	Taxi meters, fabric, scale decks, firewood, lobster gauges	5 years; inspection before use
Containers (HB 133)	Bulk mulch	
HB 44, Berry Baskets	Berry quantity	

Handbook 130 previously stated that field standards must be calibrated annually. A one-year calibration interval can be maintained for all standards if the jurisdiction chooses. However, the language now allows adjustment of field standard calibration intervals based on historical calibration data. Intervals could be increased for standards such as stainless steel weights, or decreased for standards such as weight carts or cast iron weights. State directors would also be able to reference documentary standards other than NIST documents when defining specifications for field standards.

There are some standards currently used in field testing that have no corresponding NIST standard that defines their specifications and tolerances. Recognizing the use of ASTM, OIML or other suitable documentary standards fill the void.