

2019 Amendments

The following table lists the codes, paragraphs, and pages in which the 104th National Conference on Weights and Measures made 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 2019” or “Amended 2019.”

SECTION	CODE	S&T ITEM NO.	PARAGRAPH	ACTION	PAGE
1.10.	General	GEN-2	G-S.8.2.	Added	1-9
2.20.	Scales	SCL-1	S.1.1.1.(c)	Added	2-7
			UR.2.10.	Added	2-49
		SCL-5	S.1.11.	Amended	2-13
			S.1.11.1., S.1.11.2.	Added	2-13
2.21.	Belt-Conveyor Scale Systems	BCS-1	S.1.3.1.	Amended	2-59
			S.1.3.3.	Added	2-60
			S.1.9.	Amended	2-61
			S.4.	Added. Subsequent paragraphs renumbered	2-62
			S.5.	Renumbered from S.4. and Amended	2-62
			S.6. and Table S.6.	Renumbered from S.5. and Table S.5.and updated to reflect the revised Table number	2-63
			N.1.	Amended	2-63
			N.2.1.	Amended	2-64
			N.2.2.	Amended	2-64
			N.2.3.1. and N.2.3.2.	Amended	2-65
			N.3.1.2. and N.3.1.3.	Amended	2-66
			N.3.2.	Amended	2-66
			N.3.2.1.	Amended	2-67
			T.1., T.1.1.	Amended	2-68
			T.2.1.	Amended	2-69
			T.2.2.	Added	2-69
UR.3.(a), Table UR.3.	Amended	2-72			
2.22.	Automatic Bulk Weighing Systems	ABW-2	S.1.6.	Amended	2-78

SECTION	CODE	S&T ITEM NO.	PARAGRAPH	ACTION	PAGE
2.24.	Automatic Weighing Systems	AWS-2	S.1.3.	Amended	2-97
		AWS-3	S.3.2.	Amended	2-99
3.30.	Liquid-Measuring Devices	LMD-1	S.2.2.	Amended	3-12
		LMD-2	N.4.6.	Renumbered from N.4.1.2. and Amended	3-20
			T.3.	Amended	3-21
		LMD-3	A.1., S.1.6.10., S.2.5., S.4.4.1., S.4.4.2., S.5., N.4.4.2., UR.2.4., UR.2.5.	Amended	3-5 to 3-43
LMD-5	UR.3.4.	Amended	3-24		
3.31.	Vehicle-Tank Meters	VTM-2	S.2.2.	Amended	3-34
		VTM-3	N.4.7.	Renumbered from N.4.1.2. and Amended	3-40
			N.4.1.2.	Renumbered from N.4.1.3.	3-39
		T.3.	Amended	3-42	
3.32.	LPG and Anhydrous Ammonia Liquid- Measuring Devices	LPG-1	S.2.2.	Amended	3-52
		LPG-2	S.2.5.	Amended	3-53
		LPG-4	N.4.4.	Renumbered from N.4.1.2. and Amended	3-57
			T.3.	Amended	3-57
3.33.	Hydrocarbon Gas Vapor-Measuring Devices	HGV-1	S.2.2.	Amended	3-65
		HGV-2	N.4.3.	Renumbered from N.4.1.2. and Amended	3-67
			T.2.	Amended	3-68
3.34.	Cryogenic Liquid- Measuring Devices	CLM-2	S.2.5.	Amended	3-78
		CLM-3	N.5.3.	Renumbered from N.5.1.1. and Amended	3-81
			T.4.	Amended	3-82
3.35.	Milk Meters	MLK-1	S.2.3.	Amended	3-89
		MLK-2	N.4.4.	Renumbered from N.4.1.1. and Amended	3-92
			T.3.	Amended	3-92

SECTION	CODE	S&T ITEM NO.	PARAGRAPH	ACTION	PAGE
3.36.	Water Meters	WTR-1	S.2.1.	Amended	3-99
		WTR-2	N.4.4.	Renumbered from N.4.1.1. and Amended	3-102
3.37.	Mass Flow Meters	MFM-2	S.1.3.3.	Amended	3-108
		MFM-3	S.2.9.	Added	3-110
		MFM-1	S.3.5.	Amended	3-111
		MFM-4	S.5.1.	Amended	3-114
		MFM-6	N.6.3.	Renumbered from N.6.1.1. and Amended	3-116
			T.3.	Amended	3-117
3.38.	Carbon Dioxide Liquid-Measuring Devices	CDL-3	S.2.5.	Amended	3-125
		CDL-4	N.4.5.	Renumbered from N.4.1.1. and Amended	3-134
			T.2.1.	Amended	3-134
3.39.	Hydrogen Gas- Measuring Devices	HGM-4	S.2.8.	Added	3-141
		HGM-3	S.3.3.	Amended	3-141
		HGM-5	N.6.2.	Renumbered from N.6.1.1. and Amended	3-145
			T.3.	Amended	3-146
		HGM-6	Preamble	Deleted references to the “tentative” status and designated the Code as “permanent”	3-139
			A.2.(c).	Amended	3-139
			N.2., N.3., N.4.2., N.4.3.	Amended	3-145
3.40.	Electric Vehicle Fueling Systems	EVF-2	S.2.8	Added	3-156
		EVF-1	S.3.3.	Amended	3-157
		EVF-4	Definition for “power factor”	Amended	3-166
5.55.	Timing Devices	TIM-1	S.4.	Amended	5-43
5.54.	Taximeters	TXI-1	N.1.3.2.1.	Deleted and renumbered subsequent paragraph.	5-35
5.56.(a)	Grain Moisture Meters	GMA-1	S.2.5.	Amended	5-52
		GMA-2	Table S.2.5.	Amended	5-53

SECTION	CODE	S&T ITEM NO.	PARAGRAPH	ACTION	PAGE
5.58.	Multiple Dimension Measuring Devices	MDM-1	S.1.11.	Amended	5-86
Appendix D	Definitions	HGM-6	audit trail	Amended to include references to 3.39. and other relevant codes	D-5
			calibration parameter		D-8
			configuration parameter		D-9
			discharge hose		D-11
			discharge line		D-11
			equipment, commercial		D-12
			event counter		D-12
			event logger		D-12
			point-of-sale system		D-22
			remote configuration capability		D-24
			retail device		D-24
			wet hose		D-30
		wet hose-type	D-30		
		HGM-6	automatic temperature or density compensation	Amended to add a reference to “hydrogen gas”	D-6
		HGM-6	minimum measured quantity	Added	D-18
non-resettable totalizer	Added		D-20		

2019 Editorial Changes

SECTION	CODE	PARAGRAPH	ACTION	PAGE
3.30	Liquid-Measuring Devices	Table 1. Money-Value Divisions and Maximum Allowable Variations for Money-Value Computations on Mechanical Analog Computers	Reformatted the first two columns of the last two rows addressing unit prices from \$0.75/liter (or \$3.00/gal) to \$2.50/liter (or \$10.00/gal) for clarity of application.	3-9
		T.4.	Delete “for results” and make “error” plural to clarify the application of the tolerance.	3-21
3.31	Vehicle-Tank Meters	T.2.	Updated the reference to Table 1 to reflect the change in its title.	3-40
		Table 1, T.2.	Add “Other Than Vehicle-Mounted Milk Meters” to the title of Table 1 to distinguish its scope from that of Table 2.	3-40 and 3-41
		T.2.1.	Delete “for results” and make “error” plural to clarify the application of the tolerance.	3-42
3.32	LPG & Anhydrous Ammonia Liquid-Measuring Devices	T.4.	Delete “for results” and make “error” plural to clarify the application of the tolerance.	3-58
		Table 1. Money-Value Divisions and Maximum Allowable Variations for Money-Value Computations on Mechanical Analog Computers	Reformatted the first two columns of the last two rows addressing unit prices from \$0.75/liter (or \$3.00/gal) to \$2.50/liter (or \$10.00/gal) for clarity of application.	3-50
Appendix B	Units and Systems of Measurement	<p>Multiple sections, including:</p> <ul style="list-style-type: none"> • 2.1. Origin and Early History of Units and Standards • 2.2. The Metric System • 3.2. Standards of Mass 	Revisions made throughout the Appendix to: (1) reference 2019 actions in the U.S. and internationally to redefine the traceability of mass measurements based on Planck’s constant; and (2) clarify the use and definitions of the International System of Units.	B-3 through B-10

2019 Editorial Changes

SECTION	CODE	PARAGRAPH	ACTION	PAGE
Appendix C	General Table of Units of Measurement	Footnote 9 and 10	Added notice regarding depreciation of U.S. survey foot.	C-8 and C-10
Appendix D	Definitions	unit price	Updated Code References to include 3.39 Hydrogen Gas-Measuring Devices.	D-28