

**2023 Amendments for the 2024 Edition of Handbook 44
2024 Revision Index**

No California Code of Regulations were enacted in 2023

NIST Handbooks - Amendments and Editorial Changes:
See the 2024 changes to NIST Handbooks 44, 130 and 133

NIST HB 44, 2024 Current Edition – Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices

[2023 Amendments/Editorial Changes PDF](#)

NIST HB 130, 2024 Current Edition – IV. Uniform Packaging and Labeling Regulation – Chapter 4, Uniform Regulations

[2023 Amendments/Editorial Changes PDF](#)

NIST HB 133, 2023 Edition – Checking the Net Contents of Packaged Goods

[2022 Amendments/Editorial Changes PDF](#)

The following table lists the codes, paragraphs, and pages in which the 107th National Conference on Weights and Measures adopted amendments. In the column headed “Action,” changes are noted as “added,” “amended,” “deleted,” or “renumbered.” Each code, section, or paragraph that has been changed will be noted as “Added 2023” or “Amended 2023.”

2023 Amendments for 2024 Handbook 44

SECTION	CODE	S&T ITEM NUMBER	PARAGRAPH	ACTION	HB-44 PAGE
1.10.	General	B4: GEN-21.2	G-S.5.6. Recorded Representation	Amended	1-8
1.10	General	GEN-23.1	G-N.3. Test Methods.	Amended	1-11
1.10	General	B8: GEN-19.1	G-T.5. Tolerances on Tests When Type 2 Transfer Standards Are Used.	Added	1-11
2.20.	Scales	SCL-22.1	S.1.15. Recorded Representations, Multi- Independent Platform Vehicle Scale Systems.	Added	2-15
2.20.	Scales	SCL-23.2	Table S.6.3.b. Notes for Table S.6.3.a. Marking Requirements Note 28. Weigh-in-Motion Vehicle Scales; Vehicle Restriction	Added	2-24

Amendments and Editorial Changes to the Field Reference Manual

SECTION	CODE	S&T ITEM NUMBER	PARAGRAPH	ACTION	HB-44 PAGE
3.30.	Liquid- Measuring Devices	B4: LMD-21.2	S.1.6.5.6.(d) Display of Quantity of Total Price, Aviation Refueling Applications	Amended	3-10
3.30.	Liquid- Measuring Devices	B4: LMD-21.2	S.1.6.7. Recorded Representations.	Amended	3-11
3.30.	Liquid- Measuring Devices	B4: LMD-21.2	S.1.6.8. Recorded Representations for Transactions Where a Post- Delivery Discounts(s) is Provided.	Amended	3-11
3.30.	Liquid- Measuring Devices	LMD-23.2	N.3.5. Wholesale Devices	Amended (Adopted language moved to new paragraph N.3.5.1. by LMD- 23.4)	3-17
3.30.	Liquid- Measuring Devices	LMD-23.4	N.3.5. Wholesale Devices	Amended	3-17
3.30.	Liquid- Measuring Devices	B1: LMD-23.1	N.3.5.3. Field Standard Meter Test.	Added	3-18
3.30.	Liquid- Measuring Devices	B4: LMD-21.2	UR.3.3.(b)(1) Computing Device	Amended	3-23
3.30.	Liquid- Measuring Devices	B4: LMD-21.2	UR.3.4. Recorded Representations.	Amended	3-24
3.31.	Vehicle-Tank Meters	B4: VTM-21.	S.1.1.1. General.	Amended	3-31
3.31.	Vehicle-Tank Meters	B4: VTM-21.1	S.1.1.1. General; Note	Deleted	3-31
3.31.	Vehicle-Tank Meters	B4: VTM-21.1	S.1.4.2. Recorded Representation.	Amended	3-34
3.31.	Vehicle-Tank Meters	VTM-18.1	S.3.1.(b)(2) Diversion of Measured Liquid.	Amended	3-36
3.31.	Vehicle-Tank Meters	VTM-18.1	S.3.1.1.(f),(g) Means for Clearing the Discharge Hose, Multi-Product, Single Product, Single-Discharge Hose Metering Systems	Amended	3-36
3.31.	Vehicle-Tank Meters	B5: VTM-23.2	N.3. Test Drafts.	Amended	3-39

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3.31.	Vehicle-Tank Meters	B1: VTM-23.1	N.3.1. Field Standard Meter Test.	Added	3-39
3.31.	Vehicle-Tank Meters	B4: VTM-21.1	UR.2.2. Recording Element.	Amended	3-42
3.31.	Vehicle-Tank Meters	VTM-18.1	UR.2.6.1. Clearing the Discharge Hose, General	Added	3-43
3.31.	Vehicle-Tank Meters	VTM-18.1	UR.2.6.2. Minimizing Cross Contamination.	Added	3-43
3.31.	Vehicle-Tank Meters	VTM-18.1	UR.2.6.3. Records	Renumbered from UR.2.6.1.	3-43
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	B4: LPG-21.1	S.1.1.1. General, Note	Amended	3-47
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	B4: LPG-21.1	S.1.1.6. Recorded Representation	Amended	3-51
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	B4: LPG-21.1	S.1.5.5. Recorded Representations for Transactions Where a Post- Delivery Discount(s) is Provided.	Amended	3-54
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	LPG-23.2	S.2.6.1. Electronic Stationary (Other than Stationary Retail Motor-Fuel Dispensers).	Amended	3-54
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	LPG-23.2	S.2.6.3. Electronic Vehicle- Mounted Meters.	Added	3-54

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3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	LPG-15.1	N.3.1. Minimum Test.	Amended	3-56
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	LPG-15.1	N.3.2. Field Standard Meter Test.	Added	3-56
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	B4: LPG-21.1	UR.2.6. Recorded Representation	Amended	3-59
3.32.	Liquefied Petroleum Gas and Anhydrous Ammonia Liquid-Measuring Devices	B4: LPG-21.1	UR.2.7.2.(b)(1) Computing Device.	Amended	3-60
3.34	Cryogenic Liquid-Measuring Devices	B4: CLM-21.1	S.1.4.1. Recorded Representation	Amended	3-79
3.34	Cryogenic Liquid-Measuring Devices	B7: CLM-22.1	T.3. On Tests Using Type 2 Transfer Standards	Amended	3-84
3.34	Cryogenic Liquid-Measuring Devices	B4: CLM-21.1	UR.2.6.2. Recorded Representation Based on Automatic Compensator Readings	Amended	3-86
3.34	Cryogenic Liquid-Measuring Devices	B4: CLM-21.1	UR.2.6.3. Recorded Representation for Computing Devices	Amended	3-86
3.35.	Milk Meters	B4: MLK-21.1	S.1.4.2. Recorded Representation	Amended	3-91
3.35.	Milk Meters	B1: MLK-23.1	N.3.1. Test Drafts.	Amended	3-93
3.35.	Milk Meters	B1: MLK-23.1	N.3.2. Field Standard Meter Test.	Added	3-94

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SECTION	CODE	S&T ITEM NUMBER	PARAGRAPH	ACTION	HB-44 PAGE
3.35.	Milk Meters	B4: MLK-21.1	UR2.2. Recorded Representation	Amended	3-95
3.37.	Mass Flow Meters	B4: MFM-21.2	S.6.(b), (c), (e), and (f) Recording Element	Amended	3-117
3.37.	Mass Flow Meters	B4: MFM-21.2	S.6.1. Recorded Representation	Amended	3-117
3.37.	Mass Flow Meters	MFM-15.1	N.3.1. Minimum Test.	Amended	3-117
3.37.	Mass Flow Meters	MFM-15.1	N.3.2. Field Standard Meter Test.	Added	3-117
3.37.	Mass Flow Meters	B4: MFM-21.2	UR.3.3. Recorded Representation, Vehicle- Mounted Measuring Systems	Amended	3-121
3.37.	Mass Flow Meters	B4: MFM-21.2	UR.3.4. Recorded Representation for Computing Devices	Amended	3-121
3.38.	Carbon Dioxide Liquid- Measuring Devices	B4: CDL-21.1	S.1.4.1. Recorded Representation.	Amended	3-127
3.38.	Carbon Dioxide Liquid- Measuring Devices	B4: CDL-21.1	UR.2.4.2. Recorded Representation.	Amended	3-137
3.38.	Carbon Dioxide Liquid- Measuring Devices	B7: CDL-22.1	T.3. On Tests Using Type 2 Transfer Standards.	Amended	3-136
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	S.2.6. Recorded Representations, Point of Sale Systems	Amended	3-143
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	S.6. Recording Element	Amended	3-146
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	S.6.1. Recorded Representation.	Amended	3-146
3.39.	Hydrogen Gas-Measuring Devices	B7: HGH-22.1	T.4. Tolerance Application on Tests Using Type 2 Transfer Standard Test Method.	Amended	3-148
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	UR.3.2. Vehicle-Mounted Measuring Systems Recording Element	Amended	3-150

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SECTION	CODE	S&T ITEM NUMBER	PARAGRAPH	ACTION	HB-44 PAGE
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	UR.3.2.1. Recording Element	Amended	3-150
3.39.	Hydrogen Gas-Measuring Devices	B4: HGM-21.1	UR.3.3. Recorded Representation.	Amended	3-150
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	S.2.5.1. Money-Value Division Digital	Amended	3-155
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	S.5.2.(b) EVSE Identification and Marking Information; maximum current deliverable	Amended	3-159
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	S.5.3.(d) Abbreviations and Symbols; joule	Amended	3-159
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	S.8. Minimum Measured Quantity (MMQ)	Amended	3-160
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	N.1. No Load Test	Deleted	3-160
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	N.2. Starting Load Test	Deleted	3-160
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	T.5. No Load Test	Deleted	3-161
3.40.	Electric Vehicle Fueling Systems	EVF-23.1	T.6. Starting Load	Deleted	3-161
5.56.(a)	Grain Moisture Meters	GMA-23.1	N.1.3. Meter to Like-Type Meter Method Transfer Standards.	Amended	5-55
5.56.(a)	Grain Moisture Meters	GMA-23.1	T.2.2. Note	Added	5-56
Appendix A.	Fundamental Considerations	B8: OTH-22.1	3.1.1. Essential Elements of Traceability	Added	A-4
Appendix A.	Fundamental Considerations	B8: OTH-22.1	3.1.2. Specifications for Standards.	Added	A-5
Appendix A.	Fundamental Considerations	B8: OTH-22.1	3.1.3. Authority for Approving Field Test Standards and/or Equipment	Added	A-5
Appendix A.	Fundamental Considerations	B8: OTH-22.1	3.2. Tolerances for Standards.	Amended	A-5
Appendix A.	Fundamental Considerations	B8: OTH-22.1	3.3. Accuracy of Field Standards	Amended	A-6
Appendix A.	Fundamental Considerations	B8: OTH-22.1	Footnote 2; Recommendation for Suitable Field Standards	Deleted	A-6

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SECTION	CODE	S&T ITEM NUMBER	PARAGRAPH	ACTION	HB-44 PAGE
Appendix A.	Fundamental Considerations	B8: GEN-19.1	field standard	Added	D-31
Appendix D.	Definitions	EVF-23.1	megajoule (MJ)	Deleted	D-20
Appendix D.	Definitions	B4: OTH-21.2	recorded representation.	Amended	D-28
Appendix D.	Definitions	B4: OTH-21.2	recording element.	Amended	D-28
Appendix D.	Definitions	B8: GEN-19.1	standard, transfer, Type 1 and Type 2	Added	D-31

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Section	Code	Paragraph	Action	Page
Introduction		A. Source	Updated NCWM street address and zip code.	1
Introduction		Form 15	Updated	4
2.23	Weights	N.1. Testing Procedures	Updated text because of a modification to the title of Appendix A, Fundamental Considerations' paragraph 3.3. Accuracy of Field Standards as a result of the adoption of B8: OTH-22.1.	2-94
3.30	Specifications	S.1.6.7.Recorded Representation	In 2018, subparagraph (e) <i>the dispenser designation by either an alphabetical or numerical description.</i> ** **[Nonretroactive as of January 1, 2021] was adopted and appeared in HB44 (2019). In error, it did not appear in HB44 editions 2019 and 2021.	3-11
3.30	Specifications	S.1.6.8.Recorded Representations for Transactions Where a Post-Delivery Discount(s) is Provided	In 2018, subparagraph (e) <i>the dispenser designation by either an alphabetical or numerical description. [Nonretroactive as of January 1, 2021]</i> was adopted and appeared in HB44 (2019). In error, it did not appear in HB44 editions 2019 and 2021.	3-11
3.30	Specifications	N.4.1. Normal Tests.	For clarity added a formula. As a formula, this is stated as: $\frac{MDFR + RMDFR}{2}$ Equals the <i>minimum discharge flow rate for additional tests.</i>	3-18
3.30	User Requirements	UR.3.4.	Recorded Representations.	3-24

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Section	Code	Paragraph	Action	Page
3.32	Specifications	S.1.1.1. General	Note: Vehicle-mounted metering systems shall be equipped with a primary recording element as required by paragraph UR.2.6. Recorded Representations.	3-47
3.34	User Requirements	UR.2.5. Conversion Factors	All sales of cryogenics shall be based on either kilograms or pounds, liters or gallons of liquid at Normal Boiling Point (NBP) , cubic meters of gas or cubic feet of gas at Normal Temperature and Pressure (NTP) .	3-85
3.35	Specifications	S.1.4.2.	Recorded Representations.	3-91
3.35	User Requirements	UR.2.2.	Recorded Representations. – Any recorded representation created issued by a device of the computing type which includes the total computed price, the total quantity, or the price per unit of quantity, shall also include the other two values and shall comply with G-S.5.6. Recorded Representations.	3-95
3.37	Specifications	S.6.1.	Recorded Representations.	3-117
3.37	User Requirements	UR.3.4.	Recorded Representations.	3-121
3.38	User Requirements	UR.2.4.2.	Recorded Representations.	3-137
3.39	Specifications	S.6.1.	Recorded Representations.	3-146
5.56.(a)		Note below the title.	Section 5.56. was reorganized into two sections beginning with the 1997 Edition of NIST Handbook 44. This Section, 5.56.(a), applies to all NTEP grain moisture meters. It also applies to any grain moisture meter manufactured or placed into service on or after January 1, 1998.	5-49
Appendix D	Definitions	Recorded representation	recorded representation, EVSE. – The printed, electronically recorded, or other representation that retains a copy of the quantity and any other required information generated by a weighing or measuring device. [3.40]	D-28
Appendix D	Definitions	Recording element	recording element, EVSE. – An element incorporated, connected to, or associated with a weighing or measuring device by means of which its performance relative to quantity or money value is permanently recorded in a printed or electronic form. [3.40]	D-28

[NIST HB 130, 2024 Current Edition](#) – IV. Uniform Packaging and Labeling Regulation – Chapter 4, Uniform Regulations - Handbook-130 pages 49-96

2023 Amendments for 2024 Handbook 130 – Uniform Packaging and Labeling Regulation

Law or Regulation	L&R Committee Item No.	Section	Action	UPLR Page
A. Uniform Packaging and Labeling Regulation	Block 3. B3: PAL-22.2	10.11 Cannabis and Cannabis-Containing Products	Added	80

2023 Editorial Changes for 2024 NIST Handbook 130 – Uniform Packaging and Labeling Regulation

Law or Regulation	L&R Committee Item No.	Section	Action	UPLR Page
Entire Handbook			Citations now formatted as: Name, Volume Source xxx (Year). Example: Special safeguards for automated records, 5 C.F.R. 293.107 (2011)	

The following table indicates the items amended by the 107th (2024) National Conference on Weights and Measures (NCWM). As appropriate, the text on the cited pages indicates the changes to a Handbook 133 section, or paragraph as “Added 2023” or “Amended 2023.” Unless otherwise noted, the effective date of the regulations added or amended in 2023 is January 1, 2024.

No Amendments or Editorial changes occurred in the 2023 session for the 2024 Handbook 133.

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