CWMA Laws and Regulations (L&R) Committee
2016 Annual Meeting Report

Mr. Doug Rathbun, Committee Chair
Illinois

200 INTRODUCTION

The L&R Committee (hereinafter referred to as the "Committee") submits this Committee Interim Report for consideration by National Conference on Weights and Measures (NCWM). This report contains the items discussed and actions proposed by the Committee during its Interim Meeting in San Diego, California, January 10-13, 2016. The report will address the following items in Table A during the Annual Meeting. Table A identifies the agenda items by reference key, title of item, page number and the appendices by appendix designations. The acronyms for organizations and technical terms used throughout the report are identified in Table B. The headings and subjects apply to NIST Handbook 130, "Uniform Laws and Regulations in the Areas of Legal Metrology and Engine Fuel Quality (2015)," and NIST Handbook 133, "Checking the Net Contents of Packaged Goods (2015)." The first three digits of an item's reference key are assigned from the Subject Series List. The status of each item contained in the report is designated as one of the following: **(D) Developing Item:** the Committee determined the item has merit; however, the item was returned to the submitter or other designated party for further development before any action can be taken at the national level; **(I) Informational Item:** the item is under consideration by the Committee but not proposed for Voting; **(V) Voting Item:** the Committee is making recommendations requiring a vote by the active members of NCWM; **(W) Withdrawn Item:** the item has been removed from consideration by the Committee.

Some Voting Items are considered individually, others may be grouped in a consent calendar. Consent calendar items are Voting Items that the Committee has assembled as a single Voting Item during their deliberation after the Open Hearings on the assumption that the items are without opposition and will not require discussion. The Voting Items that have been grouped into consent calendar items will be listed on the addendum sheets. Prior to adoption of the consent calendar, the Committee will remove specific items from the consent calendar upon request to be discussed and voted upon individually.

Committees may change the status designation of agenda items (Developing, Informational, Voting, and Withdrawn) up until the report is adopted, except that items which are marked Developing, Informational or Withdrawn cannot be changed to Voting Status. Any change from the Committee Interim Report (as contained in this publication) or from what appears on the addendum sheets will be explained to the attendees prior to a motion and will be acted upon by the active members of NCWM prior to calling for the vote.

An "Item Under Consideration" is a statement of proposal and not necessarily a recommendation of the Committee. Suggested revisions are shown in **bold face print** by ~~**striking out**~~ information to be deleted and **<u>underlining</u>** information to be added. Requirements that are proposed to be nonretroactive are printed in ***bold faced italics***. Please refer to <u>http://www.ncwm.net/meetings/annual/publication-16</u> to review these documents.

Note: The policy is to use metric units of measurement in all of its publications; however, recommendations received by NCWM technical committees and regional weights and measures associations have been printed in this publication as submitted. Therefore, the report may contain references to inch-pound units.

Subject Series List

Table A
Table of Contents

Appendices

Table B
Glossary of Acronyms and Terms

Acronym	Term	Acronym	Term
AKI	Minimum Antiknock Index	LNG	Liquefied Natural Gas
API	American Petroleum Institute	MATG	Moisture Allowance Task Group
ASTM	ASTM International	MON	Motor Octane Number
CNG	Compressed Natural Gas	MAV	Maximum Allowable Variation
CRC	Coordinating Research Council	MPFS	Meat, Poultry, Fish, and Seafood
CVEF	Clean Vehicle Education Foundation	NFPA	National Fire Protection Association
CWMA	Central Weights and Measures Association	NGSC	Natural Gas Steering Committee
DGE	Diesel Gallon Equivalent	OEM	Original Equipment Manufacturer
DLE	Diesel Liter Equivalent	OIML	International Organization of Legal Metrology
DOE	Department of Energy	NCWM	National Conference on Weights and Measures
EPA	Environmental Protection Agency	NEWMA	Northeastern Weights and Measures Association
FALS	Fuels and Lubricants Subcommittee	NIST	National Institute of Standards and Technology
FDA	Food and Drug Administration	OWM	Office of Weights and Measures
FPLA	Fair Packaging and Labeling Act	PALS	Packaging and Labeling Subcommittee
FSIS	Food Safety and Inspection Service	RMFD	Retail Motor Fuel Dispenser
FTC	Federal Trade Commission	S&T	Specifications and Tolerances
GGE	Gasoline Gallon Equivalent	SP	Special Publication
GLE	Gasoline Liter Equivalent	SWMA	Southern Weights and Measures
L&R	Laws and Regulations	TG	Task Group
HB 130	NIST Handbook 130, *Uniform Laws and Regulations in the areas of Legal Metrology and Engine Fuel Quality*	UPLR	Uniform Packaging and Labeling Regulation
HB 133	NIST Handbook 133, *Checking the Net Contents of Packaged Goods*	USNWG	U.S. National Work Group
HB 44	NIST Handbook 44, *Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices*	VPS	Voluntary Product Standard
IFG	Informal Focus Group	WG	Work Group
IRS	Internal Revenue Service	WWMA	Western Weights and Measures Association

Details of All Items
(In order by Reference Key)

231 NIST HANDBOOK 130 – UNIFORM PACKAGING AND LABELING REGULATION

231-1 V 1. Background Information, Section 5. Declaration of Responsibility: Consumer and Non-consumer Packages, 6.7.1. Symbols and Abbreviations, and Section 13. Retail Sale Price Representations

Source:
NIST Office of Weights and Measures) (2016)

Purpose:
Amend NIST Handbook 130 – Uniform Packaging and Labeling Regulations to have the requirements to conform to the language finalized by FTC in their revision to regulations promulgated under the FPLA.

Item under Consideration:

1. Background Information:

The Uniform Packaging and Labeling Regulation was first adopted during the 37th Annual Meeting of the National Conference on Weights and Measures (NCWM) in 1952. Reporting to the Conference, the Committee on Legislation stated:

The National Conference should adopt a model package regulation for the guidance of those states authorized to adopt such a regulation under provisions of their weights and measures laws. Since so much of the work of weights and measures officials in the package field concerns food products, the importance of uniformity between the Federal (FDA) regulations and any model regulations to be adopted by this Conference cannot be overemphasized.

Since its inception, the Uniform Packaging and Labeling Regulation has been continually revised to meet the complexities of an enormous expansion in the packaging industry – an expansion that, in late 1966, brought about the passage of the Fair Packaging and Labeling Act (FPLA). Recognizing the need for compatibility with the Federal Act, in 1968 the Committee on Laws and Regulations of the 53rd Annual Meeting of the National Conference amended the "Model Packaging and Labeling Regulation" (renamed in 1983) to parallel regulations adopted by federal agencies under FPLA. The process of amending and revising this Regulation is a continuing one in order to keep it current with practices in the packaging field and make it compatible with appropriate federal regulations. Amendments and additions since 1971 are noted at the end of each section.

The revision of 1978 provided for the use of the metric system (SI) on labels as well as allowing SI-only labels for those commodities not covered by federal laws or regulations. "SI" means the International System of Units as established in 1960 by the General Conference on Weights and Measures and interpreted or modified for the United States by the Secretary of Commerce. [See the "Interpretation of the International System of Units for the United States" in the "Federal Register" (Volume 73, No. 96, pages 28432 to 28433) for May 16, 2008, and 15 United States Code, Section 205a - 205l "Metric Conversion." See also NIST Special Publication 330 "The International System of Units (SI)" 2008 edition and NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" 2008 edition that are available at **www.nist.gov/pml/wmd/** or by contacting TheSI@nist.gov.] In 1988, Congress amended the Metric Conversion Law to declare that it is the policy of the United States to designate the International System of Units of measurement as the preferred system of weights and measures for U.S. trade and commerce. In 1992, Congress amended the federal FPLA to require the most appropriate units of the SI and the U.S. customary systems of measurement on certain consumer commodities. The 1993 amendments to NIST Handbook 130 require SI and U.S. customary units on certain consumer commodities in accordance with federal laws or regulations. Requirements for labeling in both units of measure were effective February 14, 1994,

under FPLA and as specified in Section 15. Effective Date; except as specified in Section 11.32. SI Units, Exemptions for Consumer Commodities.

In 2015, the Federal Trade Commission (FTC) conducted a periodic review of its regulations issued under the FPLA and recently published several revisions which go into effect on December 17, 2015. [See the "Rules, Regulations, Statements of General Policy or Interpretation and Exemptions Under the Fair Packaging and Labeling Act] Final Rule" in the "Federal Register" (Volume 80, No. 221, pages 71686 to 71689) dated Tuesday, November 17, 2015. In response to comments from the NCWM's Packaging and Labeling Subcommittee, the FTC amended its regulations to clarify that exponents may be used in conjunction with U.S. customary units and recognized that with today's online resources the location of a business can be readily obtained in lieu of using a printed telephone directory. The FTC amended its regulations on the Declaration of Responsibility to allow the street address to be omitted if it is accessible in a printed or online telephone directory, or any readily accessible, widely published and publicly available resource. In response to a concern that the existing regulation included a limited table of metric conversions, the FTC decided to incorporate the more comprehensive metric conversion tables to provide users with the wide range of factors in NIST Handbook 133 (2015) "Checking the Net Contents of Packaged Goods," Appendix E, General Tables of Units of Measurements. The FTC also revoked regulations on certain retail price sale representations, since they are no longer used in the marketplace. The regulation was also amended to aid state and local compliance efforts by alerting users of the role of the states in regulating packages that fall outside the scope of the FTC's purview under the FPLA.
(Added 20XX)

Nothing contained in this regulation should be construed to supersede any labeling requirement specified in federal law or to require the use of SI units on non-consumer packages.

Section 5. Declaration of Responsibility: Consumer and Non-consumer Packages

Any package kept, offered, or exposed for sale, or sold at any place other than on the premises where packed shall specify conspicuously on the label of the package the name and address of the manufacturer, packer, or distributor. The name shall be the actual corporate name, or, when not incorporated, the name under which the business is conducted. The address shall include street address, city, state (or country if outside the United States), and ZIP Code (or the mailing code, if any, used in countries other than the United States); however, the street address may be omitted **if this is shown in a current city directory or telephone directory** **if it is listed in any readily accessible, well-known, widely published, and publicly available resource, including but not limited to a printed directory, electronic database or Web site. (Amendment effective 12/17/2015.)**

If a person manufactures, packs, or distributes a commodity at a place other than his principal place of business, the label may state the principal place of business in lieu of the actual place where the commodity was manufactured or packed or is to be distributed, unless such statement would be misleading. Where the commodity is not manufactured by the person whose name appears on the label, the name shall be qualified by a phrase that reveals the connection such person has with such commodity, such as "Manufactured for and packed by _____," "Distributed by _____," or any other wording of similar import that expresses the facts.

(Amended 20XX)

6.7.1. Symbols and Abbreviations. – Any of the following symbols and abbreviations, and none other, shall be employed in the quantity statement on a package of commodity:

avoirdupois	avdp	ounce	oz
piece	pc	count	ct
pint	pt	cubic	cu
pound	lb	each	ea
feet or foot	ft	quart	qt
fluid	fl	square	sq
gallon	gal	weight	wt
inch	in	yard	yd
liquid	liq	drained	dr

diameter	dia

A period should not be used after the abbreviation. Abbreviations should be written in singular form; and "s" should not be added to express the plural. (For example, "oz" is the symbol for both "ounce" and "ounces.") Both upper and lower case letters **and exponents** are acceptable. **(Amendment effective 12/17/2015.)**
(Added 1974) (Amended 1980, 1990, ~~and~~ 1993**, and 20XX)**

~~Section 13. Retail Sale Price Representations~~

~~13.1. "Cents off" Representations.~~

~~**(a) The term "cents off representation" means any printed matter consisting of the words "cents off" or words of similar import (bonus offer, 2 for 1 sale, 1¢ sale, etc.), placed upon any consumer package or placed upon any label affixed or adjacent to such package, stating or representing by implication that it is being offered for sale at a price lower than the ordinary and customary retail sale price.**~~

~~**(Amended 1982)**~~

~~**(b) Except as set forth in Section 13.2. Introductory Offers, the packager or labeler of a consumer commodity shall not have imprinted thereon a "cents off" representation unless:**~~

~~**(1) The commodity has been sold at an ordinary and customary price in the most recent and regular course of business where the "cents off" promotion is made.**~~

~~**(2) The commodity so labeled is sold at a reduction from the ordinary and customary price, which reduction is at least equal to the amount of the "cents off" representation imprinted on the commodity package or label.**~~

~~**(3) Each "cents off" representation imprinted on the package or label is limited to a phrase that reflects that the price marked by the retailer represents the savings in the amount of the "cents off" the retailer's regular price; e.g., "Price Marked is ____ Cents Off the Regular Price," "Price Marked is _____ off the Regular Price of this Package", provided the package or label may in addition bear in the usual pricing spot a form reflecting a space for the regular price, the represented "cents off," and a space for the price to be paid by the consumer.**~~

~~**(4) The commodity at retail presents the regular price, designated as the "regular price", clearly and conspicuously on the package or label of the commodity or on a sign, placard, or shelf marker placed in a position contiguous to the retail display of the "cents off" marked commodity.**~~

~~**i. Not more than three "cents off" promotions of any single size commodity may be initiated in the same trade area within a 12-month period;**~~

~~**ii. At least 30 days must lapse between "cents off" promotions of any particular size packaged or labeled commodity in a specific trade area; and**~~

~~**iii. Any single size commodity so labeled may not be sold in a trade area for a duration in excess of six months within any 12-month period.**~~

~~**(5) Sales of any single size commodity so labeled in a trade area do not exceed in volume 50 % of the total volume of sales of such size commodity in the same trade area during any 12-month period. The 12-month period may be the calendar, fiscal, or market year provided the identical period is applied in this subparagraph and subparagraph (5) of this paragraph. Volume limits may be calculated on the basis of projections for the current year, but shall not exceed 50 % of the sales for the preceding year in the event actual sales are less than the projection for the current year.**~~

(c) No "cents off" promotion shall be made available in any circumstances where it is known or there is reason to know that it will be used as an instrumentality for deception or for frustration of value comparison; for example, where the retailer charges a price that does not fully pass on to the consumers the represented price reduction or where the retailer fails to display the regular price in the display area of the "cents off" marked product.

(b) The sponsor of a "cents off" promotion shall prepare and maintain invoices or other records showing compliance with this section. The invoices or other records required by this section shall be open to inspection and shall be retained for a period of one year subsequent to the end of the year (calendar, fiscal, or market) in which the "cents off" promotion occurs.

(Added 1972)

13.2. Introductory Offers

(a) The term "introductory offer" means any printed matter consisting of the words "introductory offer" or words of similar import, placed upon a package containing any new commodity or upon any label affixed or adjacent to such new commodity, stating or representing by implication that such new commodity is offered for retail sale at a price lower than the anticipated ordinary and customary retail sale price.

(b) The packager or labeler of a consumer commodity may not have imprinted thereon an introductory offer unless:

(1) The product contained in the package is new, has been changed in a functionally significant and substantial respect, or is being introduced into a trade area for the first time.

(2) Each offer on a package or label is clearly and conspicuously qualified.

(3) No commodity so labeled is sold in a trade area for duration in excess of six months.

(4) At the time of making the introductory offer promotion, the offerer intends in good faith to offer the commodity, alone, at the anticipated ordinary and customary price for a reasonably substantial period of time following the duration of the introductory offer promotion.

(c) The packager or labeler of a consumer commodity shall not have imprinted thereon an introductory offer in the form of a "cents off" representation unless, in addition to the requirements in paragraph (b) of this section:

(1) The package or label clearly and conspicuously and in immediate conjunction with the phrase "Introductory Offer" bears the phrase "_____ cents off the after introductory offer price."

(2) The commodity so labeled is sold at a reduction from the anticipated ordinary customary price, which reduction is at least equal to the amount of the reduction from the after introductory offer price representation on the commodity package or label.

(d) No introductory offer with a "cents off" representation shall be made available in any circumstance where it is known or there is reason to know that it will be used as an instrumentality for deception or for frustration of value comparison; e.g., where the retailer charges a price that does not fully pass on to consumers the represented price reduction.

(e) The sponsor of an introductory offer shall prepare and maintain invoices or other records showing compliance with this section. The invoices or other records required by this section shall be open to inspection and shall be retained for a period of one year subsequent to the period of the introductory offer.

(Added 1972)

~~**13.3. Economy Size.**~~

~~**(a) The term "economy size" means any printed matter consisting of the words "economy size," "economy pack," "budget pack," "bargain size," "value size," or words of similar import placed upon any package containing any consumer commodity or placed upon any label affixed or adjacent to such commodity, stating or representing directly or by implication that a retail sale price advantage is accorded the purchaser thereof by reason of the size of that package or the quantity of its contents.**~~

~~**(b) The packager or labeler of a consumer commodity may not have imprinted thereon an "economy" size representation unless:**~~

~~**(1) At the same time the same brand of the commodity is offered in at least one other packaged size or labeled form.**~~

~~**(2) Only one packaged or labeled form of that brand of commodity labeled with an "economy size" representation is offered.**~~

~~**(3) The commodity labeled with an "economy size" representation is sold at a price per unit of weight, volume, measure, or count that is substantially reduced (i.e., at least 5 %) from the actual price of all other packaged or labeled units of the same brand of that commodity offered simultaneously.**~~

~~**(c) No "economy size" package shall be made available in any circumstances where it is known that it will be used as an instrumentality for deception; e.g., where the retailer charges a price that does not pass on to the consumer the substantial reduction in cost per unit initially granted.**~~

~~**(d) The sponsor of an "economy size" package shall prepare and maintain invoices or other records showing compliance with paragraph (b) of this section. The invoices or other records required by this section shall be open to inspection and shall be retained for one year.**~~

~~**(Added 1972)**~~

Background/Discussion: See Appendix A, Page L&R-A5.

CWMA Action: Item 231-1
Summary of comments considered by the regional committee (in writing or during the open hearings):
A NIST technical advisor commented that this federal regulation went into effect December 17, 2015. The proposal is intended to align Handbook 130 UPLR with FTC regulation. An industry representative stated that the proposal was developed by the Packaging and Labeling Subcommittee (PALS), and they support the item.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee feels this item is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☒ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

A NIST technical advisor commented that this federal regulation went into effect December 17, 2015. The proposal is intended to align Handbook 130 UPLR with FTC regulation. An industry representative stated that the proposal was developed by the Packaging and Labeling Subcommittee (PALS), and they support the item. The committee feels this item is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to http://www.ncwm.net/meetings/annual/publication-16 to review these documents.

232 NIST HANDBOOK 130 – UNIFORM REGULATION FOR THE METHOD OF SALE COMMODITIES

232-1 D Section 1. Food Products and Section 2. Non-Food Products

Source:
Los Angeles County, California (2016)

Purpose:
Clarify and formalize the long-standing, fundamental, core tenet of legal metrology and weights and measures regulation that the sale of any commodity, in any form or by any method, be according to legally-recognized, traceable units of measure.

Item under Consideration:
Amend NIST Handbook 130 Uniform Regulation for the Method of Sale of Commodities as follows:

Section 1. Food Products

(a) Any food product, whether sold from bulk or in packaged form, shall be sold only in a unit of measure or weight that meets all of the following criteria:

(1) Is recognized and defined by NIST as legal for use in commerce

(2) Has been published in the "Federal Register"; and

(3) Has metrological traceability *(NOTE #, page #)* to a national standard

Note: Sale of a product or commodity according to count, where appropriate to be fully informative to facilitate value comparison, is permissible as a method of sale.

(b). Only the following commodities may be exempted from the method of sale limitations set forth in Section 1.(a) and permitted to be sold according to "head" or "bunch," as appropriate:

(1) Asparagus;

(2) Brussels Sprouts (on stalk);

(3) Rhubarb;

(4) Edible Bulbs (onions [spring or green], garlic, leeks, etc.);

(5) Flower Vegetables (broccoli, cauliflower, brussel sprouts, etc.);

(6) Leaf Vegetables (lettuce, cabbage, celery, parsley, herbs, loose greens, etc.); and

(7) Root Vegetables (turnips, carrots, radishes, etc.);

(Added 20XX)

And

Section 2. Non-food Products [***NOTE 1***, page 109]

(a). Any non-food product, whether sold from bulk or in packaged form, shall be sold only in a unit of measure or weight that meets all of the following criteria:

(1) Is recognized and defined by NIST as legal for use in commerce

(2) Has been published in the "Federal Register" and

(3) Has metrological traceability ***(NOTE #, page #)*** **to a national standard**

Note: Sale of a product or commodity according to count, where appropriate to be fully informative to facilitate value comparison, is permissible as a method of sale.

(b). The only exemption from the method of sale limitations set forth in Section 2(a) shall be retail sales of compressed natural gas sold as a vehicle fuel, which are permitted to be sold in terms of gasoline liter equivalent (GLE) or gasoline gallon equivalent (GGE) as defined in Section 2.27.1. Definitions

Note: As defined in NIST Handbook 130, Uniform Weights and Measures Law, Metrological traceability means the property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty.

(Added 20XX)

Background/Discussion: See Appendix A, Page L&R-A5.

CWMA Action: Item 232-1
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda

☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The item continues to be developed and considered by various stakeholders.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
The item continues to be developed and considered by various stakeholders.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-2 V Section 1.5. Meat, Poultry, Fish, and Seafood.

Source:
Massachusetts Division of Standards (2015)

Purpose:
To allow the retail sale of meat, poultry and fish by count with adequate consumer information.

Item under Consideration:
Amend NIST Handbook 130, Uniform Regulation for the Method of Sale of Commodities as follows:

1.5. Meat, Poultry, Fish, and Seafood. [***NOTE 3***, page 110] – Shall be sold by weight, except that whole shellfish in the shell may be sold by weight, measure, and/or count. Shellfish are aquatic animals having a shell, such as mollusks (for example, scallops) or crustaceans (for example, lobster or shrimp).

(Amended 1988 **and 20XX)**

(a) **If meat, poultry, fish, or seafood is kept, offered or exposed for sale from bulk (e.g., direct service counters), by the portion or piece according to a pre-determined fixed weight, the product identity and net weight shall be displayed, as well as the unit price at which it is offered for sale. This information shall appear on a label or sign immediately adjacent to the meat, poultry, fish or seafood and must be presented in an easy-to-read type style and color. The font size of the net weight and unit price declaration shall be equal to or greater than the font size used for the product identity.**

(b) **The unit price required under Sections 1.5.(a) shall be in terms of the unit price-per-kilogram or unit price-per-pound, and not in common or decimal fractions of the permitted units. A supplemental declaration of a price per unit (i.e., price per ounce) is permitted.**

(c) **Similar or competing commodities kept, offered, or exposed for sale from bulk in any single display or facility shall have unit prices posted or advertised in the same terms uniformly and consistently expressed (i.e., all in either prices–per-kilogram or prices–per pound, not in differing units) to readily facilitate value comparison.**

(Added 20XX)

NOTE 3: *See Section 1.12. Ready-to-Eat Food for additional requirement.*

1.5.1. In Combination with Other Foods. – When meat, poultry, fish, or seafood is combined with some other food element to form a distinctive food product, the quantity representation may be in terms of the total weight of the product or combination, and a quantity representation need not be made for each element provided a statement listing the ingredients in order of their predominance by weight must also appear on the label.

Note: See Interpretations and Guidelines Section 2.2.13. Declaration of Identity: Consumer Package and Labeling Regulation (UPLR).

(Amended 1989)

1.5.2. Clams, Mussels, Oysters, and Other Mollusks.

1.5.2.1. Whole Clams, Oysters, Mussels, or Other Mollusks in the Shell (fresh or frozen). – Shall be sold by weight (including the weight of the shell, but not including the liquid or ice packed with them), dry measure (e.g., bushel), and/or count. In addition, size designations may be provided.

1.5.2.2. Whole Clams, Oysters, Mussels, or Other Mollusks on the Half Shell (fresh, cooked, smoked, or frozen, with or without sauces or spices added). – Shall be sold by weight (excluding the weight of the shell) or by count. Size designations may also be provided.

(Added 1989)

1.5.2.3. Fresh Oysters Removed from the Shell. – Shall be sold by weight, drained weight, or by fluid volume. For oysters sold by weight or by volume, a maximum of 15 % free liquid by weight is permitted.

(Amended 1991)

1.5.2.4. Processed Clams, Mussels, Oysters, or Other Mollusks on the Half Shell (fresh or frozen). – Shall be sold by net weight excluding the weight of the shell. The term "processed" means removing the meat from the shell and chopping it or cutting it or commingling it with other solid foods.

(Amended 1989 **and 20XX**)

1.9. Advertising and Price Computing of Bulk Food Commodities

1.9.1. Total Price Computing. – The price of food commodities sold from bulk by weight shall be computed in terms of whole units of weight (i.e., **price per** ~~**grams**~~, kilograms, pounds, **grams**, ounces, etc.) and not in common or decimal fractions.

(Amended 20XX)

1.9.2. Unit Price Advertising. – The **unit** price of food commodities sold from bulk shall be advertised or displayed in terms of **the price per** whole **units of** weight **in** ~~**of**~~ kilograms or pounds only, not in common or decimal fractions **of a kilogram or pound** or in ounces. A supplemental declaration **of a**

price per unit (i.e., price per ounce) is permitted in **font size** ~~**print**~~ no larger than the whole unit price. This supplemental declaration may be expressed in common or decimal fractions or in ounces.
(Added 1976) (Amended 1985, 1987, ~~**and**~~ 1991**, 20XX)**

1.9.3. Individual Piece Advertising. – The unit price and net weight of any food commodity offered or exposed for sale from bulk by the portion or piece, according to a pre-determined fixed weight, shall include a declaration of the individual item price, a unit price in terms of kilogram or pound and net weight in terms of kilograms or pounds or decimal fractions, thereof. The font size of the net weight and unit price declaration shall be equal to or greater than the font size used for the product identity.

NOTE: For specific requirements on Meat, Poultry, Fish and Seafood refer to Section 1.5.
(Added 20XX)

Background/Discussion: See Appendix A, Page L&R-A7.

CWMA Action: Item 232-2
Summary of comments considered by the regional committee (in writing or during the open hearings):
A NIST technical advisor commented that the proposed language in the publication was submitted to L&R by the MPFS work group and was a collaborative effort between officials and industry.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
A NIST technical advisor commented that the proposed language in the publication was submitted to L&R by the MPFS work group and was a collaborative effort between officials and industry. The committee feels the proposal is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-3 I Section 1.12. Ready-to-Eat Food.

Source:
MPFS TG (2016)

Purpose:
Provide clarification in the definition and method of sale for these products.

Item under Consideration:
Amend the NIST Handbook 130, Method of Sale Regulation as follows:

1.12. Ready-to-Eat Food.

1.12.1. Definition - Ready-to-Eat Food. – Restaurant style food offered or exposed for sale, whether in restaurants, supermarkets, or similar food service establishments, that is ready for consumption~~,~~ **and will not require additional cooking preparation by the customer. Consumption may not necessarily be on the premises where sold.** ~~though not necessarily on the premises where sold.~~ Ready-to-Eat Food does not include **bulk deli food or** sliced luncheon products, such as meat, poultry, or cheese when sold separately.

NOTE: *The sale of an individual piece of fresh fruit (like an apple, banana, or orange) is allowed by count.*

(Added 2004) **(Amended 20XX)**

1.12.2. Methods of Sale. – Ready-to-Eat Food ~~**sold from bulk or in single servings packed on the premises may be sold by weight, measure, or count (count includes servings).**~~ **shall be sold from bulk or in single serving packages. Bulk ready-to-eat foods may be sold by random weight or count which includes serving size. Pre-packaged single serving or multi-serving packages shall display a net weight statement representative of the contents, a unit price and a total cost.**

(Amended 1993 **and 201X**)

Background/Discussion: See Appendix A, Page L&R-A10.

CWMA Action: Item 232-3
Summary of comments considered by the regional committee (in writing or during the open hearings):
A NIST technical advisor commented that the MPFS Task Group submitted new language to the National Laws and Regulations Committee, which is available on the CWMA and NCWM web site. All were encouraged to review the revised Method of Sale and "test" it in the marketplace and provide feedback at the Annual NCWM in July.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal continues to be developed by the task group.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☐ Voting Item on the NCWM Agenda
- ☒ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

A NIST technical advisor commented that the MPFS Task Group submitted new language to the National Laws and Regulations Committee, which is available on the CWMA and NCWM web site. All were encouraged to review the revised Method of Sale and "test" it in the marketplace and provide feedback at the Annual NCWM in July.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-4 V Section 2.4. Fireplace and Stove Wood (See Related Items 260-3 & 260-4)

Source:
NIST Office of Weights and Measures (2016)

Purpose:
Recognize traditional industry labeling practice and eliminate language that appears to conflict with the requirements of the packaging and labeling regulation regarding quantity statements.

Item under Consideration:
Amend the NIST Handbook 130, Method of Sale Regulation as follows:

2.4.3. Quantity. – Fireplace and stove wood shall be advertised, offered for sale, and sold only by measure, using the term "cord" and fractional parts of a cord or the cubic meter, except that:

(a) **Packaged natural wood.** – Natural wood offered for sale in packaged form in quantities less than 0.45 m^3 ($^1/_8$ cord or 16 ft^3) shall display the quantity in terms of:

(1) liters, to include fractions of liters; **and may also include a declaration of quantity in terms of:** ~~**or**~~

~~**(2) cubic inches, if less than one cubic foot; or**~~

(**2** ~~**3**~~) cubic **foot,** ~~**feet, if one cubic foot or greater,**~~ **to include fractions of a cubic foot**; **or cubic feet** to include fractions of a cubic foot.

(Amended 2010 **and 20XX**)

Note: Implementation for the requirement for use of the liter in (1): packages may continue to show the dm^3 instead of the liter (L) for 3 years after the effective date of this regulation to allow for the use of current packaging inventories.

(Added 20XX)

(b) **Artificial compressed or processed logs –** A single fireplace log shall be sold by weight, and packages of such individual logs shall be sold by weight plus count.

(c) **Stove wood pellets or chips –** Pellets or chips not greater than 15 cm (6 in) in any dimension shall be sold by weight. This requirement does not apply to flavoring chips.

(Amended 1976 and 1991)

(d) **Flavoring chips. –**Flavoring chips offered for sale in packaged form in quantities less than 0.45 m^3 ($^1/_8$ cord or 16 ft^3) shall display the quantity in terms of:

(1) liters, to include fractions of liters; **and may also include a declaration of quantity in terms of: or**

~~**(2) cubic inches, if less than one cubic foot; or**~~

(**2** ~~**3**~~) cubic **foot,** ~~**feet, if one cubic foot or greater,**~~ **to include fractions of a cubic foot**; **or cubic feet** to include fractions of a cubic foot.

(Added 1998) (Amended 2010 **and 20XX)**

Note: In determining the appropriate Method of Sale, a clear distinction must be made as to whether the wood is being sold primarily as fuel (some wood is sold as fuel but flavoring is a byproduct) or strictly as a wood flavoring.

(Added 2010)

Background/Discussion: See Appendix A, Page L&R-A12.

CWMA Action: Item 232-4
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee feels the proposal is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

No comments were heard during L&R open hearings, and the committee feels the proposal is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-5 V Section 2.10. Softwood Lumber

Source:
American Lumber Standard Committee (2016)

Purpose:
Correct the treatment of nominal dimension of softwood lumber and to make consistent with NIST Voluntary Product Standard PS 20.

Item under Consideration:
Amend NIST Handbook 130, Uniform Method of Sale of Commodities as follows:

2.10. Softwood Lumber. – Applies to softwood boards, timbers, and dimension lumber that have been surfaced**~~, but shall not apply to rough lumber, to lumber that has been matched, patterned, or shiplapped~~**; **to other products set forth in the latest version of the Department of Commerce, Voluntary Product Standard PS 20-15, "American Softwood Lumber Standard," Tables 1-4; but shall not apply ~~or~~** to **rough** lumber **or lumber (other than products in the Tables)** remanufactured or joined so as to have changed the form or identity, such as individually assembled or packaged millwork items. "Nominal sizes" **are ~~for U.S.~~** customary dimensions **~~are size designations used for convenience in describing~~ to describe** approximate, rather than actual, sizes of lumber. "Nominal sizes" were originally derived from the dimensions of rough lumber before surfacing and are always greater than the actual **or minimum dressed** dimensions; thus a dry "2 × 4" is surfaced to actual dimensions of 1½ in × 3½ in (38 mm × 89 mm). The requirements in **~~this section~~ Section 2.10.1. Definitions** refer to actual sizes of lumber**~~.; for~~ Examples of** nominal sizes **and minimum dressed sizes for board and dimension lumber are shown in ~~(see~~** Table 1. Softwood Lumber Sizes**~~)~~**. **A more complete listing of nominal size categories are found in the latest version of PS 20-15, ~~The nominal sizes used in this section follow Department of Commerce Voluntary Product Standard PS 20-10,~~** "American Softwood Lumber Standard" **in Tables 1, 2, 3, and 4. ~~or latest edition. SI equivalents are included for actual measurements only.~~**

(Amended 20XX)

2.10.1. Definitions.

2.10.1.1. ~~Surfaced (d~~Dressed~~)~~ Lumber. – Lumber that has been surfaced by a machine (to attain smoothness of surface and uniformity of size) on one side (S1S), on two sides (S2S), one edge (S1E), two edges (S2E), or a combination of sides and edges (S1S1E, S1S2E, S2S1E, S4S).

(Amended 20XX)

2.10.1.2. Boards. – Lumber 38 mm (1½ in) or less in actual thickness and 38 mm (1½ in) or more in actual width. Lumber less than **~~139~~140** mm (5½ in) in actual width may be classified as strips.

(Amended 20XX)

2.10.1.3. Timbers. – Lumber 114 mm (4½ in) or more in smallest dimension. Timbers may be designated as beams, stringers, postscaps, sills, girders, or purlins.

2.10.1.4. Dimension Lumber. – Lumber from 38 mm (1½ in) to, but not including, 114 mm (4½ in) in actual thickness, and 38 mm (1½ in) or more in actual width. Dimension lumber may be designated as framing, joists, planks, rafters or studs.

2.10.1.5. Rough Lumber – Lumber that has not been **dressed ~~surfaced~~**, but that has been sawed, edged, and trimmed at least to the extent of showing saw marks, or other primary manufacturing marks in the wood, on the four longitudinal surfaces of each piece for its overall length.

(Amended 20XX)

2.10.1.6. Matched Lumber. – Lumber that has been worked with a tongue on one edge of each piece and a groove on the opposite edge to provide a close tongue and groove joint by fitting two pieces together; when end-matched, the tongue and groove are worked in the ends also.

2.10.1.7. Patterned Lumber. – Lumber that is shaped to a pattern or a molded form, in addition to being dressed, matched, or shiplapped, or any combination of these workings.

2.10.1.8. Shiplapped Lumber. – Lumber that has been worked or rabbeted on both edges of each piece to provide a closelapped joint by fitting two pieces together.

2.10.1.9. Grade – The commercial designation assigned to lumber meeting specifications established by a nationally recognized grade rule writing organization.

2.10.1.10. Species. – The commercial name assigned to a species of trees.

2.10.1.11. Species Group. – The commercial name assigned to two or more individual species having similar characteristics.

2.10.1.12. Representation – A "representation" shall be construed to mean any advertisement, offering, invoice, or the like that pertains to the sale of lumber.

2.10.1.13. Minimum Dressed Sizes (width and thickness). – The standardized width and thickness at which lumber is dressed when manufactured in accordance with the U.S. Department of Commerce Voluntary Product Standard PS 20-**15~~10~~**), "American Softwood Lumber Standard," or latest edition, and regional grading rules conforming to **the latest version of** PS 20-**15~~10~~**) **~~or latest edition~~**. (See Table 1. Softwood Lumber Sizes **containing examples of some minimum dressed sizes**.)

(Amended 20XX)

2.10.2. Identity. – Representations shall include a declaration of identity that specifies the grade or grades, species or species group, and whether the lumber is unseasoned (green) or dry.

2.10.3. Quantity. – Representations shall be in terms of:

(a) the number of pieces;

(b) the minimum **dressed ~~surfaced~~** width and thickness**~~; and~~ or actual width and thickness, except that the use of nominal dimensions shall be allowed as long as:**

(1) The term "nominal" or "nom" is also used, and

(2) The actual or minimum dressed sizes are prominently displayed to the customer either by means of a table or label; and

(c) either the length of individual pieces or the lineal footage**~~., except that the use of nominal dimensions shall be allowed as long as a table of minimum surfaced sizes is displayed prominently or the actual dimensions are prominently displayed to the customer and the~~**

~~**term "nominal" or "nom" is also used in conjunction with any representation of dimensions.**~~

Table 1. Softwood Lumber Sizes

Examples of minimum **dressed** ~~**standard surfaced**~~ sizes at the time of manufacture for both unseasoned green) and dry lumber ~~**as published by the**~~ **in the latest version** of the U.S. Department of Commerce in Voluntary Product Standard PS 20-**15** ~~**10 or latest edition**~~.

Product Classification (Nominal Size)	**Minimum Dressed Sizes****			
	Unseasoned		**Dry**	
Inches	**Inches**	**Millimeters**	**Inches**	**Millimeters**
Surfaced Lumber*				
2 × 2	$1^{9}/_{16} \times 1^{9}/_{16}$	40 × 40	1½ × 1½	38 × 38
2 × 2½	$1^{9}/_{16} \times 2^{1}/_{16}$	40 × 52	1½ × 2	38 × 51
2 × 3	$1^{9}/_{16} \times 2^{9}/_{16}$	40 × 65	1½ × 2½	38 × 64
2 × 4	$1^{9}/_{16} \times 3^{9}/_{16}$	40 × 90	1½ × 3½	38 × 89
2 × 6	$1^{9}/_{16} \times 5^{5}/_{8}$	40 × 143	1½ × 5½	38 × 140
2 × 8	$1^{9}/_{16} \times 7½$	40 × 190	1½ × 7¼	38 × 184
2 × 10	$1^{9}/_{16} \times 9½$	40 × 241	1½ × 9¼	38 × 235
2 × 12	$1^{9}/_{16} \times 11½$	40 × 292	1½ × 11¼	38 × 286
Board Lumber				
1 × 2	$^{25}/_{32} \times 1^{9}/_{16}$	20 × 40	¾ × 1½	19 × 38
1 × 3	$^{25}/_{32} \times 2^{9}/_{16}$	20 × 65	¾ × 2½	19 × 64
1 × 4	$^{25}/_{32} \times 3^{9}/_{16}$	20 × 90	¾ × 3½	19 × 89
1 × 6	$^{25}/_{32} \times 5^{5}/_{8}$	20 × 143	¾ × 5½	19 × 140
1 × 8	$^{25}/_{32} \times 7½$	20 × 190	¾ × 7¼	19 × 184
1 × 10	$^{25}/_{32} \times 9½$	20 × 241	¾ × 9¼	19 × 235
1 × 12	$^{25}/_{32} \times 11½$	20 × 292	¾ × 11¼	19 × 286

*The dry thicknesses of nominal 3 in and 4 in lumber are 2½ in (64 mm) and 3½ in (89 mm); unseasoned thicknesses are $2^{9}/_{16}$ in (65 mm) and 3^{9}/16 (90 mm). Widths for these thicknesses are the same as shown above.

PS 20-15**~~10~~ defines dry lumber as being 19 % or less in moisture content and unseasoned lumber as being over 19 % moisture content. The size of lumber changes approximately 1 % for each 4 % change in moisture content. Lumber stabilizes at approximately 15 % moisture content under normal use conditions.

(Added 1971) **(Amended 20XX)**

Background/Discussion: See Appendix A, Page L&R-A15.

CWMA Action: Item 232-5
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard on this item.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee feels this item is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
No comments were heard on this item, and the committee feels it is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-6 V Section 2.17. Precious Metals

Source:
Florida (2016)

Purpose:
Provide critical information consumers should have when deciding to sell items containing precious metals.

Item under Consideration:
Amend the NIST Handbook 130, Method of Sale Regulation as follows:

2.17. Precious Metals.

2.17.1. Definition.

2.17.1.1. Precious Metals. –Gold, silver, platinum, or any item composed partly or completely of these metals or their alloys and in which the market value of the metal in the item is principally the gold, silver, or platinum component.

2.17.2. Quantity. – The unit of measure and the method of sale of precious metals, if the price is based in part or wholly on a weight determination, shall be either troy weight or SI units. **To facilitate price comparison and provide information allowing consumers to make an informed decision a chart must be prominently displayed and present in proximity to the purchasing scale being used for the transaction. The chart must be clearly visible to the seller and contain at a minimum the following information:** ~~**When the measurement or method of sale is expressed in SI units of mass, a conversion chart to troy units shall be prominently displayed so as to facilitate price comparison. The conversion chart shall also display a table of troy weights indicating grains, pennyweights, and troy ounces.**~~

(a) A table of troy weights indicating grains, pennyweights, and troy ounces.

(b) The percentages as noted in Table 3 of precious metals contained in common mixtures found in the marketplace.

Table 3. - Percentage of precious metal contained in mixtures		
Gold	**10 karat**	**41.7 %**
	14 karat	**58.3 %**
	18 karat	**75.0 %**
	24 karat	**100 %**
Silver	**Sterling**	**92.5 %**
Platinum	**900 platinum**	**90 %**
	950 platinum	**95 %**

(c) If buying precious metals based on weight the chart shall also state the minimum percentage of the current melt value being used to calculate the buying price and the minimum melt value on which the buying price is based.

(d) If buying precious metals based on weight the following formula:

"(Item weight × Percentage in decimal form of precious metal contained in the item) × (Melt value being used × Percentage in decimal form being paid of melt value being used) = Potential Monetary Offer".

(e) When the measurement or method of sale is expressed in SI units of mass, a conversion chart to troy units must also be present on the chart.

(Added 1982) **(Amended 20XX)**

Background/Discussion: See Appendix A, Page L&R-A17.

CWMA Action: Item 232-6
Summary of comments considered by the regional committee (in writing or during the open hearings):
A NIST technical advisor commented that the submitter was asked by the National L&R Committee to seek stakeholder input. Officials at CWMA were also encouraged to review the proposal with stakeholders and provide additional input.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda

☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
A NIST technical advisor commented that the submitter was asked by the National L&R Committee to seek stakeholder input. Officials at CWMA were also encouraged to review the proposal with stakeholders and provide additional input. However, the committee feels the item is fully developed and ready for voting status unless subsequent concerns arise.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-7 V Section 2.23. Animal Bedding

Source:
NIST Office of Weights and Measures (2015)

Purpose:
Provide a uniform method of sale for animal bedding that will enhance the ability of consumers to make value comparisons and will ensure fair competition.

Item under Consideration:
Amend the NIST Handbook 130, Method of Sale Regulation as follows:

2.23. Animal Bedding. ~~**— Packaged animal bedding of all kinds, except for baled straw, shall be sold by volume, that is, by the cubic meter, liter, or milliliter and by the cubic yard, cubic foot, or cubic inch. If the commodity is packaged in a compressed state, the quantity declaration shall include both the quantity in the compressed state and the usable quantity that can be recovered. Compressed animal bedding packages shall not include pre-compression volume statements.**~~

~~**Example:**~~

~~**250 mL expands to 500 mL (500 in^3 expands to 1000 in^3).**~~

2.23.1. Definition.

(a) Compressed Bedding – means that the volume of the bedding was reduced under pressure during the packaging process.

(b) Useable Volume – the volume of the product that can be recovered from a package by the consumer after it is unwrapped and, if necessary, uncompressed.

2.23.2. Method of Sale.

Packaged animal bedding of all kinds, except for baled straw, shall be advertised, labeled, offered for sale and sold by volume in either a compressed or a uncompressed package. A packaged of compressed animal bedding shall be advertised, labeled, offered and exposed for sale and sold on the basis of the "Useable Volume." If unit pricing is provided for use by retail customers to make a value comparison it shall be in terms of the price per liter.

(b) A quantity declaration shall be in terms of the largest whole unit of the milliliter, liter, or cubic meter. A declaration may also include the quantity in terms of largest whole unit of the cubic inch, cubic foot, or cubic yard only. The terms "Useable Volume" must appear in the quantity declaration on a package of compressed animal bedding.

Example for Uncompressed Animal Bedding:

Volume 41 Liters (1.4 Cubic Feet)

Volume 125 Liters

Examples for Compressed Animal Bedding:

Useable Volume 1.4 Cubic Feet (41 Liters)

Useable Volume 27.9 Liters (1700 Cubic Inches)

Useable Volume 113 L (4 Cubic Feet)

Useable Volume 226 L

(c) The display of a net or gross weight, pre-compression volume, compressed volume, or supplementary dry measure quantities (e.g., dry pint, dry quart, or bushel) anywhere on the package is prohibited.

2.23.~~1.~~3. Exemption - Non-Consumer Packages of Animal Bedding Sold to Laboratory Animal Research Industry. – Packaged Animal Bedding consisting of granular corncobs and other dry (8 % or less moisture), pelleted, and/or non-compressible Bedding materials that are sold to commercial (non-retail) end users in the laboratory animal research industry (government, medical, university, preclinical, pharmaceutical, research, biotech, and research institutions) may be sold on the basis of weight.

(Added 2010) **(Amended 20XX)**

Note: This method of sale for animal bedding shall be enforceable after January 1, 20XX.

(Added 20XX)

Background/Discussion: See Appendix A, Page L&R-A17.

CWMA Action: Item 232-7
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were given.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:
The proposal is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
No comments were heard, and the committee feels the items is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-8 V Section 2.27. Retail Sales of Natural Gas Sold as a Vehicle Fuel

Source:
Clean Vehicle Education Foundation (2014)

Purpose:
Since natural gas is sold in the retail market place as compressed natural gas (CNG) to be an alternative fuel to gasoline and diesel fuel and as liquefied natural gas (LNG) to be an alternative fuel to diesel, the proposed additions and edits to Handbook 130 will provide definitions for natural gas equivalents for diesel liters and diesel gallons so that end users can readily compare cost and fuel economy. At present only CNG equivalents for gasoline are included in the handbooks.

Item under Consideration:
Amend the NIST Handbook 130, Method of Sale Regulation as follows:

2.27. Retail Sales of Natural Gas Sold as a Vehicle Fuel.

2.27.1. Definitions.

2.27.1.1. <u>Compressed</u> Natural Gas <u>(CNG)</u>. – A gaseous fuel composed primarily of methane that is suitable for compression and dispensing into a fuel storage container(s) for use as an engine fuel.

<u>(Amended 20XX)</u>

~~**2.27.1.2. Gasoline Liter Equivalent (GLE).** – **Gasoline liter equivalent (GLE) means 0.678 kg of natural gas.**~~

2.27.1.2.~~3.~~ Gasoline Gallon Equivalent (GGE). – Gasoline gallon equivalent (GGE) means 2.567 kg (5.660 lb) of **compressed** natural gas.

(Amended 20XX)

2.27.1.3. Diesel Gallon Equivalent (DGE). - Diesel gallon equivalent means 6.384 lb of compressed natural gas or 6.059 lb of liquefied natural gas.

(Added 20XX)

2.27.1.4. Liquefied Natural Gas (LNG). – Natural gas which is predominantly methane that has been liquefied at − 162 °C (− 260 °F) at 14.696 psi and stored in insulated cryogenic fuel storage tanks for use as an engine fuel.

(Added 20XX)

2.27.2. Method of Retail Sale and Dispenser Labeling.

2.27.2.1. Method of Retail Sale. – All **compressed** natural gas kept, offered, or exposed for sale and sold at retail as a vehicle fuel shall be **measured** in terms of **mass, and indicated in** the gasoline ~~**liter equivalent (GLE), or gasoline**~~ gallon equivalent (GGE), **diesel gallon equivalent (DGE) units or mass.**

(Amended 20XX)

2.27.2.2. Dispenser Labeling Compressed Natural Gas. – All retail **compressed** natural gas dispensers shall be labeled with the **equivalent** conversion factor in terms of ~~**kilograms or**~~ pounds **(lb).** The label shall be permanently and conspicuously displayed on the face of the dispenser and shall have ~~**either**~~ the statement "1 Gasoline Gallon Equivalent (GGE) ~~**is equal to**~~ **means** 5.660 lb of **Compressed** Natural Gas" **or "1 Diesel Gallon Equivalent (DGE) means 6.384 lb of Compressed Natural Gas"** consistent with the method of sale used.

(Amended 20XX)

2.27.2.3. Method of Retail Sale. –All liquefied natural gas kept, offered, or exposed for sale and sold at retail as a vehicle fuel shall be measured in mass, and indicated in diesel l gallon equivalent (DGE) units, or mass.

(Added 20XX)

2.27.2.4. Dispenser Labeling of Retail Liquefied Natural Gas. – All retail liquefied natural gas dispensers shall be labeled with the equivalent conversion factor in terms of pounds (lb). The label shall be permanently and conspicuously displayed on the face of the dispenser and shall have the statement "1 Diesel Gallon Equivalent (DGE) means 6.059 lb of Liquefied Natural Gas".

(Added 20XX)

Background/Discussion: See Appendix A, Page L&R-A20.

CWMA Action: Item 232-8
Summary of comments considered by the regional committee (in writing or during the open hearings):
This item was discussed during the S&T open hearings. A representative from SIGMA and NACS supports the item as it appears, but not the addition of any new language from the working group that adds a mass weight statement to the receipt, as was proposed at the NCWM Interim meeting in January, 2016. An additional comment was made by a regulator from Missouri that a clarification in section 2.27.1.4. related to temperature and pressure should be revised with language below (in red).
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region:

☐ Voting Item on the NCWM Agenda
☐ Information Item on the NCWM Agenda
☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

The committee vote was split between withdraw and voting status, so no official recommendation was given from the committee at this time.

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION

Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

2.27.1.4. Liquefied Natural Gas (LNG). – Natural gas which is predominantly methane that has been liquefied at − 162 °C (− 260 °F) at 14.696 psia and stored in insulated cryogenic fuel storage tanks for use as an engine fuel.

Regional recommendation to NCWM for item status:

☒ Voting Item on the NCWM Agenda
☐ Information Item on the NCWM Agenda
☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
☐ Developing Item on the NCWM Agenda *(To be developed by source)*
☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

After considerable discussion, the committee was split evenly as to whether the item should move forward as with voting status or be withdrawn. During the voting session, a state regulator from Kansas indicated he wondered why we are essentially proposing selling one item as two items (GGE and DGE). A state regulator from Minnesota commented that the item was fully developed and should move forward as a voting item. A state regulator from Missouri stated that the Central Region should differentiate between actual support of the item and recommending it move forward as a voting item strictly because it is fully developed. A state regulator commented that the region's views be stated in the report, including the comment that the region was divided in its support of the item. An API representative commented that if the body does not pass this provision, each state will enact its own version of this law. A state regulator from Missouri indicated there may be some additional language that modifies the proposal during the annual meeting in July. Following a hand vote, the region determined the item should move forward as a voting item with the proposed change.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

232-9 I Section 2.XX. Automatic Transmission Fluid. (See Related Item 237-4)

Source:
American Petroleum Institute (2016)

Purpose:
Define how transmission fluids shall be identified in the marketplace on delivery documents and invoices and receipts from service.

Item under Consideration:
Amend NIST Handbook 130, Uniform Regulation for the Method of Sale of Commodities as follows:

2.XX. Automatic Transmission Fluid.

2.XX.1 Labeling of Automatic Transmission Fluid. – Automatic transmission fluid shall be labeled.

2.XX.1. Labeling. – The label on a container of automatic transmission fluid, as well as the invoice or receipt from bulk distribution and service on an automatic transmission that includes the installation of automatic transmission fluid dispensed from a receptacle, dispenser, or storage tank shall not contain any information that is false or misleading.

a) In addition, each packaged container shall be labeled with the following:

(1) the brand name;

(2) the name and place of business of the manufacturer, packer, seller, or distributor;

(3) the words "Automatic Transmission Fluid";

(4) the performance claim or claims for the fluid; and

(5) an accurate statement of the quantity of the contents in terms of liquid measure.

b) Each receptacle and/or storage tank of automatic transmission fluid shall be labeled with the following:

(1) the brand name;

(2) the name and place of business of the manufacturer, packer, seller, or distributor;

(3) the performance claim or claims for the fluid; and

(4) the words "Automatic Transmission Fluid."

2.XX.2. Documentation of Claims Made Upon Product Label. – Any manufacturer, packer, or distributor of any product subject to this article and sold in this state shall provide, upon request of duly authorized representatives of the Director, documentation of any claim made upon their product label.

(Added 20XX)

Background/Discussion: See Appendix A, Page L&R-A25.

CWMA Action: Item 232-9
Summary of comments considered by the regional committee (in writing or during the open hearings):
A representative from API who originally submitted the proposal commented that it should remain informational until additional details can be compiled and presented to FALS.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:
The item continues to be developed through FALS.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
A representative from API who originally submitted the proposal commented that it should remain informational until additional details are compiled and presented to FALS.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents

232-10 D Electric Watthour

Source:
NIST OWM (2016)

Purpose:

1) Make the weights and measures community aware of work being done within the U.S. National Work Group on Electric Vehicle Fueling and Submetering to develop proposed requirements for electric watthour meters used in submeter applications in residences and businesses;

2) Encourage participation in this work by interested regulatory officials, manufacturers, and users of electric submeters.

3) Allow an opportunity for the USNWG to provide regular updates to the S&T Committee and the weights and measures community on the progress of this work;

4) Allow the USWNG to vet specific proposals as input is needed.

Item Under Consideration:
Create a "Developing Item" for inclusion on the NCWM S&T Committee Agenda (and a corresponding item is proposed for inclusion on the L&R Committee Agenda) where progress of the USNWG can be reported as it develops legal metrology requirements for electric watthour meters and continues work to develop test procedures and test equipment standards. The following narrative is proposed for this item:

> In 2012, NIST OWM formed the U.S. National Working Group on Electric Vehicle Fueling and Submetering to develop proposed requirements for commercial electricity-measuring devices (including those used in sub-metering electricity at residential and business locations and those used to measure and

sell electricity dispensed as a vehicle fuel) and to ensure that the prescribed methodologies and standards facilitate measurements that are traceable to the International System of Units (SI).

In 2013, the NCWM adopted changes recommended by the USNWG to the NIST Handbook 130 requirements for the Method of Sale of Commodities to specify the method of sale for electric vehicle refueling. At the 2015 NCWM Annual Meeting, the NCWM adopted NIST Handbook 44 Section 3.40 Electric Vehicle Refueling Systems developed by the USNWG.

This Developing Item is included on the Committee's agenda (and a corresponding item is proposed for inclusion on the L&R Committee Agenda) to keep the weights and measures community apprised of USNWG current projects, including the following:

- The USNWG continues to develop recommended test procedures for inclusion in a new EPO 30 for Electric Vehicle Refueling Equipment along with proposed requirements for field test standards.

- The USWNG is continuing work to develop a proposed code for electricity-measuring devices used in sub-metering electricity at residential and business locations. This does not include metering systems under the jurisdiction of public utilities. The USNWG hopes to have a draft code for consideration by the community in the 2016-2107 NCWM cycle.

The USNWG will provide regular updates on the progress of this work and welcomes input from the community.

For additional information, contact USNWG Chairman Ms. Tina Butcher at tbutcher@nist.gov or 301-975-2196 or Technical Advisor, Ms. Juana Williams at Juana.williams@nist.gov or 301-975-3989

Background/Discussion: See Appendix A, Page L&R-A27.

CWMA Action: Item 232-10
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The item continues to be developed.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports**

from your region on this item.
No comments were heard during open hearings. The committee supports continued developed of this item.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237 NIST HANDBOOK 130 – UNIFORM ENGINE FUELS AND AUTOMOTIVE LUBRICANTS REGULATION

237-1 V Sections 1.36. Liquefied Natural Gas (LNG) and 3.11. Compressed Natural Gas (CNG)

Source:
Clean Vehicle Education Foundation (2013)

Purpose:
Enable consumers to make cost and fuel economy comparisons between diesel fuel and natural gas.

Item under Consideration: Amend NIST Handbook 130, Uniform Engine Fuels and Automotive Lubricants Regulation as follows:

Section 1. Definitions

1.36. Liquefied Natural Gas (LNG). – Natural gas that has been liquefied at – 162 °C (– ~~259~~**260** °F) and stored in insulated cryogenic tanks for use as an engine fuel.

Section 3. Classification and Method of Sale of Petroleum Products

3.11. Compressed Natural Gas (CNG).

3.11.1. How Compressed Natural Gas is to be Identified. – For the purposes of this regulation, compressed natural gas shall be identified by the term "Compressed Natural Gas" or "CNG."

3.11.2. Retail Sales of Compressed Natural Gas Sold as a Vehicle Fuel.

~~**3.11.2.1. Method of Retail Sale. All CNG kept, offered, or exposed for sale or sold at retail as a vehicle fuel shall be in terms of the gasoline liter equivalent (GLE) gasoline gallon equivalent (GGE).**~~

3.11.2.~~2~~1. Retail Dispenser Labeling.

3.11.2.~~2~~1.1. Identification of Product. – Each retail dispenser of CNG shall be labeled as "Compressed Natural Gas."

~~**3.11.2.2.2. Conversion Factor. All retail CNG dispensers shall be labeled with the conversion factor in terms of kilograms or pounds. The label shall be permanently and conspicuously displayed on the face of the dispenser and shall have either the statements "1 Gasoline Liter Equivalent (GLE) is equal to 0.678 kg of Natural Gas "1 Gasoline Gallon**~~

~~**Equivalent (GGE) is equal to 5.660 lb of Natural Gas consistent with the method of sale used.**~~

3.11.2.~~2~~1.~~3~~2. Pressure. – CNG is dispensed into vehicle fuel containers with working pressures of ~~**16 574 kPA,**~~ 20 684 kPa **(3000 psi),** or 24 821 kPa **(3600 psi)**. The dispenser shall be labeled ~~**16 574 kPa,**~~ 20 684 kPa **(3000 psi)**, or 24 821 kPa **(3600 psi)** corresponding to the pressure of the CNG dispensed by each fueling hose.

(Amended 20XX)

3.11.2.~~2~~1.~~4~~3. NFPA Labeling. – NFPA Labeling requirements also apply. (Refer to NFPA 52.)

3.11.3. Nozzle Requirements for CNG. – CNG fueling nozzles shall comply with ANSI/AGA/CGA NGV 1.

Background/Discussion: See Appendix A, Page L&R-A27.

CWMA Action: Item 237-1
Summary of comments considered by the regional committee (in writing or during the open hearings):
A representative from National Association of Convenience Stores (NACS) and Society of Independent Gasoline Marketers of America (SIGMA) supports this item with the caveat that the newest suggestion from the Natural Gas Working Group that includes additional information on the receipt that captures the metric equivalent does not "work" for his members. He is recommending the item move forward as a voting item either way. Clean Energy Fuels representative commented that he supports the proposal with the exception of the mass printout on the receipt. He was originally hopeful the metric equivalency would be a workable compromise, but after reviewing older equipment in marketplace, there is no capability at some locations to make these adjustments. The "mom and pop" businesses do not have the capability to change the Point of Sale Coding. He is suggesting the requirement be moving forward only – not retroactive. A state regulator from Missouri commented that he sits on an informal work group to look at new data to determine energy content of diesel fuel. He indicated that the BTU content of the diesel fuel from 30 years ago is different than it is now. His informal work group is developing a paper to reflect these differences, and will be present the report to the FALS Committee moving forward. As a state of Missouri official, this has become a very confusing issue with multiple units of measures. Currently, CNG is sold by a gasoline gallon equivalent. The DGE conversion is a different unit that the CNG conversion unit, and no one else in the world recognizes the sale of natural gas as fuel anywhere in the world in any other unit of measure besides mass (pounds/kilograms). He believes all of these equations, differing energy contents, and when applying the different tax rate factors, a retail fuel seller could be selling in one type of equivalency and metering in another equivalency, which could potentially lead to fraud. A future fuel – dimethyl ether – similar to LP gas – will have the same issues when it becomes commercially available. Also, a vehicle that runs on two types of fuels (i.e. gas and CNG or diesel and LNG) do not have an equivalent BTU content, and the conversion factors do not take that factor into account. He believes the item should be withdrawn. A representative from Endress Hauser indicated he originally was opposed to the equivalency factor. Since that time, he has seen the diesel gallon equivalent used, and he does not see confusion. As for liter equivalency, it may not be useful. He supports the action, but is unfamiliar with the newly proposed language. The NACS representative commented that there is only one federal tax rate each for compressed natural gas and liquid natural gas. He also commented that we sell items in other units, and asked the group to recognize that all advertising is a marketing tactic. So this issue is no different. The proposal has to be workable. He said his member groups sent in a letter of support for the proposal until they found out about the new suggestion for adding metric equivalency to the receipt. A state regulator from MN commented she wants the item to move forward. A representative from API expressed support for the item.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:
The committee vote was split evenly between voting and withdraw status, therefore the committee is not making a recommendation at this time.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
After considerable discussion, the committee was split evenly as to whether the item should move forward as with voting status or be withdrawn. During the voting session, a state regulator from Kansas indicated he wondered why we are essentially proposing selling one item as two items (GGE and DGE). A state regulator from Minnesota commented that the item was fully developed and should move forward as a voting item. A state regulator from Missouri stated that the Central Region should differentiate between actual support of the item and recommending it move forward as a voting item strictly because it is fully developed. A state regulator commented that the region's views be stated in the report, including the comment that the region was divided in its support of the item. An API representative commented that if the body does not pass this provision, each state will enact its own version of this law. A state regulator from Missouri indicated there may be some additional language that modifies the proposal during the upcoming NCWM annual meeting in July. There is significant division within the region on this issue as to whether it is ready for voting status or if it should be withdrawn. Following a hand vote, the region determined the item should move forward as a voting item.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237-2 V Section 2.1.2. Gasoline-Ethanol Blends

Source:
American Petroleum Institute (2016)

Purpose:
Extend the effective date of the 1-psi vapor pressure exception to May 1, 2017 and make the effective date for this change July 28, 2016.

Item under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

2.1.2. Gasoline-Ethanol Blends. When gasoline is blended with ethanol, the ethanol shall meet the latest version of ASTM D4806, "Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel," and the blend shall meet the latest version of ASTM D4814, "Standard Specification for Automotive Spark-Ignition Engine Fuel," with the following permissible exceptions:

a. The maximum vapor pressure shall not exceed the ASTM D4814 limits by more than:

(1) 1.0 psi for blends containing 9 to 10 volume percent ethanol from June 1 through September 15.

(2) 1.0 psi for blends containing one or more volume percent ethanol for volatility classes A, B, C, D from September 16 through May 31.

(3) 0.5 psi for blends containing one or more volume percent ethanol for volatility Class E from September 16 through May 31.

The vapor pressure exceptions in subsections 2.1.2. Gasoline-Ethanol Blends will remain in effect until May 1, ~~**2016**~~ **2017**, or until ASTM incorporates changes to the vapor pressure maximums for ethanol blends, whichever occurs earlier. **(Effective July 28, 2016)**

(Amended 20XX)

NOTE 1: *The temperature values (e.g., 54 °C, 50. °C, 41.5 °C) are presented in the format prescribed in ASTM E29 "Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications."*

(Added 2009) (Amended 2012 **and 20XX**)

Background/Discussion: See Appendix A, Page L&R-A35.

CWMA Action: Item 237-2
Summary of comments considered by the regional committee (in writing or during the open hearings):
An individual from API commented they are in support of this item and it should continue to be a voting item. A representative from Flint Hills commented that they support the item.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee feels this item is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
An individual from API commented they are in support of this item and it should continue to be a voting item. A representative from Flint Hills commented that they support the item. The committee feels this item is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237-3 W Sections 2.1.3. Minimum Antiknock Index (AKI), 2.1.4. Minimum Motor Octane Number, and 3.2.5. Prohibition of Terms – Table 1.

Source:
General Motors (2013)

Purpose:
Remove obsolete Altitude De-rating of Octane practice, establish a National Octane Baseline, and harmonize Octane Labeling from state to state.

Item under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

Section 2. Standard Fuel Specification

2.1.3. Minimum Antiknock Index (AKI). – **The AKI of gasoline and gasoline-oxygenate blends shall not be less than 87.** The AKI shall not be less than the AKI posted on the product dispenser or as certified on the invoice, bill of lading, shipping paper, or other documentation**;**

(Amended 20XX)

2.1.4. Minimum Motor Octane Number. – The minimum motor octane number shall not be less than 82. ~~**for gasoline with an AKI of 87 or greater;**~~

(Amended 20XX)

Section 3. Classification and Method of Sale of Petroleum Products

3.2. Automotive Gasoline and Automotive Gasoline-Oxygenate Blends

3.2.5. Prohibition of Terms. – It is prohibited to use specific terms to describe a grade of gasoline or gasoline-oxygenate blend unless it meets the minimum antiknock index requirement shown in Table 1. Minimum Antiknock Index Requirements.

Table 1.
Minimum Antiknock Index Requirements

Term	Minimum Antiknock Index	
	~~**ASTM D4814 Altitude Reduction Areas IV and V**~~	**All ~~Other ASTM D4814~~ Areas**
Premium, Super, Supreme, High Test	~~**90**~~	91
Midgrade, Plus	~~**87**~~	89
~~**Regular Leaded**~~	~~**86**~~	~~**88**~~
Regular, Unleaded (alone)	~~**85**~~	87
~~**Economy**~~	~~**–**~~	~~**86**~~

(Table 1. Amended 1997 and **20XX**)

Background/Discussion: See Appendix A, Page L&R-A38.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237-4 I Sections 2.14. Products for Use in Lubricating Automatic Transmission Fluids and 3.14. Automatic Transmission Fluid. (See Related Item 232-9)

Source:
American Petroleum Institute (2016)

Purpose:
Define how transmission fluids shall be identified in the marketplace on delivery documents and invoices and receipts from service.

Item under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

2.14. Products for Use in Lubricating Automatic Transmissions. – Any automatic transmission fluid sold without limitation as to type of transmission for which it is intended shall meet all automotive manufacturers' recommended requirements for transmissions in general use in the state. Automatic transmission fluids that are intended for use only in certain transmissions, as disclosed on the label of its container **or on an invoice or receipt when dispensed from a receptacle, dispenser or storage tank**, shall meet the latest automotive manufacturers' recommended requirements for those transmissions. Adherence to automotive manufacturers' recommended requirements shall be based on tests currently available to the lubricants' industry and the state regulatory agency. Any material offered for sale or sold as an additive to automatic transmission fluids shall be compatible with the automatic transmission fluid to which it is added, and shall meet all performance claims as stated on the label **or on an invoice or receipt when dispensed from a receptacle, dispenser or storage tank**. Any manufacturer of any such product sold in this state shall provide, upon request by a duly authorized representative of the Director, documentation of any claims made on their product label **or on an invoice or receipt when dispensed from a receptacle, dispenser or storage tank**.

(Amended 20XX)

3.14. Automatic Transmission Fluid.

3.14.1. Labeling. – The label on a container of automatic transmission fluid **~~or~~, as well as the invoice or receipt from bulk distribution and service on an automatic transmission that includes the installation of automatic transmission fluid dispensed from a receptacle, dispenser, or storage tank** shall not contain any information that is false or misleading.

In addition, each **packaged** container shall be labeled with the following:

(a) the brand name

(b) the name and place of business of the manufacturer, packer, seller, or distributor;

(c) the words "Automatic Transmission Fluid";

(d) **~~the duty type of classification~~ the performance claim or claims for the fluid;** and

(e) an accurate statement of the quantity of the contents in terms of liquid measure.

Each receptacle and/or storage tank of automatic transmission fluid shall be labeled with the following:

(a) the brand name;

(b) the name and place of business of the manufacturer, packer, seller, or distributor; and

(c) the performance claim or claims for the fluid; and

(d) the words "Automatic Transmission Fluid."

(Amended 20XX)

3.14.2. Documentation of Claims Made Upon Product Label. – Any manufacturer, ~~**or**~~ packer, **or distributor** of any product subject to this article and sold in this state shall provide, upon request of duly authorized representatives of the Director, documentation of any claim made upon their product label. (Added 2004) **(Amended 20XX)**

Background/Discussion: See Appendix A, Page L&R-A39.

CWMA Action: Item 237-4
Summary of comments considered by the regional committee (in writing or during the open hearings):
See Item 232-9.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal is still being developed through FALS.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
See item 232-9.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237-5 I Section 4.1. Water in Retail Engine Fuel Storage Tanks, ~~Gasoline-Alcohol Blends, Biodiesel Blends, Ethanol Flex Fuel, Aviation Gasoline, and Aviation Turbine Fuel.~~ and ~~4.2. Water in Gasoline, Diesel, Gasoline-Ether, and Other Fuels.~~

Source:
Colorado (2016)

Purpose:
Provide a consistent best management practice with regard to managing water in any engine fuel utilizing current detection technology.

Item under Consideration:
Amend NIST Handbook 130, Uniform Engine Fuels and Automotive Lubricants Regulation as follows:

4.1. Water in Retail Engine Fuel Storage Tanks ~~Gasoline-Alcohol Blends, Biodiesel Blends, Ethanol Flex Fuel, Aviation Gasoline, and Aviation Turbine Fuel.~~ No water phase greater than 6 mm (¼ in) as determined by an appropriate detection paste or other acceptable means, is allowed to accumulate in any **retail** tank utilized in the storage of **engine fuels including, gasoline,** gasoline-alcohol blend, biodiesel, biodiesel blends, **ultra-low sulfur diesel,** ethanol flex fuel, aviation gasoline, and aviation turbine fuel**, gasoline ether blends, kerosene, or any other engine fuels**.

(Amended 2008, 2012, ~~and~~ 2014**, and 20XX**)

~~**4.2. Water in Gasoline, Diesel, Gasoline-Ether, and Other Fuels. Water shall not exceed 25 mm (1 in) in depth when measured with water indicating paste or other acceptable means in any tank utilized in the storage of diesel, gasoline, gasoline-ether blends, and kerosene sold at retail except as required in Section 4.1. Water in Gasoline-Alcohol Blends, Biodiesel Blends, Ethanol Flex Fuel, Aviation Gasoline, and Aviation Turbine Fuel.**~~

~~**(Amended 2008, 2012, and 2014)**~~

Background/Discussion: See Appendix A, Page L&R-A41.

CWMA Action: Item 237-5
Summary of comments considered by the regional committee (in writing or during the open hearings):
Scott Simmons made comments on behalf of the newly formed informal task force. He commented that all engine fuels are affected negatively by water, and the occurrence of microbial growth clogs filters and damages fuel systems. Currently, almost all gasoline is blended with ethanol and all diesel is ultra-low sulfur diesel. The absence of sulfur, which is a natural biocide, leaves fuel systems more vulnerable. The proposal puts all requirements in one place and makes the requirement consistent across different types of fuels. A representative from API commented that he believes the item should continue to remain informational because not all fuel is blended with biodiesel or has ethanol in it.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee feels that this item should remain informational for additional input from stakeholders.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☐ Voting Item on the NCWM Agenda
- ☒ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

Scott Simmons made comments on behalf of the newly formed informal task force on water in storage tanks. He commented that all engine fuels are affected negatively by water, and the occurrence of microbial growth clogs filters and damages fuel systems. Currently, almost all gasoline is blended with ethanol and all diesel is ultra-low sulfur diesel. The absence of sulfur, which is a natural biocide, leaves fuel systems more vulnerable. The proposal puts all requirements in one place and makes the requirement consistent across different types of fuels. A representative from API commented that he believes the item should continue to remain informational because not all fuel is blended with biodiesel or has ethanol in it. The committee feels that this item should remain informational for additional input from stakeholders.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

237-6 V Section 4.3. Dispenser Filters

Source:
Missouri Department of Agriculture (2012)

Purpose:
Recognize the need for 10 micron or smaller nominal pore-sized filters for today's diesel engines.

Item under Consideration:
Amend the NIST Handbook 130, Engine Fuels and Automotive Lubricants Regulation as follows:

4.3. Dispenser Filters.

4.3.1. Engine Fuel Dispensers.

(a) All gasoline, gasoline-alcohol blends, gasoline-ether blends, ethanol flex fuel, and M85 methanol dispensers shall have a 10 micron or smaller nominal pore-sized filter.

(b) All biodiesel, biodiesel blends, diesel, and kerosene dispensers shall have a ~~**30**~~ **10** micron or smaller nominal pore-sized filter **with the following exceptions:**

1) Dispensers with flow rates greater than 15 gallons per minute shall use a 30 micron or smaller nominal pore size filter.

2) Dispensers with flow rates less than or equal to 15 gallons per minute in the following states may use a 30-micron or smaller nominal pore size filter during the months of December through March. These states include: Nevada, Idaho, Montana, Wyoming Colorado, South Dakota, Nebraska, Minnesota, Iowa, Wisconsin, Michigan, Illinois,

Pennsylvania, New York, Vermont, New Hampshire, and Maine. This exception has a sunset date of April 2020.

3) Dispensers with flow rates less than or equal to 15 gallons per minute in North Dakota may use a 30 micron or smaller nominal size filter during the months of November through March. This exception has a sunset date of April 2020.

(Amended 2014 **and 20XX**)

Background/Discussion: See Appendix A, Page L&R-A42.

CWMA Action: Item 237-6

Summary of comments considered by the regional committee (in writing or during the open hearings):

A state regulator from Missouri commented that this proposal came from an update in Missouri's state fuel quality requirements, and commented that regardless of whether diesel fuel has biodiesel in it or not is irrelevant – fuel needs to be cleaner. He added that the current volume of the PEI (Petroleum Equipment Institute) Journal has an article about coverage of current NCWM items being considered. He said that the article points out that off-road equipment has better coverage and protection when it comes to fuel quality, but a customer at a retail station is at the mercy of what fuel housekeeping practices the retail fuel station operator provides. A representative from API commented they support the proposal.

Item as proposed by the regional committee: ***(If different than agenda item)***

Committee recommendation to the region:

- ☒ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

The committee feels this issue is fully developed and ready for voting status.

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION

Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☒ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

A state regulator from Missouri commented that this proposal came from an update in Missouri's state fuel quality requirements, and commented that regardless of whether diesel fuel has biodiesel in it or not is irrelevant – fuel needs to be cleaner. He added that a recent volume of the PEI (Petroleum Equipment Institute) Journal has an article about coverage of current NCWM items being considered. He said that the article points out that off-road equipment has better coverage and protection when it comes to fuel quality, but a customer at a retail station is at the mercy of what fuel housekeeping practices the retail fuel station operator provides. A representative from API commented they support the proposal. During the voting session, a state regulator from Illinois spoke in support of the item. A state regulator from Missouri commented that the current language is a compromise from the original proposal and addresses some of the concerns fuel marketers had regarding cold weather issues. A state regulator from Minnesota commented that she supports a workmanship standard on all fuels at all levels. She believes the item is fully

developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260 HANDBOOK 133

260-1 V Section 1.2.1. Inspection Lots and Section 3.10. Mulch and Soils Labeled by Volume

Source:
Mulch & Soil Foundation and NIST OWM (2016)

Purpose:
Clarify test procedures and promote uniform practices.

Item under Consideration:
Amend NIST Handbook 133 as follows:

Chapter 1- General Information

1.2. Package Requirements

1.2.1. Inspection Lot

An "inspection lot" (called a "lot" in this handbook) is defined as a collection of identically labeled (except for quantity or identity in the case of random packages) packages available for inspection at one time. The collection of packages will pass or fail as a whole based on the results of tests on a **randomly drawn** sample ~~**drawn from**~~ **of** the lot. This handbook describes procedures to determine if the packages in an "inspection lot" contain the declared net quantity of contents and if the individual packages' variations are within acceptable limits.

Chapter 3 – Test Procedures – For Packages Labeled by Volume

3.10. Mulch and Soils Labeled by Volume

Mulch is defined as "any product or material except peat or peat moss that is advertised, offered for sale, or sold for primary use as a horticultural, above-ground dressing, for decoration, moisture control, weed control, erosion control, temperature control, or other similar purposes."

Soil is defined as "any product or material, except peat or peat moss that is advertised or offered for sale, or sold for primary use as a horticultural growing media, soil amendment, and/or soil replacement."

3.10.1. Test Equipment:

- A test measure appropriate for the package size that meets the specifications for test measures in Table 3-4. "Specifications for Test Measures for Mulch and Soils"
- Drop cloth/polyethylene sheeting for catching overflow of material
- Level (at least 15 cm [6 in] in length)

Table 3-4 Specifications for Test Measures for Mulch and Soils

Nominal Capacity of Test Measure[4]	Actual Volume of the Measure	Interior Length[1]	Interior Width[1]	Interior Height[2]	Marked Intervals on Interior Wall[3]	Volume Equivalent of Marked Intervals
30.2 L (1.07 cu ft) for testing packages that contain less than 28.3 L (1 cu ft or 25.7 dry qt)	31.9 L (1.13 cu ft)	213.4 mm (8.4 in)	203.2 mm (8.0 in)	736.6 mm (29 in)	12.7 mm ($^1/_2$ in)	550.6 mL (33.6 cu in)
28.3 L (1 cu ft)	~~28.3 L (1 cu ft)~~ **33.04 L (1.16 cu ft)**	304.8 mm (12 in)	304.8 mm (12 in)	~~304.8 mm (12 in)~~ **355.6 mm (14 in)**		1179.8 mL (72 cu in)
56.6 L (2 cu ft)	~~63.7 L (2.25 cu ft)~~ **61.3 L (2.16 cu ft)**	304.8 mm (12 in)	304.8 mm (12 in)	~~685.8 mm (27 in)~~ **660.4 mm (26 in)**		
		406.4 mm (16 in)	228.6 mm (9 in)	~~685.8 mm (27 in)~~ **660.4 mm (26 in)**		
84.9 L (3 cu ft)	~~92 L (3.25 cu ft)~~ **89.4 L (3.16 cu ft)**	304.8 mm (12 in)	304.8 mm (12 in)	~~990.6 mm (39 in)~~ **965.2 mm (38 in)**		
		406.4 mm (16 in)	228.6 mm (9 in)	~~990.6 mm (39 in)~~ **965.2 mm (38 in)**		

Measures are typically constructed of 1.27 cm ($^1/_2$ in) marine plywood. **The measure must accommodate the entire contents of the package being tested, and** a transparent sidewall is useful for determining the level of fill, but must be reinforced if it is not thick enough to resist distortion. If the measure has a clear front, place the level gage at the back (inside) of the measure so that the markings are read over the top of the mulch.

Notes

1. Other interior dimensions are acceptable if the test measure approximates the configuration of the package under test, **can accommodate the entire contents of the package at one time** and does not exceed a base configuration of the package cross-section.

2. The height of the test measure **shall be 355.6 mm (14 in) for a 1 cubic foot package, 660.4 mm (26 in) for a 1.5 - 2 cubic foot package or 965.2 mm (38 in) for a 3 cubic foot package**. ~~**may be reduced, but this will limit the volume of the package that can be tested.**~~

3. When lines are marked in boxes, they should extend to all four sides of the measure if possible to improve readability. It is recommended that a line indicating the MAV level also be marked to reduce the possibility of

reading errors when the level of the mulch is at or near the MAV.

[4.] The Nominal Capacity is given to identify the size of packages that can be tested in a single measurement using the dry measure with the listed dimensions. It is based on the most common package sizes of mulch in the marketplace. If the measures are built to the dimensions shown above the actual volume will be larger than the nominal volume so that plus errors (overfill) can be measured accurately.

(Amended 2010 **and 20XX**)

3.10.2. Test Procedure

1. Follow the Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection, and select a random sample.

~~**2. Open each package in turn. Empty the contents of the package into a test measure and level the contents by hand. Do not rock, shake, drop, rotate, or tamp the test measure. Read the horizontal marks to determine package net volume.**~~

2. ~~**Note**~~ Some types of mulch are susceptible to clumping and compacting. ~~**Take steps**~~ **T**o ensure that the material is loose and free flowing when placed into the test measure**, g**ently **massage the package while** roll**ing** the bag **on the ground (or flat surface) at least four full rotations (but not more than eight full rotations), without lifting or dropping the package,** before opening to reduce the clumping and compaction of the material.

Note: Mulch products stored exposed to the elements may become saturated with moisture. Excessive moisture adds weight to mulch particles and distorts the volume test results. Test samples with flowing or excessive collected moisture in the package shall be excluded from the test procedure.

~~**3. Exercise care in leveling the surface of the mulch/soil and determine the volume reading from a position that minimizes errors caused by parallax.**~~

3. Placing contents into the test measure.

- **Open the bag, gather the bag opening to ensure that no product is lost. Place the gathered bag opening as far into the top of the measure as possible without touching or leaning against the measure.**

- **Release the bag opening and quickly dump the contents of the package into a test measure in a continuous flow**

Note: Do not touch the product or test measure at any time during this procedure. Do not disturb the test measure by rocking, shaking, dropping or tamping it during the test procedure.

- **Massage the outside of the bag to maintain a continuous flow of the product but not for the purpose of de-clumping the product.**

- **Using your hand, gently level the contents, being careful not to affect the compaction of the product.**

4. Read the horizontal marks at a position level with the product and round the readings between two marked intervals up to the nearest 38.1 mm (½ in) increment to determine the package net volume.

5. ~~**4.**~~ Determine package errors by subtracting the labeled volume from the package net volume in the measure. Record each package error.

Package Error = Package Net Volume − Labeled Volume

(Amended 20XX)

3.10.3. Evaluation of Results

Follow the procedures in Section 2.3.7. "Evaluate for Compliance" to determine lot conformance.

Note: In accordance with Appendix A, Table 2-10. Exceptions to the Maximum Allowable Variations for Textiles, Polyethylene Sheeting and Film, Mulch and Soil Labeled by Volume, Packaged Firewood, and Packages Labeled by Count with 50 Items or Fewer, and Specific Agricultural Seeds Labeled by Count, apply an MAV of 5 % of the declared quantity to mulch and soil sold by volume. When testing mulch and soil with a net quantity in terms of volume, one package out of every 12 in the sample may exceed the 5 % MAV (e.g., one in a sample of 12 packages; two in a sample of 24 packages; four in a sample of 48 packages). However, the sample must meet the average requirement of the "Category A" Sampling Plan.

Background/Discussion: See Appendix A, Page L&R-A45.

CWMA Action: Item 260-1
Summary of comments considered by the regional committee (in writing or during the open hearings):
A representative from the Mulch and Soil Council commented that this is a joint proposal between the Mulch and Soil Foundation and NIST to clarify procedures for checking package content of mulch. This proposal updates procedures for containers in the testing protocol. These procedures have been developed from the NIST training sessions so that industry and states can both reference the same materials if training is unavailable. The industry supports the proposal as a voting item. The L&R Chairman commented that the Conference received a letter from Professor Judd Michael from the College of Agricultural Sciences and Engineering at the Pennsylvania State University that stated they did not support all of the proposed changes. The submitter is concerned the new procedures will result in more issues rather than fewer issues. The chairman commented that NIST has reached out to the individual to clarify the specific concerns.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The committee felt that the proposal should move forward as a voting item with the expectation that NIST will continue communication with Dr. Michael, and he will have the opportunity to attend the annual meeting to present his concerns.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
A representative from the Mulch and Soil Council commented that this is a joint proposal between the Mulch and Soil Foundation and NIST to clarify procedures for checking package content of mulch. This proposal updates procedures for containers in the testing protocol. These procedures have been developed from the NIST training sessions so that industry and states can both reference the same materials if training is unavailable. The industry supports the proposal as a voting item. The L&R Chairman commented that the Conference received a letter from Professor Judd Michael from the College of Agricultural Sciences and Engineering at the Pennsylvania State University that stated they did not support all of the proposed changes. The submitter is concerned the new procedures will result in more issues rather than fewer issues. The chairman commented that NIST has reached out to the individual to clarify the specific concerns. The committee felt that the proposal should move forward as a voting item with the expectation that NIST will continue communication with Dr. Michael, and he will have the opportunity to attend the annual meeting to present his concerns.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-2 V Section 2.4. Borax Audit Test

Source:
NIST Office of Weights and Measures (2016)

Purpose:
Provide clarification for existing steps for the Borax Test Procedure.

Item under Consideration:
Amend NIST Handbook 133 as follows:

2.4. Borax Audit Test

This audit test is only used if the sample fails a net weight test. This method is used to identify possible short-filling by weight at point-of-pack for borax. Since the density of borax can vary at point-of-pack, further investigation is required to determine whether such short-filling has occurred. ~~**Use the following procedure to determine if packages of borax are labeled correctly.**~~ This procedure applies to packages of powdered or granular products consisting predominantly (more than 50 %) of borax. Use the following procedure to determine if packages of borax are labeled correctly. ~~**Such commodities are**~~ **Borax shall be** labeled by weight. Borax can lose more than 23 % of its weight due to moisture loss. However, it does not lose volume upon moisture loss, and this property makes possible a method of volume testing based on a density determination in the event that the net weight of the ~~**product**~~ borax does not meet the average or individual package requirements. ~~**This method may be used for audit testing to identify possible short-filling by weight at point-of-pack. Since the density of these commodities can vary at point-of-pack, further investigation is required to determine whether such short-filling has occurred.**~~

(Amended 20XX)

2.4.1. Test Equipment

- ~~**Metal density cup**~~ **Dry measure** with a capacity of 550.6 mL (1 dry pt), 1101 mL (dry quart), 1000 mL (liter)
- Metal ~~**density**~~ funnel with slide-gate and stand

- ~~**Scale or balance having a scale division not larger than 1 g or (0.002 lb),**~~ **A scale that meets the requirements in Chapter 2, Section 2.2. "Measurement Standards and Test Equipment."**
- ~~**Rigid**~~ **S**traightedge or ruler
- **Safety glasses**
- **Gloves**
- **Dust mask**
- **Level (at least 15 cm [6 in] in length)**
- Pan or drop cloth/polyethylene sheeting ~~**suitable**~~ for ~~**holding**~~ **catching** overflow of ~~**density cup**~~ **dry measure**
- **Borax Audit Worksheet**

2.4.2. Test Procedure

Use this procedure only if the sample fails to meet the package requirements in Section 2.3.7. "Evaluate for Compliance."

1. ~~**Follow Section 2.3.1. through 2.3.7. to define the inspection lot, use a "Category A" sampling plan in the inspection; select a random sample, determine tare and package errors and evaluate results.**~~ **Select the package with the lightest gross weight. Fill out Boxes 1 through 3 of the Borax Audit Worksheet.**
2. ~~**If the lot does not comply by weight with the sampling plan requirements (either the average or individual package requirements), select the lightest package, and record the net weight of this package.**~~ **Record the volume declared on the package (Box 4). This volume declaration shall not appear on the principal display panel. Instead, it shall appear on the back, side, or bottom of the package and may read as:**

   Volume _____ mL per NIST Handbook 133

   Note: 1 mL = 1 cm^3

3. Determine the ~~**empty weight of the density cup.**~~ **gross weight of the package (Box 5).**
4. ~~**Place the density cup in the pan and put the funnel on top of the density cup. Close the funnel slide-gate.**~~ **Look up the dry measure used in the following table and record the volume (Box 8)**

Dry Measure	Volume in milliliters
Dry Pint	550.6 mL
Dry Quart	1101 mL
Liter	1000 mL

5. ~~**Pour sufficient commodity into the funnel so that the density cup can be filled to overflowing.**~~ **Determine the empty weight of the dry measure and record the value (Box 9).**

   a) Place the dry measure in the pan or on top of drop cloth/polyethylene sheeting and verify that it is level. Place the funnel on top of the dry measure and close the funnel slide gate.

   b) Pour an adequate amount of borax into the funnel so that the dry measure will be filled to overflowing.

   c) Quickly remove the slide-gate from the funnel, allowing the borax to flow into the dry measure. To ensure that the borax is free-flowing, repeat Steps 5 a, b, and c at least three

times. After the final filling go to Step 5 d.

d) Carefully, without agitating the dry measure, remove the funnel and level off the borax with the straightedge or ruler at a right angle to the rim of the cup, and carefully draw it across the top of the dry measure to leave an even surface. If the surface of the borax is not smooth repeat Steps 5 a, b, c, and d. If the surface of the borax is smooth proceed to Step 6.

6. ~~**Quickly remove the slide gate from the funnel, allowing the commodity to flow into the density cup.**~~ **Determine the gross weight of the filled dry measure and borax (Box 10).**

7. ~~**Carefully, without agitating the density cup, remove the funnel and level off the commodity with the ruler or straightedge. Hold the ruler or straightedge at a right angle to the rim of the cup and carefully draw it back across the top of the density cup to leave an even surface.**~~ **Subtract the empty weight of the dry measure from the gross weight of the dry measure (Box 10 – Box 9) to obtain the net weight of the borax in the dry measure (Box 11).**

8. ~~**Weigh (in pounds) the filled density cup to determine gross weight. Subtract the empty density cup in weight from the gross weight. This will give the net weight of the commodity.**~~ **Determine the tare weight of the package (Box 6).**

9. ~~**Multiply the package net weight (in pounds) found for the package under test by 550.6.**~~ **Determine the net weight of package (Box 7).**

10. ~~**Divide the answer just obtained (Step 9) by the weight of the commodity in the density cup determined in Step 8 above. The result is the net volume of commodity in the package in milliliters.**~~

~~**11. Compare the net volume of the commodity in the package with the volume declared on the package. The volume declaration must not appear on the principal display panel. Instead, it will appear on the back, side of the package and may appear as:**~~

~~**Volume ____ mL per NIST Handbook 133**~~

~~**Note: 1 mL = 1 cm^3**~~

Determine the net volume of the borax by dividing the net weight of the package (Box 7) by the net weight of the borax in the dry measure (box 11) and multiply the result by the volume of the dry measure (Box 8). The result is the net volume of the borax in the package in milliliters (Box 12).

~~**12**~~. If the net volume of ~~**commodity**~~ **borax** in the lightest package equals or exceeds the declared volume on the package, treat the lot as being in compliance based on volume and take no further action. If the net volume of borax in the lightest package is less than the declared volume on the package, further compliance testing will be necessary.

~~**13**~~. Take further steps to determine if the lot was in compliance with net weight requirements at point-of-pack or was short-filled by weight. To determine this, perform a laboratory moisture loss analysis to ascertain the weight of the original borax ~~**product**~~ when it was fully hydrated; obtain additional data at the location of the packager; and/or investigate the problem with the packager of the ~~**commodity**~~ **borax**.

(Amended 20XX)

Borax Audit Worksheet **Use only IF the sample fails the net weight test. Use the lightest package in the sample.**	
1. Product:	**2. Lot Code :**
3. Declared Net Weight on the Package:	
4. Declared Volume on the Borax Package:	
5. Gross Weight of Package:	
6. Tare Weight of Package:	
7. Net Weight of Package:	
8. Volume of Dry Measure - look up the volume of the dry measure in milliliters used to calculate the volume and enter it below: **=_____mL__** **Dry Measures: Dry Pint = 550.6 mL; Dry Quart = 1101 mL; Liter = 1000 mL**	
9. Empty Weight of Dry Measure:	
10. Gross Weight of Dry Measure + Borax:	
11. Net Weight of Borax in the Dry Measure (Box 10 - Box 9 =) :	
12. Net Volume of Borax (Box 7 ÷ Box 11) × Box 8= :	
13. Refer to Step 10 to determine if the sample is in compliance or if further action is required.	

Background/Discussion: See Appendix A, Page L&R-A47.

CWMA Action: Item 260-2
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☒ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

No comments were heard during open hearings, and the committee feels the item is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-3 V Section 3.14. Firewood – Volumetric Test Procedures for Packaged Firewood with a Labeled Volume of 113 L [4ft^3] or Less) and Stacked Firewood sold by the Cord or fractions of a Cord. (See Related Items 232-4 & 260-4)

Source:
NIST Office of Weights and Measures (2016)

Purpose:
Replace ambiguous test procedures with new procedures that will provide improved national uniformity in test results.

Item under Consideration:

3.14. Firewood – (Volumetric Test Procedure for Packaged Firewood with a Labeled Volume of 113 L [4 ft^3]) or Less and Stacked Firewood sold by the Cord or fractions of a Cord.

Unless otherwise indicated, take all measurements without rearranging the wood or removing it from the package. **However,** if the layers of wood are crosshatched or not ranked in discrete sections in the package, remove the wood from the package, re-stack, and measure according **to the procedures described in this section. For boxed firewood, it is the volume of the wood in the box that is determined not the volume of the box.**

3.14.1. Test Equipment ~~Linear Measure. Take all measurements in increments of 0.5 cm ($^3/_{16}$) or less and round up~~

Linear Measurement: the maximum value of graduations on a ruler or tape shall be equal to or less than:

For testing packaged firewood: SI Units - 1 millimeter or for U.S. customary units – $^1/_{16}$ in (0.0625 in)

For testing stacked firewood: SI Units – 0.5 centimeters or for U.S. customary units – $^1/_8$ in (0.125 in)

Other Equipment:

Except where a long tape measure is needed for measuring stacks of wood and unless otherwise noted below, a precision tempered steel ruler should be used for linear measurements. Current calibration certificates issued by a NIST recognized or accredited laboratory should be available for all measuring devices.

- **To test boxes of firewood, use a straightedge and a 150 mm (6 in) tempered steel pocket ruler to measure the box headspace. A rigid 610 mm (24 in) tempered steel ruler is required to measure piece length and the dimensions of the box.**

- **To test bundles of firewood, use a rigid 610 mm (24 in) tempered steel ruler to measure typical piece length. If the circumference based auditing method is to be conducted, a precision 610 mm (24 in) diameter (pi) tape or flexible steel tape with 1 mm ($^1/_{16}$ in) graduations may be used to approximate the package volume for screening and audit purposes.**

For testing stacks of firewood, a precision tape or long tape measure are used. For testing bundles and bags of firewood, the following equipment and materials are used in addition to the linear measures listed above:

- Binding Straps - **Straps with ratchet type closures are easily tightened to secure the wood tightly.** The binding straps are used to hold wood bundles together if the bundles need to be removed from the package/wrapping material.

- ~~**Tracing Paper**~~

- ~~**Graduated template in square centimeters or square inches**~~

- **Graph Paper - 279.4 mm × 431.8 mm (11 in × 17 in) with 0.5 centimeter or ¼ inch squares. This paper is used for tracing and calculating the areas of the ends of a bundle of firewood. Prior to using any graph paper use a calibrated ruler to verify the dimensions of squares at several random points across the page.**

- **Ruler – 300 mm (12 in) with 0.5 cm ($^1/_4$ in) graduations. This ruler is used with the graph paper to calculate the area of the bundle ends.**

(Amended 20XX)

3.14.2. Test Procedures

General Instructions

1. **When testing packaged firewood follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.**

2. **Measurements shall be read to the smallest graduation on the ruler or tape. Round any value that falls between two graduations up to the higher value except when making headspace depth measurements in the test procedure for boxes where a value falling between two graduations is rounded down.**

3. **Samples for Length – Use Table 1. "Minimum Number of Pieces to be Measured for Length" to determine the minimum number of pieces to measure to determine the average length of the firewood pieces in a package or stack.**

Table 1. Minimum Number of Pieces to be Measured for Length		
	Volume	**Minimum Number of Pieces to be Measured for Length***
1.	**Packaged Firewood 453 L (16 cu ft) [$^1/_8$ cord] or less**	
a.	**For packages with 12 pieces or less**	**All**

b.	**For packages with 13 to 50 pieces**	**At least 12 pieces**
c.	**For packages with more than 50 pieces**	**At least 24 pieces**
2.	**stacked wood**	**At least 12 pieces for each ½ cord or fraction thereof**

***Note: While the packages of firewood to be included in the sample must be selected using the random sampling techniques described in NIST HB133, Section 2.3.4. "Random Sample Selection" those techniques are not used in selecting the individual pieces for measurement of length. Since the packages were selected at random the assumption is made that the length of any piece selected for measuring is generally representative of the other pieces that the packer cut or selected for inclusion in the package under inspection. When selecting pieces of wood for measurement, take them from different locations in the package or stack so they are representative of the total amount of wood under test.**

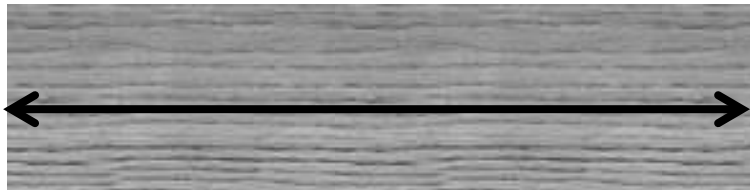
4. Measuring Procedures for Length – Use the instructions and graphics in Table 2. "Determining Piece Length" when measuring the length of pieces to determine the average length of a piece of firewood based on its shape in a package or stack. If a piece of wood does not appear to fall within the examples shown, measure it as if it were an irregular shape and take three or more measurements and average them.

Table 2. Determining Piece Length

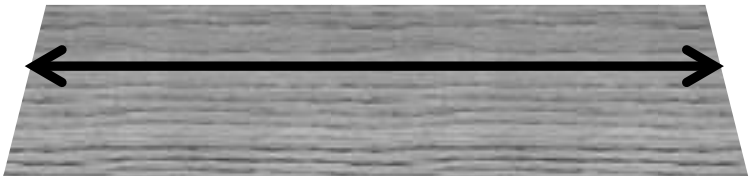
a) Uniform Shapes

Errors in the length measurement can result in a significant volume errors especially with the small quantities typical of packaged wood. When the pieces are generally cut in a uniform manner a single measurement along the center line of the logitudinal axis is used to determine piece length. Take the measurement along a straight line between two points over solid wood.

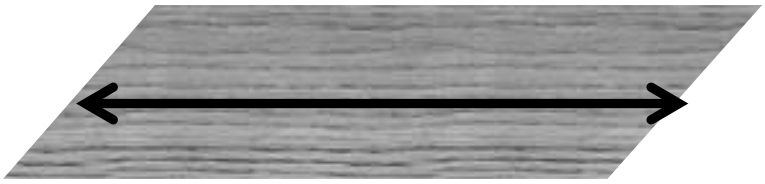
(i). Most wood pieces are cut perpendicular to their longitudinal axis so one measurement taken from the face of one end to the face of the other end will provide an accurate length determination.



(ii). On pieces of wood with "reverse bias" and "bias" end cuts estimate where the center-line of the piece is and then measure to these points as shown below. The intent of this measurement is determine an "average" length that is assumed to fall along the center line of the piece. The top piece is an example of a "reverse" bias cut.



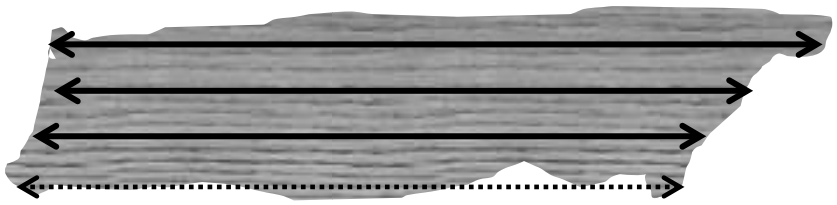
The bottom piece is an example of a bias cut



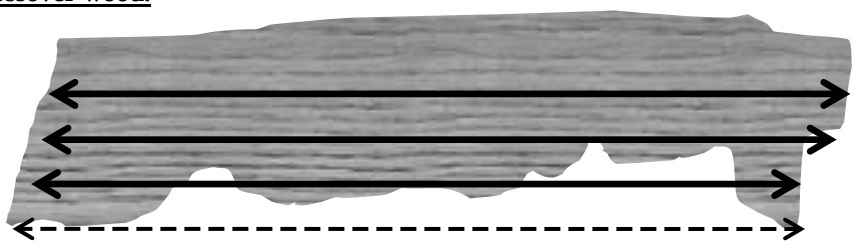
b. Irregular Shapes

When the pieces have irregular shapes, cuts or shattered ends it is necessary to take at least three measurements and average the results to obtain the length of the piece. Take the measurements along a straight line between two points which cover solid wood that appear to be the shortest and longest dimensions and a third measurrement at or near the center-line of the piece.

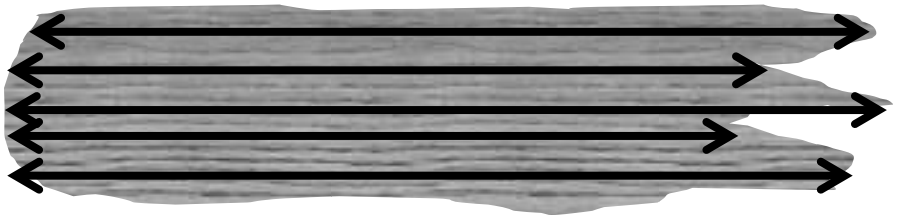
(iii) This is piece has a bias cut end on the left and an irregular end on the right. The measurements are taken at at the longest and shortest points where the line crosses over solid wood. The lowest measurement (dotted line over the air space) is not used because it does not cross wood. Only the three upper measurements are used to calculate the average length for this piece unless additional measurements across solid wood are taken.



(iv). This is a piece with a bias cut on the left and irregular end on the right. Note how the measurements are taken at the longest and shortest points where the line crosses over solid wood. The lowest measurement (the dotted line) would not be used because it does not crossover wood.



(v). This piece of wood has a "shattered end." Shattering occurs when wood is stressed beyond its breaking point and the end is not trimmed. The inspector will take additonal measurements to account at the shortest point of the voids and longest points at the extensions. In this example, five measurements were taken and averaged to account for the voids and extensions.



a. Boxed Firewood

Note: A packer may place wrapped bundles of firewood in boxes for ease of handling as well as for display on retail store shelves. When a box contains a bundle of wrapped firewood the volume of the bundle is verified using the test procedure in c. for bundles and bags.

1. Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.
2. Open the box to determine the average height of the **stack of** wood.
3. Measure the internal height of the box **[See Figure 1. Measuring Internal Height of Box]**

Figure 1 – Measuring Internal Height of Box

4. **Determining the Height of the Wood - Take at least five measurements spaced at intervals along each end and center of the wood stack (record as "d_1, d_2. . .etc. Take at least 15 measurements). [See Figure 2.-Top View of Box – Measure at cross bars and Figure 2.a. – Examples of the Headspace Measurement.] Measure from the bottom of a straightedge placed across the top of the box to the highest point on the wood (round the measurements down to the nearest 0.5 cm [$^1/_8$ in] or less). Calculate the average height of the stack by averaging these measurements and subtracting the result from the internal height of the box using the following formula:**

Average Height of Wood Stack =

(Internal Height of Box) − (Sum of Depth Measurements ÷ Number of Measurements)

Figure 2. Top View of Box – Measure at cross bars.

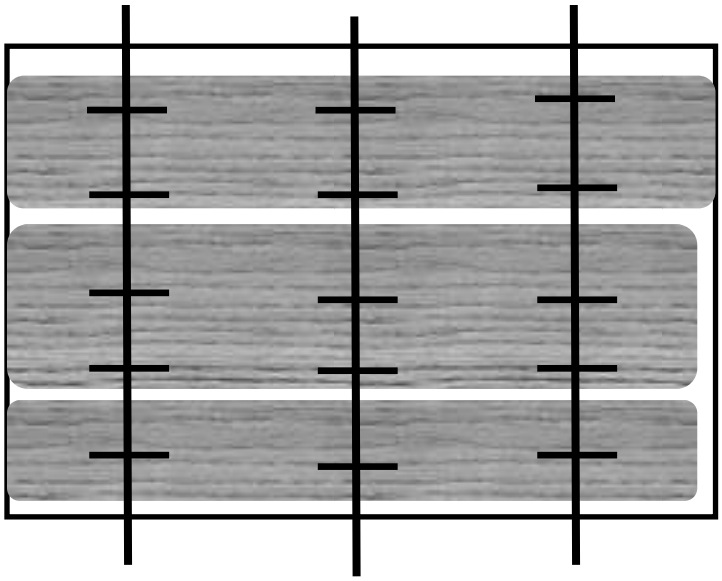


Figure 2.a. – Examples of the Headspace Measurement

~~3~~5. Width of Wood Stack - Open the box and measure the width of the wood stack. Take at least five measurements at intervals spaced along the length of the stack. Average these values to obtain an Average Width of Wood Stack. [See Figure 3. – Top View of Box – Measure at crosslines and Figure 3.a. – Measuring the Width of the Firewood in a Box] You are measuring the width of the wood, not the width of the box. ~~Determine the average width of the stack of wood in the box by taking measurements at three places along the top of the stack. Measure the inside distance from one side of the box to the other on both ends and in the middle of the box. Calculate the average width.~~

~~*Average Width = $(W_1 + W_2 + W_3) \div (3)$*~~

Average Width of Wood Stack = $(W_1 + W_2 + W_3 + W_4 + W_5) \div 5$

Figure 3. Top View of Box – Measure at

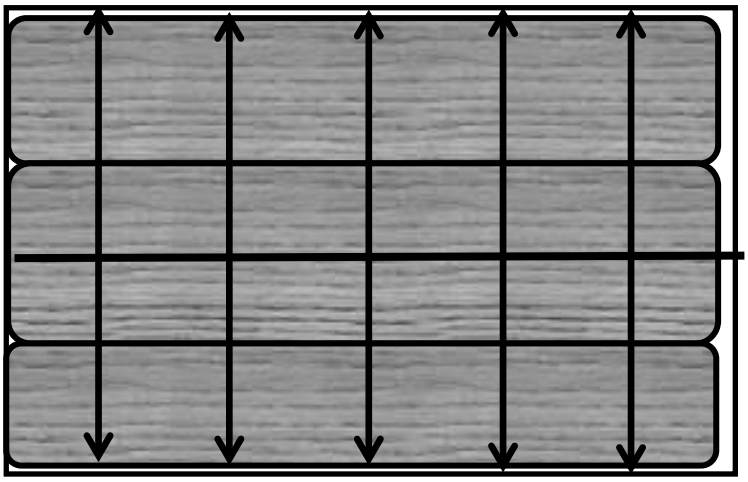


Figure 3.a. – Measuring the Width of the Firewood in a Box

~~8~~6. **Individual Piece Length** – ~~**To determine the average length of the piece of wood**~~, Remove the wood from the **package and measure the length of each piece of wood (see Table 1. "Minimum Number of Pieces to be Measured for Length." If the piece of wood is uniform in shape take at least 1 point-to-point measurement along the center line of the longitudinal axis (see Table 2. "Determining Piece Length – (a) Uniform Shapes" for examples) and record the value.** ~~**box and select the five pieces with the greatest girth. Measure the length of each of the five pieces from center-to-center. Calculate the average length of the five pieces.**~~

~~*Average Length = $(L_1 + L_2 + L_3 + L_4 + L_5) \div (5)$*~~

If the wood is irregularly shaped (see Table 2. "Determining Piece Length – (b) Irregular Shapes" for examples) take at least three measurements along a straight line between two points crossing solid wood that appear to be the shortest and longest dimensions, and a third at or near the center-line of the piece. Calculate the average of the measurements to obtain the Average Individual Piece Length and record the length of the piece.

To determine Average Individual Piece Length (AIPL) of irregularly shaped pieces:

$$AIPL = (L_1 + L_2 + L_3) \div 3$$

After all pieces are measured, total the lengths and divide that total by the number of samples to obtain the Average Piece Length for the package.

To determine Average Piece Length (APL) for the package:

$$APL = (L_1 + L_2 + L_3 + L_n) \div (\text{Number of Pieces in Sample})$$

~~6~~.**7. Use the average values for height, width, and length to** calculate the volume of wood ~~within~~ in the box.

Volume in liters = (height in ***mm*** ~~*cm*~~ *× width in* ~~*mm*~~ ~~*cm*~~ *× length in* ***mm*** ~~*cm*~~*) ÷* ***1,000,000*** ~~*(1000)*~~

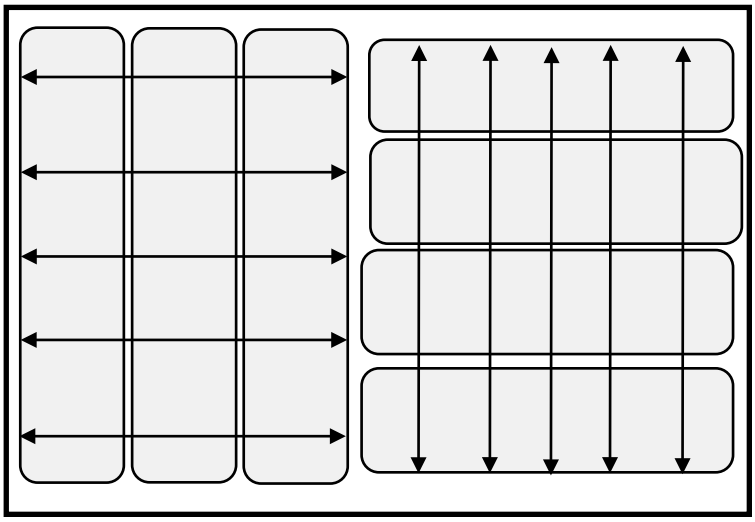
Volume in cubic feet = (height in inches × width in inches × length in inches) ÷ ~~*(1728)*~~

Note: 1 Cubic Foot = 1728 in^3, 1 Cubic Liter – 1,000,000 L^3

~~7.~~**8.** For boxes of wood that are packed with the wood ranked in two discrete sections perpendicular to each other, calculate the volume of wood in the box as follows: (1) determine the average height, width, and length as in 1, 2, and 3 above for each discrete section, compute total volume, and (2) total the calculated volumes of the two sections. Compute total volume by adding Volume 1 (V_1) and Volume 2 (V_2) according to the following formula.

$$Total\ Volume = V_1 + V_2$$

This illustration shows how the width of the firewood is measured when two perpendicular stacks of firewood are in a box. The height, width and length of the pieces are used to determine the volume of the separate stacks which are then added together to obtain the volume of wood in the package.



b. ~~Crosshatched~~ Stacked Firewood

Bulk deliveries of firewood are typically required by law or regulation to be on the basis of Cord measurement. The "Cord" is defined as the amount of wood contained in a space of 128 cubic feet when the wood is ranked and well stowed. The standard dimensions for a Cord of wood are 4 ft × 4 ft × 8 ft but wood may be stacked and measured any configuration. See Figure 4. for an illustration of how a Cord may be stacked.

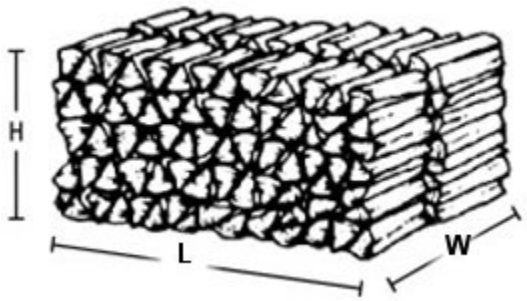


Figure 4. A Cord - 4 ft (Height) × 4 ft (Width) × 8 ft (Length)

1. ~~**Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.**~~

2. ~~**Stack the firewood in a ranked and well-stowed geometrical shape that facilitates volume calculations (i.e., rectangular).**~~

3. ~~**Determine the average measurements of the stack:**~~

~~**Note: The number of measurements for each dimension given below is the minimum that should be taken.**~~

- ~~**Height: Start at one end of the stack; measure the height of the stack on both sides at four equal intervals. Calculate and record the average height.**~~

- ~~**Length: Start at the base of the stack; Measure the length of the stack in four equal intervals. Calculate and record the average length.**~~

- ~~**Width: Select the five pieces with the greatest girth. Measure the length of the pieces, calculate and record the average piece length.**~~

i. Wood delivered to a consumer: if a delivery ticket or sales receipt is available (these are often required by state regulation) review the delivery ticket or sales receipt and determine the quantity delivered. Identify the wood to be measured and verify that the wood delivered was not mixed with wood that was already present at the location. Also, determine if the delivery was partial or complete (i.e., no additional deliveries are expected) and if any of the delivered wood has been used.

ii. If necessary stack the firewood in a ranked and well-stowed geometrical shape that facilitates volume calculations (i.e., rectangular). Any voids that will accommodate a piece of wood in the stack shall be deducted from the measured volume.

Note: The length measurements of the individual pieces may be made during the stacking process.

iii. Determine the average measurements of the stack: the number of measurements for each dimension given below is the minimum that should be taken.

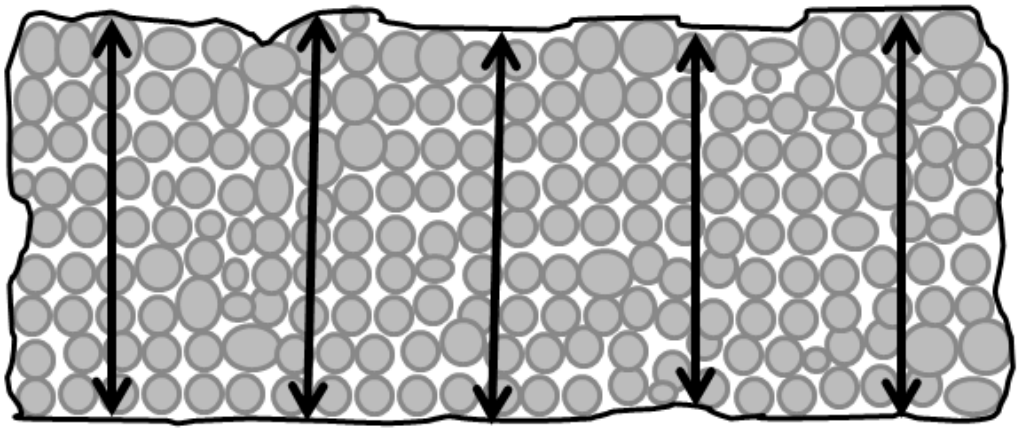
1. Height of Stack: A height measurement is the vertical distance between the top edge of a piece of wood in the top row and the bottom edge of a piece of wood on the bottom row. Start at one end of the front of the stack; measure the height of the stack at 5 equally spaced intervals (e.g., approximately 18 to 24 in) along the length of stack. If the length of the stack is over 10 ft take additional height measurements at equally spaced intervals along its length. If the height of the stack varies significantly (e.g., the pieces are stacked in peaks along the length of the stack) take additional height measurements. Calculate and record the average height for the front of the stack. Repeat the same height measurement procedure along the back of the stack and then calculate and record the average height for the back of the stack. Calculate the average height of the stack by averaging the two results. If the wood to be measured is stacked on a slope, take the height measurements at right-angles to the slope.

$$Average\ Height_{Front} = (h_1 + h_2 + h_3 + h_4 + h_5) \div 5$$

$$Average\ Height_{Back} = (h_1 + h_2 + h_3 + h_4 + h_5) \div 5$$

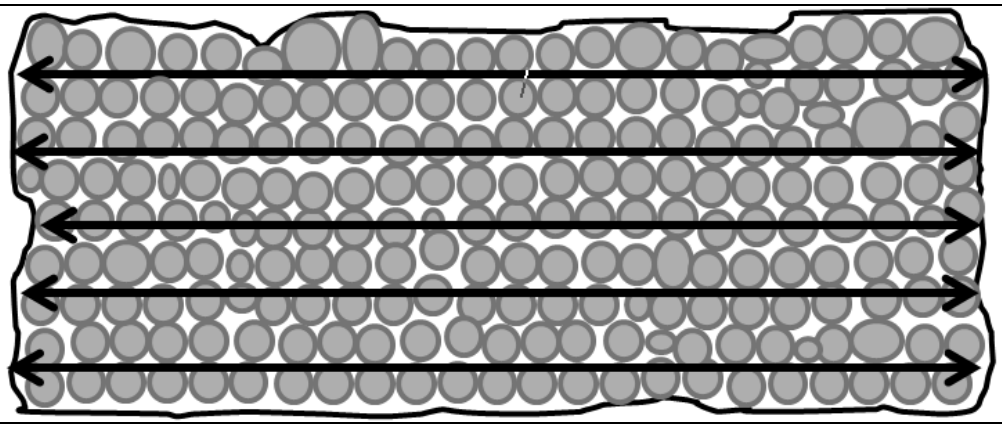
$$Average\ Height\ of\ Stack = Average\ Height_{Front} + Average\ Height_{Back} \div 2$$

Average Height Measurement (Front and Back)



2. Length of Stack: A length measurement is the horizontal distance between the left edge of a piece of wood on the left side of the stack and the right edge of a piece of wood on the opposite side of the stack. Start at either side of the stack; Measure the length of the stack in five equal intervals. Calculate and record the average length. If the length of the stack varies significantly (e.g., the ends of the stack bulge out along the height of the stack) take additional measurements.

Average Length Measurement (Front and Back)



Calculate and record the average length for the front of the stack. Repeat the length measurement procedure along the back of the stack and then calculate and record the average length for the stack.

$$Average\ Stack\ Length_{Front} = (l_1 + l_2 + l_3 + l_4 + l_5) \div 5$$

$$Average\ Stack\ Length_{Back} = (l_1 + l_2 + l_3 + l_4 + l_5) \div 5$$

$$Average\ Stack\ Length = (Average\ Length_{Front} + Average\ Length_{Back}) \div 2$$

3. Stack Width is Equal to the Average Length of Pieces that Make up the Width of the Stack – Refer to Table 1. "Minimum Number of Pieces to be Measured for Length" to determine how many pieces are to be measured. This dimension is calculated by averaging the length of individual pieces of wood in the stack. The wood can be stacked in a single or multiple rows. If the wood is stacked in several rows deep select a representative random sample from each row. If the wood needs to be stacked, measure the pieces prior to stacking. If the wood is already stacked, select the pieces at random by moving up and down and across the stack. If it is necessary to remove the wood from a stack to measure the individual piece lengths, always complete the height and length measurements before disturbing the stacked wood.

i. Individual Piece Length - Table 1. "Minimum Number of Pieces to be Measured for Length" requires that at least 12 pieces of wood be measured for every ½ cord estimated to be in the stack.

- **If the wood is uniform in shape take at least 1 point-to-point measurement along the center line of the longitudinal axis (see Table 2. "Determining Piece Length – (a) Uniform Shape" for examples) and record the value.**

- **If the wood is irregularly shaped (see Table 2. "Determining Piece Length – (b) Irregular Shape" for examples) take at least three measurements along a straight line between two points crossing solid wood that appear to be the shortest and longest dimensions, and a 3rd at or near the center-line of the piece. Calculate the average of the measurements to determine Average Individual Piece Length (AIPL) of irregularly shaped pieces:**

$$AIPL = (L_1 + L_2 + L_3) \div 3$$

After all pieces are measured total the lengths and divide the total by the number of samples to obtain the Average Piece Length for the stack. To determine Average Piece Length (APL) for the package:

$$APL = (L_1 + L_2 + L_3 + \ldots L_n) \div (Number\ of\ Pieces\ in\ Sample)$$

4. Calculate Volume:

Volume in liters = (Avg. Height [cm] × Avg. Width [cm] × Average Piece Length [cm]) ÷ 1000

Volume in cubic feet = (Avg. Height [in] × Avg. Width [in] × Average Piece Length [in]) ÷ 1728

5. Supplemental Measurement of Stacked Wood

1. Volume of a Triangle Stack of Wood – To calculate the volume of a triangular stack take at least 2 measurements (one each side) of the height and length, and 5 measurements of the width of the stack and average each result. Use this formula to calculate the volume.

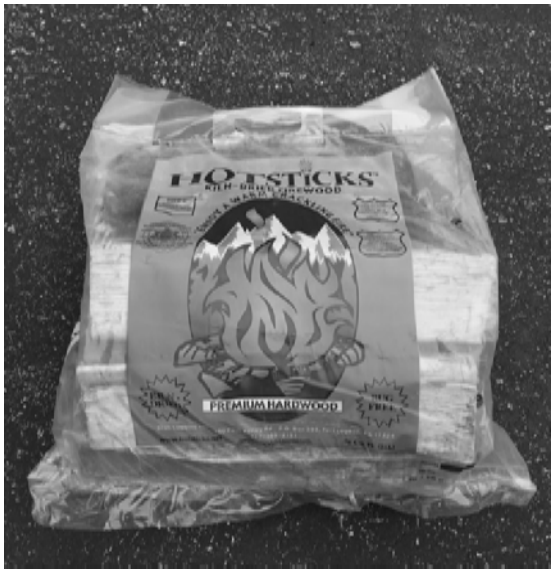
Volume of Triangular Stack = (Avg. Height × Avg. Length of Base × Avg. Width) ÷ 2

The volume of the triangular stack may be added to the volume of other stacks.

Figure 5. Triangular Stack

c. Bundles and Bags ~~of firewood~~

Figure 6. Firewood Bundle and Bag



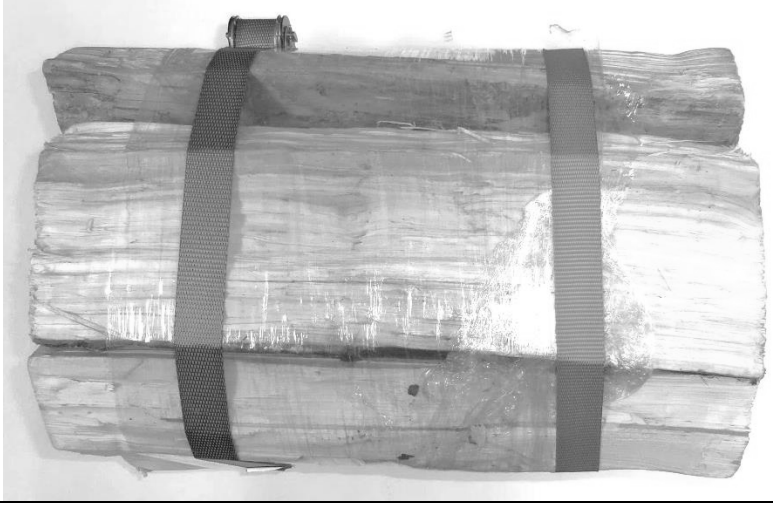
1. Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.

Test Note: To test a bag of firewood remove the wood from the bag and form a compact bundle and strap it as shown in Figure 7 and follow the procedures for measuring a bundle.

2. Average Area of **Bundle** Ends: ~~**secure a strap around each end of the bundle or bag of wood to prevent movement during testing and to provide a definite perimeter. Use two or more straps to secure the wood**~~

a. Place a binding strap around each end of the bundle (or bag of wood) to prevent movement of the pieces during test. Place the straps approximately 10 cm (4 in) from the ends (See Figure 7- Bundle with Straps placed in 10 cm (4 in)) and tighten them securely.

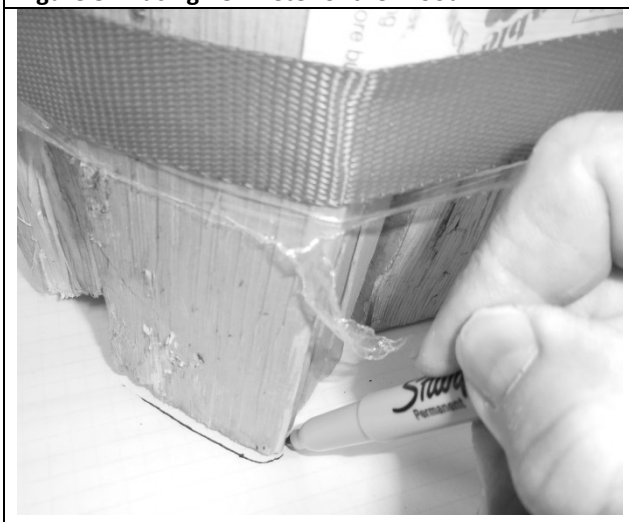
Figure 7. Bundle with Straps placed 10 cm (4 in)

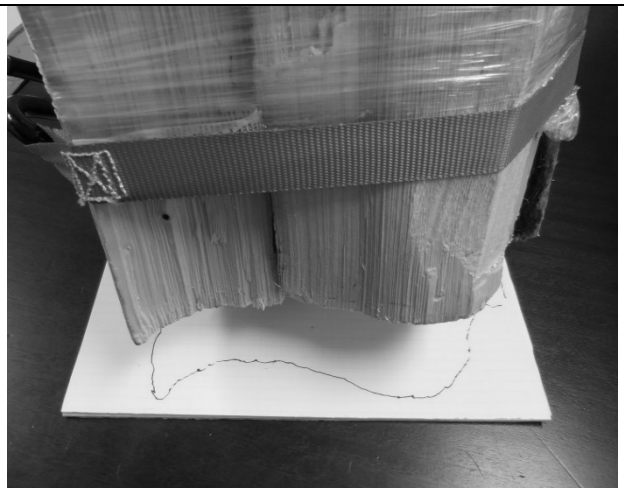


Notice: Do not use shrink wrap or packaging to define the perimeter because it can result in inaccurate measurements. If necessary, trim the shrink wrap back from the ends to allow for the bundle to sit flat on the graph paper.

b. Set one end of the bundle or bag on graph paper large enough to cover the end completely. Draw a line around the outside of the wood perimeter on the graph paper using a sharp point marking pen (see Figure 8. Tracing Perimeter of the Wood).

Figure 8. Tracing Perimeter of the Wood





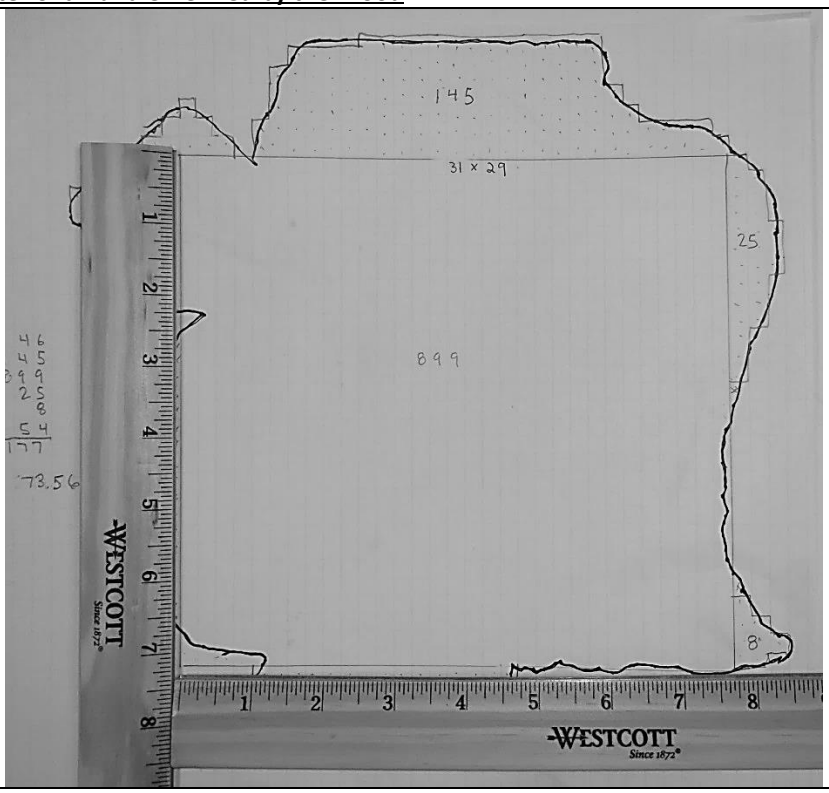
c. Count the number of square centimeters or square inches that are enclosed within the perimeter line. Determine portions of square centimeters or square inches not completely within the perimeter line to the nearest one-quarter square inch. Repeat this process on the opposite end of the bundle or bag.

Examples

1. Using ¼ square inch graph paper and a ruler with ¼ inch graduations, large blocks of the area within the perimeter are quickly measured. This is done by using the ruler to determine the length and then width of the area which are each divided by 0.25 (¼ in) {or multiply 4 × 7.25} to obtain the number of blocks in that dimension. These two values are multiplied to obtain the total number of blocks enclosed in the area. The areas in the partially covered blocks are rounded up or down to the nearest ¼ inch by enclosing the whole square and placing an x in the partial spaces which are included in the blocks where the area has been rounded up. One reason for squaring the graph squares is to simplify the counting.

Use a ruler to count graph squares: the rulers in Figure 9. "Perimeter of a Bundle Defined by the Wood" indicate the dimensions of the square are $7^1/_4 \times 7^3/_4$ in. To obtain the number of blocks divide 7.25 by 0.25 {or multiply 4 × 7.25}. to obtain the number of blocks along the left hand line (7.25 ÷ 0.25 = 29.) The bottom line measures $7^3/_4$ in so 7.75 ÷ 0.25 = 31 {or 4 × 7.75 = 31}. Multiple the two values to obtain the total number of squares within the area which is: 29 × 31 = 899. To obtain square inches divide 899 by 16 (the number of ¼ inch graph squares in a square inch) or 899 ÷ 16 = for area of 56.19 in^2 for this area of the bundle.

Figure 9– Perimeter of a Bundle Defined by the Wood



Continue to divide the area into blocks to make counting easier and then count the blocks in the remaining areas and sum these values to obtain the total. See the example in Figure 9. "Perimeter of a Bundle of Defined by the Wood." The total number of blocks was calculated by adding: 46 + 145 + 899 + 25 + 8 + 54 = 1177 squares ÷ 16 = 73.56 square inches for this end of the bundle.

Calculate the Average Area: Average Area = ($Area_1$ + $Area_2$) ÷ 2

d. Average length of the pieces of wood: ~~**select the five pieces with the greatest girth and measures the length of the pieces. Calculate the average length of the pieces of wood.**~~ **Individual Piece Length - Remove the wood from the package and measure the length of each piece of wood (see Table 1. "Minimum Number of Pieces to be Measured for Length" for the number of pieces to be measured.) If the piece of wood is uniform in shape take at least 1 point-to-point measurement along the center line of the longitudinal axis (see Table 2. Determining Piece Length - (a) Uniform Shapes for examples) and record the value.**

~~***Average Length = (L_1 + L_2 + L_3 + L_4 + L_5) ÷ 5***~~

If the wood is irregularly shaped (see Table 2. Determining Piece Length - (b) Irregular Shapes for examples) take at least three measurements along a straight line between two points crossing solid wood that appear to be the shortest and longest dimensions, and a 3rd at or near the center-line of the piece. Calculate the average of the measurements to obtain the Average Individual Piece Length and record the length of the piece.

To determine Average Individual Piece Length (AIPL) of irregularly shaped pieces:

AIPL = (L_1 + L_2 + L_3) ÷ 3

Note: If length measurements are made in millimeters divide the total by 10 to obtain centimeters.

After all pieces are measured, total the lengths and divide that total by the number of samples to obtain the Average Piece Length for the package.

To determine Average Piece Length (APL) for the package:

$$APL = (L_1 + L_2 + L_3 + \ldots L_n) \div (\text{Number of Pieces in Sample})$$

3. Use the average values for height, width, and length to calculate the volume of wood in the bundle or bag.

f. Calculate Volume:

$$\text{Volume in liters} = (\text{Average Area } [cm^2] \times \text{Average Length } [cm]) \div 1000$$

$$\text{Volume in cubic feet} = (\text{Average Area } [in^2] \times \text{Average Length } [in]) \div 1728$$

Note: 1 Cubic Foot = 1728 in^3, 1 L^3 = 1000 cm

3.14.3. Evaluation of Results

Follow Section 2.3.7. "Evaluate for Compliance" to determine lot conformance.

Note: Specified in Appendix A, Table 2-10. "Exceptions to the Maximum Allowable Variations for Textiles, Polyethylene Sheeting and Film, Mulch and Soil Labeled by Volume, Packaged Firewood **and Stove Wood Labeled by Volume**, and Packages Labeled by Count with 50 Items or Fewer."

Table 2-10. Exceptions to the Maximum Allowable Variations for Textiles, Polyethylene Sheeting and Film, Mulch and Soil Labeled by Volume, Packaged Firewood and Stove Wood Labeled by Volume, and Packages Labeled by Count with 50 Items or Fewer, and Specific Agricultural Seeds Labeled by Count.

	Maximum Allowable Variations (MAVs)
Packaged Firewood and Stove Wood Labeled by Volume	**25 % of labeled quantity** **Note: Use Table 2-5 "Maximum Allowable Variations for Packages Labeled by Weight" for packaged artificial and compressed fireplace logs and stove wood pellets and chips labeled by weight.**

Field Audit Procedure

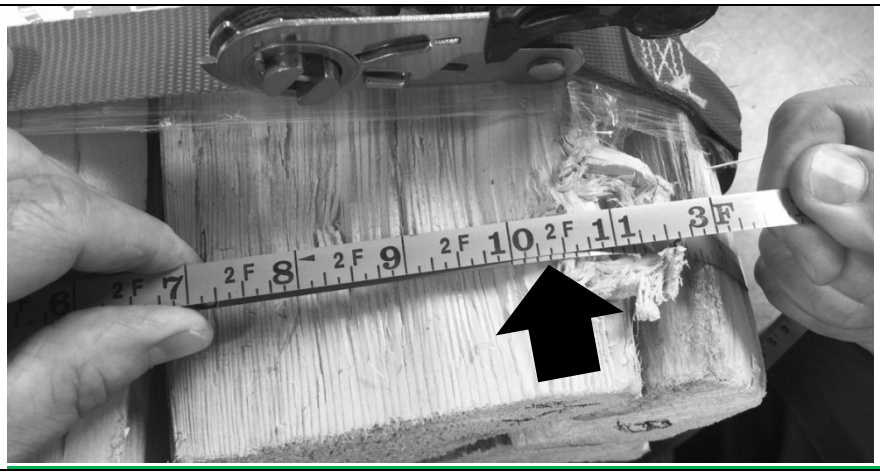
A circumference estimating method can be used for quickly identifying potentially short measure bundles. The procedure is based on measuring the circumference of the package ends and calculating the areas without using graph paper. It should be used for audit purposes only and should not be used for official inspection.

Circumference Estimating Method

1. After the bundle or bag is secured, use a flexible measuring tape to measure the circumference near each end of the bundle or bag of firewood. Using one movement extend the measuring tape around the end of the bundle or bag to obtain its circumference. The tape must be pulled tight. If the wood at the ends of a bag or

bundle is not accessible due to plastic wrapping, then wrapping should be moved away from the ends so the measuring tape can be placed tightly around the bundle so circumference measurements can be taken.

Figure 13. Strapping the End of a Bundle



At the Point of the Arrow the Circumference of the Bundle is 2 ft 10 in (34 in)

Note: The tape used has a blank end so the "0" line is visible immediately under the 10 in mark.

2. Calculate the Average Circumference:

$$\textit{Average Circumference} = (\textit{circumference}_1 + \textit{circumference}_2) \div 2$$

For example: If $circumference_1$ is 34 in and $circumference_2$ is 33.75 in then:

$$\textit{Average Circumference: } 34 + 33.75 \div 2 = 33.875 \textit{ in}$$

3. Calculate the radius

$$\textit{radius} = \textit{Average Circumference} \div 2\pi$$

Where: π = 3.1415

For example: ***radius = 33.875 ÷ (2 × π or 6.283) = 5.39 in***

4. Calculate the *Average Area*

Average Area = πr²

For example: ***Average Area = 3.1415 × 5.39² (or 29.06) = 91.3 in²***

5. Calculate the Average Length of the Pieces:

Average length of the pieces of wood - Measure the length of several pieces of wood in the bundle or bag. Measurements are to be taken from center to center at the end of each piece.

Then calculate the average:

Average length = sum of the length of all pieces ÷ number of pieces

6. Calculate Volume:

Volume in liters = (Average area [cm²] x Average Length [cm]) ÷ 1000

Volume in cubic feet = (Average Area [in²] x Average Length [in]) ÷ 1728

For Example: assume the Average Length of the Pieces is 16 in and Average Area is 91.3 in²

Bundle Volume = 91.3 in² × 16 in = 1460 in³ or 0.84 ft³

If results indicate that the sample fails conduct further testing using the reference test procedure for bundles and bags. Do not take any legal action based solely on this audit procedure.

Background/Discussion: See Appendix A, Page L&R-A47.

CWMA Action: Item 260-3
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The proposal is fully developed and ready for voting status. A NIST technical advisor recommended a six-month extension on the implementation date (amend to July 1, 2017) if this passes to allow the industry to change its methods and procedures to ensure they meet the volume statement and correct labels based on the new test procedures. The NIST technical advisor indicated NIST would send out a press release to industry if this item passes.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☒ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

No comments were heard during open hearings. NIST technical advisor recommended a six-month extension on the implementation date (amend to July 1, 2017) if this passes to allow the industry to change its methods and procedures to ensure they meet the volume statement and correct labels based on the new test procedures. The NIST technical advisor indicated NIST would send out a press release to industry if this item passes. The committee feels this item is fully developed and ready for voting status with the recommended implementation date change.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-4 W Section 3.14. Firewood – Volumetric Test Procedures for Packaged Firewood with a Labeled Volume of 113 L [4ft^3] or Less) and Stacked Firewood sold by the Cord or fractions of a Cord. (See Related Items 232-4 & 260-3)

Source:
California HotWood, Inc. (2016)

Purpose:
To provide a more uniform and concise method for measuring packaged firewood, an inherently irregular and challenging material.to measure, and to clarify existing procedures.

Item under Consideration:
Amend the NIST Handbook 133 as follows:

3.14. Firewood –Volumetric Test Procedure for Packaged Firewood with a Labeled Volume of 113 L [4 ft^3] or Less)

Unless otherwise indicated, take all measurements without rearranging the wood or removing it from the package. If the layers of wood are crosshatched or not ranked in discrete sections in the package, remove the wood from the package, re-stack, and measure accordingly.

3.14.1. ~~Test Equipment Linear Measure. Take all measurements in increments of 0.5 cm ($^3/_{16}$ in) or less and round up.~~

- ~~**Binding Straps. Binding straps are used to hold wood bundles together if the bundles need to be removed from the package/wrapping material.**~~
- ~~**Tracing paper**~~
- ~~**Graduated template in square centimeters or square inches**~~

Test equipment needed:

A. BOXED FIREWOOD

1. **Straight Edge**
2. **Linear Tape Measure**

B. CROSSHATCHED FIREWOOD

1. **Measuring Tape**

C. BUNDLES AND BAGS OF FIREWOOD

1. **Binding Straps – Two binding straps, 1 to 2 inches wide with connecting buckles and long enough to easily encircle the Bundle or Bag to secure the wood during testing.**
2. **Flexible Measuring Tape**

3.14.2. Test Procedures

a. Boxed Firewood

1. Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.

   Open the box and if the box contains a bundle or bag of firewood remove the bundle or bag and calculate the volume in accordance with Section C (Bundles and Bags of Firewood).

2. Open the box to determine the average height of wood within the box; measure the internal height of the box. Take three measurements (record as "d_1, d_2. . .etc.") along each end of the stack. Measure from the bottom of a straightedge placed across the top of the box to the highest point on the two outermost top pieces of wood and the center-most top piece of wood. Round measurements down to the nearest 0.5 cm ($^1/_8$ in). If pieces are obviously missing from the top layer of wood, take additional height measurements at the highest point of the uppermost pieces of wood located at the midpoints between the three measurements on each end of the stack. Calculate the average height of the stack by averaging these measurements and subtracting from the internal height of the box according to the following formula.

$$\textit{Average Height of Stack} = \textit{(Internal Height of Box)} - \textit{(sum of measurements)} \div \textit{(number of measurements)}$$

3. Determine the average width of the stack of wood in the box by taking measurements at three places along the top of the stack. Measure the inside distance from one side of the box to the other on both ends and in the middle of the box. Calculate the average width.

$$\textit{Average Width} = (W_1 + W_2 + W_3) \div (3)$$

4. To determine the average length of the pieces of wood, remove the wood from the box and select the five pieces with the greatest girth. Measure the length of each of the five pieces from center-to-center. Calculate the average length of the five pieces.

$$\textit{Average Length} = (L_1 + L_2 + L_3 + L_4 + L_5) \div (5)$$

5. Calculate the volume of the wood within the box. Use dimensions for height, width, and length.

Volume in liters = (height in cm × width in cm × length in cm) ÷ (1000)

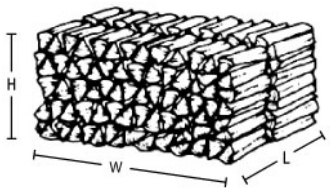
Volume in cubic feet = (height in inches × width in inches × length in inches) ÷ (1728)

6. For boxes of wood that are packed with the wood ranked in two discrete sections perpendicular to each other, calculate the volume of wood in the box as follows: (1) determine the average height, width, and length as in 1, 2 and 3 above for each discrete section, compute total volume, and (2) total the calculated volumes of the two sections. Take the width measurement for Volume 2 (V_2) from the inside edge of the box adjacent to V_2 to the plane separating VR_1 and V_2. Compute total volume by adding Volume 1 (V_1) and Volume (V_2) according to the following formula.

$$Total\ Volume = V_1 + V_2$$

b. Crosshatched Firewood

Figure 3-3. Stacked Firewood



1. Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.

2. Stack the firewood in a ranked and well-stowed geometrical shape that facilitates volume calculations (i.e., rectangular).

3. Determine the average measurements of the stack:

Note: The number of measurements for each dimension given below is the minimum that should be taken.

- Height: Start at one end of the stack; measure the height of the stack on both sides at four equal intervals. Calculate and record the average height.
- Length: Start at the base of the stack; Measure the length of the stack in four equal intervals. Calculate and record the average length.
- Width: Select the five pieces with the greatest girth. Measure the length of the pieces, calculate and record the average piece length.

4. Calculate Volume:

Volume in liters = (Avg. Height [cm] × Avg. Width [cm] × Avg. Length in [cm]) ÷ 1000

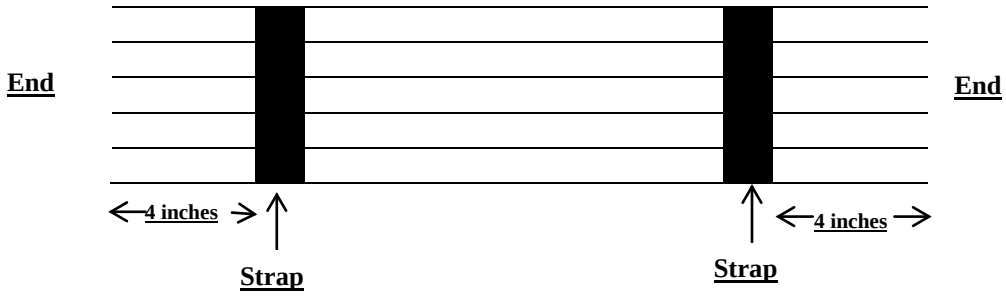
Volume in cubic feet = (Avg. Height [in] × Avg. Width [in] × Avg. Length [in]) ÷ 1728

c. Bundles and Bags of Firewood

Figure 3-4. Bundle of Firewood

- Follow Section 2.3.1. "Define the Inspection Lot." Use a "Category A" sampling plan in the inspection; and select a random sample.

- Average area of ends: secure a strap around each end of the bundle or bag of wood to prevent movement during testing ~~**and to provide a definite perimeter. Use two or more straps to secure the wood**~~. **Each strap is to be placed approximately 4 inches from each end of the Bundle or Bag. See Diagram.**



- ~~**Set one end of the bundle or bag on tracing paper large enough to cover the end completely. Draw a line around the perimeter of the bundle or bag on the tracing paper.**~~

- ~~**Transfer the tracing paper to a template graduated in square centimeters or square inches. Count the number of square centimeters or square inches that are enclosed within the perimeter line. Estimate portions of square centimeters or square inches not completely within the perimeter line to the nearest one-quarter square inch.**~~

- ~~**Repeat this process on the opposite end of the bundle or bag.**~~

- ~~**Calculate the Average Area:**~~

~~$$Average\ Area = (Area\ 1 + Area\ 2) \div 2$$~~

- ~~**Average length of the pieces of wood – select the five pieces with the greatest girth and measure the length of the pieces. Calculate the average length of the pieces of wood:**~~

~~$$Average\ Length = (L_1 + L_2 + L_3 + L_4 + L_5) \div 5$$~~

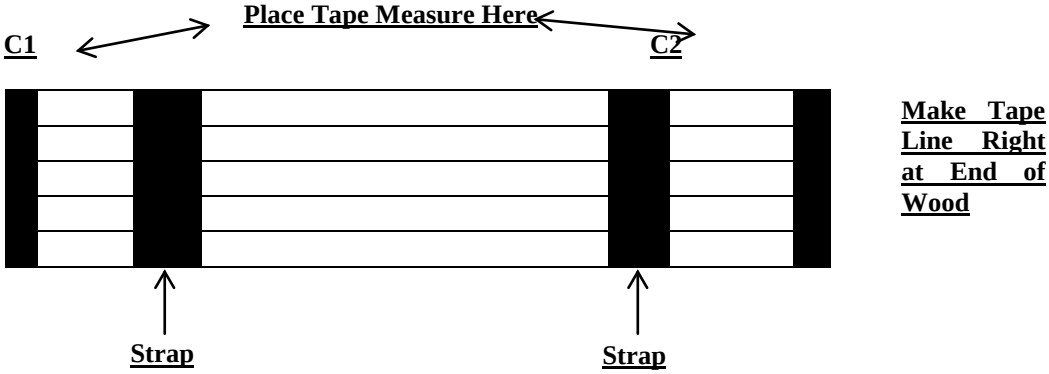
- ~~**Calculate Volume:**~~

~~$$Volume\ in\ liters = (Average\ Area\ [cm^2] \times Average\ Length\ [cm]) \div 1000$$~~

~~$$Volume\ in\ cubic\ feet = (Average\ Area\ [in^2] \times Average\ Length\ [in]) \div 1728$$~~

~~**3.14.3. Evaluation of Results**~~
~~**Follow Section 2.3.7. "Evaluate for Compliance to determine lot conformance.**~~

After the Bundle or Bag is secured and utilizing a flexible measuring tape, measure around each end of the bundle or bag of firewood with one movement by extending the measuring tape around the entire end of the bundle or bag in order to obtain a circumference. If the wood at the ends of a bag or bundle is not accessible due to plastic wrapping, then the flexible measuring tape is placed tightly around the outside of the plastic wrapping and circumference measurements are taken. See Diagram:



- **Calculate the average Circumference**

  Average Circumference = (circumference1 + circumference2) /2

- **Calculate the Average Area using the average circumference (from above)**

  $$AREA = \pi R^2$$

  $$R = C/2\pi$$

  $$\pi = 3.1415$$

- **Calculate the Average Length**

  Average length of the pieces of wood - Measure the length of each piece of wood in the bundle or bag. Measurements are to be taken from center to center at the end of each piece. Then calculate their average: Average length = sum of all pieces/ number of pieces.

- **Calculate Volume:**

  $$\text{Volume in liters} = (\text{Average area } [cm^2] \times \text{Average Length } [cm]) / 1000$$

  $$\text{Volume in cubic feet} = (\text{Average Area } [in^2] \times \text{Average Length}) / 1728$$

Background/Discussion: See Appendix A, Page L&R-A49.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-5 V Section 3.15. Test Procedure for Verifying the Usable Volume Declaration on Packages of Animal Bedding

Source:
NIST Office of Weights and Measures (2015)

Purpose:
Add a test procedure in HB133, Section 3.15. Test Procedure for Verifying the Usable Volume Declaration on Packages on Animal Bedding. This test procedure will be used for verifying the compressed volume and usable (uncompressed) volume on packages of animal bedding.

Item under Consideration:
Amend NIST Handbook 133 as follows:

Section 3.15. Test Procedure for Verifying the Usable Volume Declaration on Packages of Animal Bedding

3.15.1. Test Equipment

- **Calculator or Spreadsheet Software**
- **Modified Standard Package Report Form for Animal Bedding**
- **Package Inspection Worksheet Appropriate for Test Measure:**
  - **9 Point Measurement Grid and Package Error Worksheet for Cylindrical, Square or Rectangular Test Measures**
- **Permanent Ink - Marking Pen.**
- **Knife or Razor Cutter (for use in opening packages and unwrapping shrink-wrapped pallets in warehouses)**
- **Cellophane Tape, Duct Tape (for repairing chutes and sealing packages)**
- **Polyethylene Bags (49 L to 113.5 L [13 gal to 30 gal]) (to hold product once it is uncompressed)**
- **Rigid Rulers – Starrett[1] or equal with 1.0 mm graduations. The edges of a ruler used with a measuring frame must be straight and the edges must be the zero point.**
  - **300 mm (12 in)**
  - **500 mm (19.5 in)**
  - **1 m (39 in)**
- **Tarp - Canvas 3 m × 3 m (10 ft × 10 ft)**
- **Broom and Dust Pan**

[1] Notice: The mention of trade or brand names does not imply endorsement or recommendation by the U.S. Department of Commerce over similar products available from other manufacturers.

- **Levels – for verifying the level of the test measure and taking headspace readings.**
    - **152 mm (6 in) Bubble Level**
    - **1 m (40 in) Carpenter Level**
- **Scale 15 kg (30 lb) (only used if the audit procedure is utilized.)**
- **Chutes for Uncompressing and Pouring the Bedding into a Test Measure**

Table 1. Recommended Chute Dimensions

Nominal Capacity	Height	Width	Length
70 L (2.5 ft^3)	254 mm (10 in)	228 mm (9 in)	1219 mm (48 in)
100 L (3.5 ft^3)	254 mm (10 in)	279 mm (11 in)	1397 mm (55 in)
170 L (6 ft^3)	279 mm (11 in)	355 mm (14 in)	1727 mm (68 in)
240 L (8.5 ft^3)	304 mm (12 in)	406 mm (16 in)	2006 mm (79 in)
283 L (10 ft^3)	304 mm (12 in)	406 mm (16 in)	2286 mm (90 in)

NOTE: Chutes (see Figure 1. Testing Chutes) may be constructed using hinges and pins so that they lie flat for transporting. They can be constructed of sheet metal or with other slick surface material which enable the bedding to flow easily. The construction of the chutes used in this study allows the sides to move in or out slightly so that the bedding does not become clogged at the outlet. The heights and lengths may be adjusted slightly to fit into vehicles for transport but the widths should not be reduced because narrowing the opening can restrict material flow and result in "bridging" where the bedding collects and creates a block. Also, the width should be kept smaller than the opening of the test measure so that spillage does not occur during pouring.

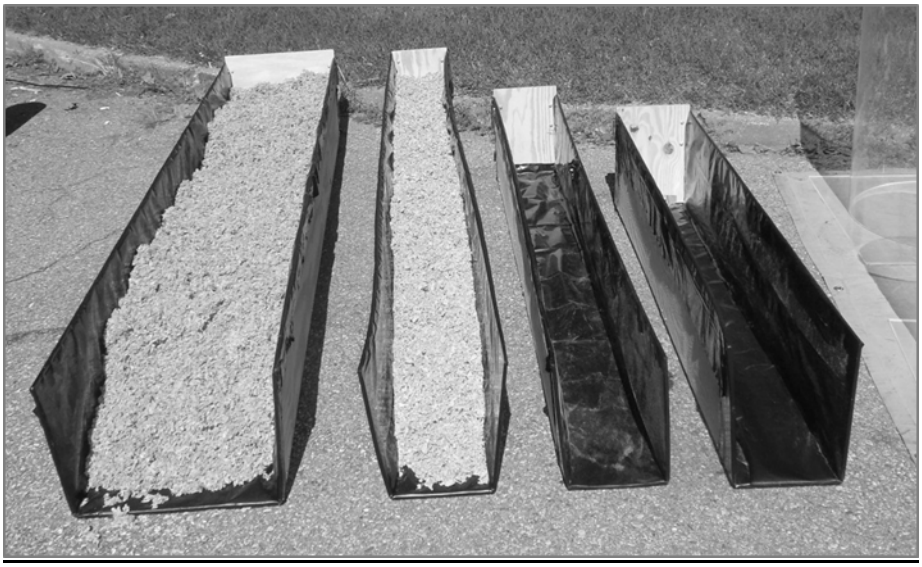


Figure 1. Testing Chutes.

- **Test Measures (see Table 2. "Test Measures for Animal Bedding")**

Table 2. Test Measures for Animal Bedding NOTES: a, b, c, and d

Only Interior Dimensions are Used for Volume Calculations
Must Be Calibrated with Traceable Measurement Standards Prior to Use

Rectangular & Square Test Measures

Actual Volume of the Measure [b & d]	Interior Wall Dimensions			Surface Area	Marked Increments on Ruler	Increment Volume
	Length	Width	Height[d]			
31.9 L 1.13 ft^3	213.4 mm (8.4 in)	203.2 mm (8 in)	736.6 mm (29 in)	43 362 mm^2 (67.2 in^2)		550.6 mL* 0.55 L (33.6 in^3)
28.3 L 1 ft^3	304.8 mm (12 in)	304.8 mm (12 in)	304.8 mm (12 in)			
63.7 L 2.25 ft^3	304.8 mm (12 in)	304.8 mm (12 in)	685.8 mm (27 in)			
	406.4 mm (16 in)	228.6 mm (9 in)	685.8 mm (27 in)	92 903 mm^2 (144 in^2)	12.7 mm (0.5 in)	1.18 L** (72 in^3)
92 L 3.25 ft^3	304.8 mm (12 in)	304.8 mm (12 in)	990.6 mm (39 in)			
	406.4 mm (16 in)	228.6 mm (9 in)	990.6 mm (39 in)			

***1.0 mm = 43 mL (2.6 cu in) ** 1.0 mm = 92 mL or 0.09 L (5.6 cu in)**

Square Test Measures

Actual Volume of the Measure [b & d]	Interior Wall Dimensions			Surface Area	Marked Increments On Ruler	Increment Volume
	Length	Width	Height[d]			
77.4 L (2.73 ft^3)	381 mm (15 in)	381 mm (15 in)	533.4 mm (21 in)	145 161 mm^2 (225 in^2)		0.14 L (8.5 in^3)
144 L (5.09 ft^3)	508 mm (20 in)	508 mm (20 in)	558.8 mm (22 in)	258 064 mm^2 (400 in^2)	1.0 mm (0.03937 in)	0.25 L (15.2 in^3)
283 L (10 ft^3)	609.6 mm (24 in)	609.6 mm (24 in)	762 mm (30 in)	371 612 mm^2 (576 in^2)		0.37 L (22.5 in^3)

Table 2. Test Measures for Animal Bedding NOTES: a, b, c, and d

Only Interior Dimensions are Used for Volume Calculations
Must Be Calibrated with Traceable Measurement Standards Prior to Use

Cylindrical Test Measures
These dimensions are based on the tube having a ¼ inch wall thickness. Other tube thicknesses may be used.

Actual Volume *Volume* = $\pi r^2 h$	Interior Diameter (Outside Diameter)	Height	Surface Area *Area* = πr^2	Increment	Increment Volume
52 L (1.8 ft^3)	292.1 mm (304.8 mm) 11.5 in (12 in)	780 mm (30.70 in)	67 012 mm^2 (103.8 in^2)	1.0 mm (0.03937 in)	0.06 L (4 in^3)
124 L (4.3 ft^3)	444.5 mm (457.2 mm) 17.5 in (18 in)	800 mm (31.49 in)	155 179 mm^2 (240.52 in^2)		0.15 L (9.4 in^3)
279 L (9.8 ft^3)	596.9 mm (609.6 mm) 23.5 in (24 in)	1000 mm (39.37 in)	279 829 mm^2 (433.76 in^2)		0.27 L (16.4 in^3)

Notes for Table 2:

a. **Rectangular and Square Based Dry Measures are typically constructed of 12.7 mm to 19.05 mm (0.5 in to 0.75 in) marine plywood. A 4.76 mm ($^3/_{16}$ in) transparent sidewall is useful for determining the level of fill, but must be reinforced or be made of thicker material if it distorts when the measure is filled. If the measure has a clear front, place the level gage at the back (inside) of the measure so that the markings are read over the top of the animal bedding. Any of these measures may be made without an attached bottom for ease of emptying if they are placed on a solid level base during filling and measurement.**

b. **Other size measures may be used if calibrated and the volume equivalence of the increment of 1.0 mm is no greater than $^1/_6$ the MAV. Widening the base of a measure reduces the column height of the product and will reduce compression but the trade-off is that the larger surface area increases the volume so the potential for measurement errors increase. One of the benefits of the cylindrical design is that, in addition to eliminating the 90 degree angles of the corners where gaps in fill frequently occur, the surface area of a cylinder is less than an equal volume square measure and that results in better resolution in the volume measurements (i.e., compare the readability of a 24 in sq box which has a surface area of 576 in^2, to the 24 in cylinder which has a surface area of 433 in^2). The height of the test measure may be reduced, but this will limit the volume of the package that can be tested.**

c. **If lines are marked in any test measures, they should extend around all sides of the measure if possible to improve readability. It is recommended that a line indicating the MAV level also be marked to reduce the possibility of reading errors when the level of the product is at or near the MAV.**

d. **If the measures are built to the dimensions shown above, the actual volume of most of the measures will be larger than the nominal volume so that plus errors (overfill) can be measured accurately.**

Test Note: Nothing in this section should be construed or interpreted as prohibiting the use of test measures meeting these specifications, or constructed in other geometric shapes or dimensions, or those made of other materials to test any other products.

3.15.2. Test Procedure

Test Notes:

Rounding: When a volume measurement falls between graduations on a ruler, round the value in the direction that favors the packer. This practice eliminates the issue of rounding from the volume determination and provides packagers the benefit of the doubt. The ruler graduation is 1.0 mm so the rounding error will be limited to 0.5 mm or less. It is good practice to circle a measurement that has been rounded up or make a statement to such effect so that it becomes a part of the inspection record.

Safety:

This procedure does not address all of the safety issues that users need to be aware of in order to carry out the following tasks. Users are sometimes required to conduct test in warehouse spaces or retail stores where fork-trucks are in motion – care must be taken to warn others to avoid or exercise care around the test site. The procedure requires users to lift heavy objects including large bulky packages and test measures and includes the use of sharp instruments to obtain packages from shrink-wrapped pallets. Users may be required to climb ladders or work platforms to obtain packages. When opening and emptying packages, dust, and other particles may be present or escape from the packages which may cause eye injuries and respiratory or other health problems. Users must utilize appropriate safety equipment and exercise good safety practice. If safe working conditions cannot be ensured, suspend testing until the situation is corrected.

1. **Follow the Section 2.3.1. "Define the Inspection Lot" select "Category A, Sampling Plan" in this inspection. Determine the Sample Size based on the size of the Inspection Lot using Category A. Collect the sample packages from the Inspection Lot using Section 2.3.4. "Random Sampling Selection."**

Test Note: Place the test equipment and sample packages in a location where there is adequate lighting and ample space around the packages and equipment so the packages can be opened and the chutes and test measures used safely.

Test Note: If the package is not labeled with a usable volume it is opened and the contents are poured directly into the test measure.

Optional – Audit Screening by Weight

The full test procedure requires that all of the packages be opened for testing. Regardless of the type of bedding, the product cannot be returned to the original package. An alternative gravimetric auditing procedure may be used to reduce the amount of destructive testing and conserve inspection resources.

Audit Procedure: After randomly selecting the sample packages from the Inspection Lot, obtain the gross weight for each package. Select the lightest and heaviest packages and conduct a usable volumetric test these two packages. If the lightest and heaviest packages pass (i.e., each contains at least the useable volume declared on the label), it is highly likely that the remaining packages in the sample will also pass. Accept these two package samples as an AUDIT TEST and move on to inspect other types of bedding or Inspection Lots of other types or brands of bedding. If either of the two packages is found to have a minus error that exceeds the Maximum Allowable Variation, the sample fails. No further testing is required (i.e., assuming no MAV is

allowed for the sample size (see Appendix A, Table 2-1. "Sampling Plans for Category A".) If either of the packages is found to have a minus error that does not exceed the MAV, continue to test all of the packages and take action based on the final results from the complete sample.

Test Note: If the gravimetric audit procedure is used, ensure that the scale is placed on a solid level support and that its accuracy has been verified to a test load that is at least 10 percent more than the gross weight of the packages (e.g., to estimate that load, place one of the packages on the scale and then test the scale with a load above the package's gross weight). See Section 2.2. "Measurement Standards and Test Equipment" for additional information.

2. **Select the appropriate test measure for the package size.**

   - **Spread a tarp large enough to hold a chute and test measure.**

   - **Place the chute and test measure on the tarp. Verify that the test measure is level.**

3. **Select a chute of appropriate capacity (see Table 1) for the package size and position it on the tarp.**

4. **Open the Packaging, Uncompressing and Pouring the Bedding into the Test Measure Twice.**

   - **Open Package: Place the package in the chute and use a knife or box cutter to open and remove the wrapper. Spread the bedding uniformly along the length of the chute. The bedding is uncompressed in two steps. The first step is to loosen the clumps of bedding by gently pulling them apart (do not tear the fibers of cellulose bedding or "grind" any bedding between your hands because these practices break the material down). Spread your fingers and pick the material up using your hands from beneath to loosen it up. There should be no clumps of bedding in the chute. If any bedding has fallen out of the chute onto the tarp, collect it and return it to the chute. The following pictures illustrate this step of the procedure. The second step of the expanded volume recovery process is to pour the bedding into a test measure as described in Step 2.**

Exhibit 1.

Exhibit 2.

Exhibit 3. First pour into the test measures.

- **First Pour: The first pour into the test measure is only used to further un-compress the bedding so no measurements are taken. Hold the chute above the test measure and tilt it so that you pour the bedding into the center of the test measure. The bedding should be poured slowly into the test measure in one continuous stream and not "dumped" (if it is "dumped" or poured too quickly some of the bedding will blow out of the measure or the bedding will be packed down and its volume reduced). The flow rate should be controlled by the tilt angle of the chute. The chute itself can be shaken but DO NOT HIT OR SHAKE THE TEST MEASURE. Also, do not touch the product to facilitate flow. (Do not adjust the flow by closing the opening of the chute as that may cause the bedding to heap up and then fall into the measure in clumps which may result in impact compression). Empty the bedding back into the chute and spread it out evenly along its length.**

Exhibit 4. Showing how to hold a chute for the pour.

Exhibit 5. Showing how to cradle the chute on one arm and holding it with one hand while tilting it with the other hand.

- **Second Pour: The second pour into the test measure is used to make the volume determination. Hold the chute above the test measure and tilt it so that you pour the bedding into the center of the test measure. The bedding should be poured slowly into the test measure in one continuous stream and not "dumped." The flow rate should be controlled by the tilt angle of the chute. The chute can be shaken but DO NOT HIT OR SHAKE THE TEST MEASURE.**

Test Note: Stop filling the measure if it appears that the test measure will overflow. The overflow product should be measured separately (use a smaller test measure of adequate size and capacity if one is available) and the multiple measurement volumes are added. If pouring into a square test measure, pour at an angle to two corners for the widest opening (see Exhibit 7).

Exhibit 6. Filling a 44 L Test Measure.

Exhibit 7. Filling a Square Test Measure at an Angle to use the Larger Opening.

5. **Volume Determination.**

DO NOT HAND LEVEL THE SURFACE OF THE BEDDING AS MANUAL LEVELING "PACKS" THE BEDDING AND REDUCES ITS VOLUME. DO NOT JAR OR SHAKE THE TEST MEASURE

Test Note: Before using a test measure for volume determinations, place a level of adequate length on top of the test measure at five approximately equal measuring points across the top. A permanent marking pen can be used to evenly space the marks across the top edge of the test measure so that it can be positioned to take the measurements (see Exhibit 8. "Marking the evenly spaced measuring points across the top of the test measure.")

Exhibit 8. Marking the evenly spaced measuring points across the top of the test measure.

- **Place a rigid level or straight edge of adequate size on top the test measure and select a ruler of adequate length to reach to the lowest level of the top surface of the bedding. Start at the measuring points to your left or right, place the ruler against the side of the level, and hold it with either hand. The zero graduation is pointed down so the ruler can be lowered into the test measure for measurement. Lower the ruler into the test measure slowly until its end is at the surface level of the bedding (see Exhibits 9 and 10).**

Exhibit 9. Placing ruler into the test measure with zero end down.

Exhibit 10. Ruler shown with zero end at surface of the bedding.

- **Determine the depth of each measurement point from the surface of the bedding to the bottom edge of the straight edge and record the value in the appropriate space on the worksheet. Take a minimum of 9 measurements (at least 9 for cylindrical measures) across the top of the test measure in a grid pattern. Read the graduations on the ruler from a position that minimizes errors caused by parallax.**

Table 2. Illustrations of Depth Determinations with Cylindrical Test Measures

Figure 1. Shows how to read the depth of container.

The picture on the left (Figure 1) shows how to read the depth from the bottom of the straightedge (top edge of measure) down to the to bedding in a 44 L test measure from a position that reduces parallax. The graphic below (Figure 2) illustrates the actual worksheet with the headspace procedure on the 44 L cylinder test measure (its internal radius is 151 mm and its height is 610 mm). The bedding was poured into the test measure but not leveled. Then 9 measurements were made at the locations shown on the grid to determine the depth of the product from the top edge of the measure. The average of the 9 values was 479.88 mm which was subtracted from the height of the test measure to obtain 130.12 mm for the average height of the column of bedding in the measure.

The volume was calculated using: *Volume in liters* = $\pi r^2 h$ Pi) 3.14159265 × 23035.69 × 130.12 mm = 9.41 L*

***After the calculation was completed the result was divided by 1 000 000 to obtain the volume in liters.**

Figure 2 Illustration of Worksheet.

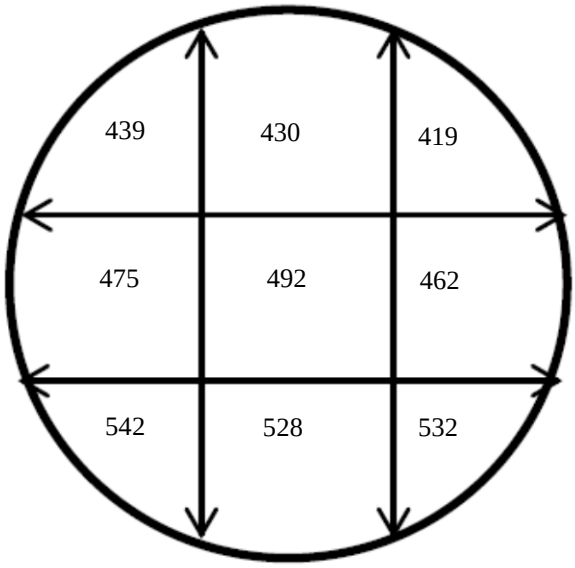


Table 2. Illustrations of Depth Determinations with Cylindrical Test Measures

Figure 3. Using the headspace measurement on a 279 L test measure. The ruler is read from the bottom edge of a straight edge or level from a position that reduces parallax.

Figure 4. Illustrating how the ruler is placed on the bedding with the headspace method. The ruler is red from the bottom edge of a straight edge or level from a position that reduces parallax.

Table 3. Illustrations of Depth Determinations with Square Test Measures

Figure 1.

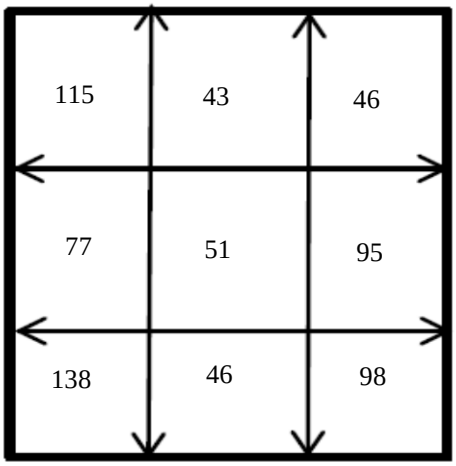


Figure 2.

The picture on the left (Figure 1) shows how to read the depth from the bottom of the straightedge (top edge of measure) down to the bedding in a 283 L square test measure from a position that reduces parallax. The graphic on the right (Figure 2) illustrates the actual worksheet with the headspace procedure on the square test measure (its internal dimensions are 609.6 mm × 609.6 mm × 762 mm (24 in × 24 in × 30 in). The bedding was poured into the test measure but not leveled. Then 9 measurements were made at the locations shown on the grid to determine the depth of the product from the top edge of the measure. The average of the 9 values was 78.77 mm that was subtracted from the height of the test measure to obtain 683.23 mm for the average height of the column of bedding in the measure.

The volume was calculated using: Volume in liters = lwh 609.6 mm × 609.6 mm × 683.23 mm = 253.89 L*

***After the calculation was completed, the result was divided by 1 000 000 to obtain the volume in liters.**

Figure 3. Using the headspace measurement on 56.6 L (2 cu ft) test measure. The ruler is read from the bottom edge of a straight edge or level from a position that reduces parallax.

Table 3. Illustrations of Depth Determinations with Square Test Measures

Figure 4. Showing how the ruler is placed on the bedding with the headspace method. The ruler is read from the bottom edge of a straight edge or level from a position that reduces parallax.

6. Using a Worksheet for Volume Calculation

- **Enter the sample number of the package on the worksheet along with its labeled usable volume.**
- **Test Measure Information**
  - **For a cylindrical test measure, enter its interior height and radius in the spaces labeled A and B.**
  - **For a square or rectangular test measure enter its interior height and the area of its base (i.e., length × width) in spaces labeled A and B.**
- **Sum the measurements in the grid, divide the value by the number of measurements (i.e., 9), and enter this value in the space labeled C, Average Depth.**
- **Calculate the Average Height of the Bedding (subtract C [Average Depth] from A [Interior Height of Test Measure]) and enter this value in the space labeled D.**
- **Calculate the Volume of Bedding in the Package:**
  - **For a cylindrical test measure, the formula (*Volume in Liters* = $\pi r^2 h$) is shown in E on the worksheet. It is *Volume* (Liters) = 3.14159265 × r^2 (B^2) × Average Height (D) ÷ 1 000 000. Enter the package volume in the space provided for this value in E.**
  - **For a square or rectangular test measure the formula (*Volume in Liters = LWH)* is shown in E on the worksheet. It is *Volume* (Liters) = B (Area of Test Measure Base) × D (Average Height) ÷ 1 000 000. Enter the package volume in the space provided for this value in E.**
- **Calculate the Package Error using the following formula:**
  - **Package Error = Labeled Usable Volume (Liters) − E Package Volume (Liters)**

Package Error (Liters) = Labeled Expanded Volume – Package Volume

- **Transfer the individual package errors (verify whether they are positive or negative) to the "Modified Standard Package Report for Animal Bedding" in Appendix D. Fill in the required header information. For Box 7, "Number of Unreasonable Package Errors Allowed for Sample Size, use Appendix A, to Table 2-1. "Sampling Plans for Category A, Column 4.", Based on the sample size, determine how many packages may have minus package errors that exceed the MAV (i.e., unreasonable package error).**

  Then:

- **Calculate the Total Error (Enter in Box 8. "Total Error").**

7. Evaluation of the Test Results and Determination of Pass or Fail

- **Determine if any of the minus package errors exceeds the MAV. Apply a MAV value of 5 % (0.05 × labeled expanded volume) to single measurement volume determinations. If none of the minus package errors exceeds the MAV, go to Step 3. If any of the minus package errors exceed the MAV, enter the number of packages in Box 9 "Number of Unreasonable Minus Errors". Go to Box 10 "Is Box 9 Greater than Box 7?" and determine if the value exceeds the number in Box 7 "Number of Unreasonable Package Errors Allowed for Sample Size". If the number of packages with unreasonable errors exceeds the number permitted in Box 7 "Number of Unreasonable Package Errors Allowed for Sample Size," the sample fails. Go to Box 17 "Disposition of the Inspection Lot" and reject the Inspection Lot.**

- **Calculate the Average Error for the sample by dividing Box 8 "Total Error," by Box 6 "Sample Size" and enter the value in Box 11 "Calculate Average Error," then go Box 12 "Does Box 11 equal Zero or Plus?" If the Average Error is zero or a positive number the sample passes, go to Box 17 "Disposition of the Inspection Lot" and approve the inspection lot. If the Average Error is a negative value go to Step 4. If the Average Error is a negative value go to Step 4 on the Inspection Worksheet.**

- **Calculate the Sample Standard Deviation and enter in Box 13. "Compute Sample Standard Deviation." To obtain the Sample Correction Factor for the sample size use Appendix A, Table 2-1. "Sampling Plans for Category A," Column 3 "Sample Correction Factor' and enter that in Box 14 "Sample Correction Factor." Then calculate the Sample Error Limit by multiplying Box 13 "Compute Sample Standard Deviation" and Box 14 "Sample Correction Factor." Enter the value in Box 15 "Compute Sample Error Limit."**

  - **Disregarding the signs, determine if the minus in Box 11 "Calculate Average Error" is larger than the value in Box 15 "Compute Sample Error Limit."**

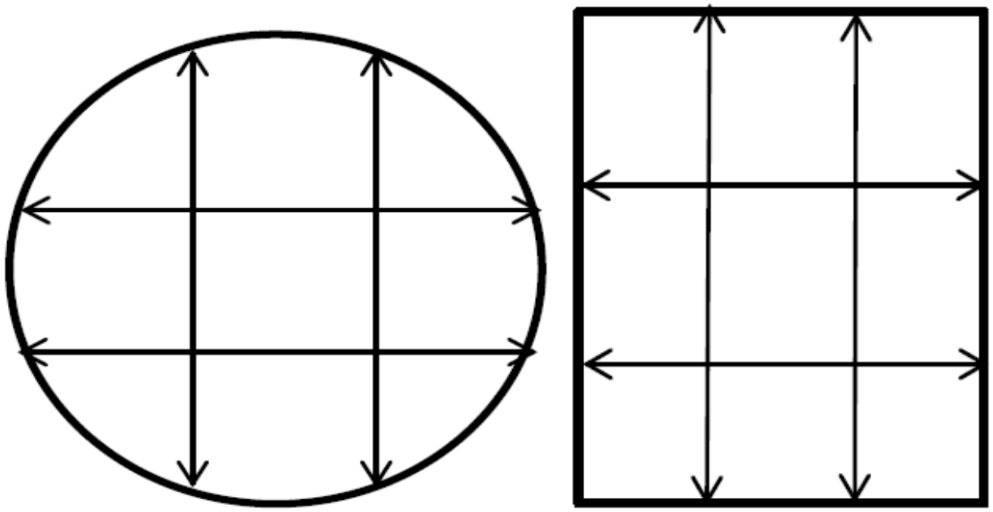
  - **If yes, the sample fails, go to Box 17 "Disposition of Inspection" and reject the Inspection Lot.**

  - **If no, the sample passes, go to Box 17 "Disposition of Inspection" and approve the Inspection Lot**

- **Prepare a comprehensive report of the test results and enforcement action taken and present the information to the party responsible for the product.**

Table 2-10. Exceptions to the Maximum Allowable Variations for Textiles, Polyethylene Sheeting and Film, Mulch and Soil Labeled by Volume, Packaged Firewood, Animal Bedding, and Packages Labeled by Count with 50 Items or Fewer, and Specific Agricultural Seeds Labeled by Count.	
	Maximum Allowable Variations (MAVs)
Animal Bedding	**5 % of the labeled volume**

Worksheet A – 9 Point Measurement Grid and Package Error Worksheet for Cylindrical and Square or Rectangular Test Measures



Complete this for Cylindrical Test Measures
Sample Package _____ Labeled Expanded Volume (L): _____
A. Interior Height of Test Measure: _____ B. Radius of Test Measure (r): _____
C. Average Depth (Sum of Measurements ÷ 26): _____
D. Average Height of Bedding (= A − C): _____
E. Volume (L): _____ = 3.14159265 × r^2 (B^2): _____ × D: _____ ÷ 1 000 000
F. Package Error (L): _____ = Labeled Volume (L): _____ − E (L): _____
Volume is calculated using: *Volume in liters = $\pi r^2 h$ For example: if r^2 is 23035 and height of bedding is 109.26 then* ((Pi) 3.14159265 × r^2 (23035) × 109.26) ÷ 1 000 000 = 7.90 L

Complete this for Square or Rectangular Test Measures

Sample Package _____ Labeled Expanded Volume (L): _____

A. Interior Height of Test Measure: _____ B. Area of Test Measure Base (L × W): _____

C. Average Depth (Sum of Measurements ÷ 25): _____

D. Average Height of Bedding (= A − C): _____

E. Volume (L): _____ = B. Area of Test Measure Base: _____ × D: _____ ÷ 1 000 000

F. Package Error (L): _____ = Labeled Volume (L): _____ − E (L): _____

Volume is calculated using: *Volume in liters = (lw)h For example: If length and width are 609.6 the area of the measure's base is 371612. If the Average Height of the Bedding is 109.26 then:*

B. Area of Test Measure Base (371612) × Average Height of Bedding (109.26) ÷ 1 000 000 = 40.6 L

Modified Standard Package Report for Animal Bedding

Date:	**Modified Standard Package Report for Animal Bedding**		**Sampling Plan A – Table 2-1., Appendix A. in NIST Handbook 133**		**Report Number:**
Location (name, address)		**Product/Brand Identity** **Lot Codes**	**Manufacturer**		**Container Description:**
1. Labeled Quantity (Usable Volume):	**2. Unit of Measure:**	**3. MAV:** (5 % of labeled quantity)	**4. MAV** (0.05 × Box 1. Usable Volume	**5. Inspection Lot Size:**	**6. Sample Size (n):** **7. Number of Unreasonable Package Errors Allowed for Sample Size:**

Gross Weight for Audit Testing		**Package Error**		**Test Notes**
		–	**+**	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		Total:	Total:	

8. Total Error:	**9. Number of unreasonable minus (−) errors (compare each package error with Box 4):**	**10. Is Box 9 greater than Box 7?** ☐ **Yes, lot fails go Box 17** ☐ **No, go to Box 11.**	**11. Calculate Average Error: (Box 8 ÷ Box 6 =)**

12. Does Box 11 = Zero (0) or Plus (+)? ☐ **Yes, lot passes, go to Box 17** ☐ **No, go to Box 13, 14, 15 & 16**	**13. Compute Sample Standard Deviation:**	**14. Sample Correction Factor:**	**15. Compute Sample Error Limit (SEL) (Box 13 × Box 14 =)**

***16.* Disregarding the signs, is Box 11 larger than Box 15?** ☐ **Yes, lot fails, go to Box 17** ☐ **No, lot passes, go to Box 17**	**17. Disposition of Inspection Lot** ☐ **Approve** ☐ **Reject**

Comments:	**Official's Signature** **Acknowledgement of Report**

Background/Discussion: See Appendix A, Page L&R-A50.

CWMA Action: Item 260-5
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation: The committee feels this item is fully developed and ready for voting status.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☒ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
No comments were heard during open hearings, and the committee feels this item is fully developed and ready for voting status.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-6 D Recognize the Use of Digital Density Meters

Source:
Missouri (2016)

Purpose:
Allow the use of digital density meters for package checking testing of viscous fluids such as motor oils, diesel exhaust fluid (DEF) and antifreeze.

Item under Consideration:
Amend NIST Handbook 133 as follows:

Develop specific test procedures for NIST Handbook 133, "Chapter 3. Test Procedures – For Packages Labeled by Volume" that would recognize the use of digital density meters in lieu of volumetric flasks and thermometers when testing certain viscous fluids such as motor oil, DEF, antifreeze, syrups, etc.

Background/Discussion: See Appendix A, Page L&R-A52.

CWMA Action: Item 260-6
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
The item continues to be developed by the submitter.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
The committee feels this item should continue to be further developed.

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

260-7 D Incorporating Efficiencies into Inspections

Source:
Ventura County, California (2016)

Purpose:
Improve efficiency in the time and resources to conduct inspections where it is determined early in the testing that the lot is going to fail.

Item under Consideration:

Amend NIST Handbook 133 as follows:

Option 1.)

Amend each test procedure in Handbook 133, indicated in 14 above, to make it permissive to allow the rejection of a lot if it is obvious that the number of UMEs exceeds the number allowed before all samples in the lot have been tested.

For each test procedure add the phrase "If an inspector at any time during testing packages determines the number of unreasonable minus errors exceeds the number allowed, the inspector may fail the lot without further testing and will not need to follow the requirements of Section 2.3.7. Evaluation for Compliance."

Option 2.)

Make one "general" statement up front in Chapter 1, in sections 1.2.3 and/or 1.2.4 and/or or Chapter 2, 2.3.7.1. where it talks about the Individual Package Requirement and MAV.

The general statement or explanation should say something along the lines that "nothing in Handbook 133 or the test procedures are to be interpreted that an inspector must continue testing all samples when the number of MAV's allowed are exceeded. Once the MAV's allowed are exceeded the lot fails and can be immediately rejected. It is no long necessary (required) to continue testing the remainder of the samples. Reference to statements such as "every package must be opened and its error determined before the results can be evaluated" does not apply in cases where the number of allowed MAV's is exceeded".

Background/Discussion: See Appendix A, Page L&R-A53.

CWMA Action: Item 260-7
Summary of comments considered by the regional committee (in writing or during the open hearings):
No comments were heard.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
This item is still being developed.
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☒ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

270 OTHER ITEMS

270-1 D Fuels and Lubricants Subcommittee

Source:
The Fuels and Lubricants Subcommittee (2007)

Purpose:
Update the Uniform Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation in NIST Handbook 130 including major revisions to fuel ethanol specifications. Another task will be to update the Basic Engine and Fuels, Petroleum Products, and Lubricants Laboratory Publication.

Item under Consideration:
This item is under development. All comments should be directed to Dr. Matthew Curran, FALS Chair at (850) 921-1570, Matthew.Curran@freshfromflorida.com, or Ms. Lisa Warfield, NIST Technical Advisor at (301) 975-3308, lisa.warfield@nist.gov.

Background/Discussion: See Appendix A, Page L&R-A54.

CWMA Action: Item 270-1
Summary of comments considered by the regional committee (in writing or during the open hearings):
Chuck Corr commented that FALS and ASTM is asking for input from stakeholders including state regulatory agencies to help the ASTM D4814 working group determine a direction to go in terms of a consistent definition for gasoline. He indicated this was also part of the process to update the Engine Fuels and Lubricants section of Handbook 130.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:
COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

270-2 D Packaging and Labeling Subcommittee

Source:
Packaging and Labeling Subcommittee (2011)

Purpose:
Provide an update of the activities of this Subcommittee which reports to the L&R Committee. The mission of PALS is to assist the L&R Committee in the development of agenda items related to packaging and labeling. The Subcommittee will also be called upon to provide important and much needed guidance to the regulatory and consumer packaging communities on difficult questions. PALS will report to NCWM L&R Committee. The Subcommittee is comprised of a Chairperson and eight voting members.

Item under Consideration:
This item is under development. All comments should be directed to Mr. Chris Guay, Packaging and Labeling Subcommittee Chair at (513) 983-0530, guay.cb@pg.com or Mr. David Sefcik, NIST Technical Advisor at (301) 975-4868, david.sefcik@nist.gov.

Background/Discussion: See Appendix A, Page L&R-A55.

CWMA Action: Item 270-2
Summary of comments considered by the regional committee (in writing or during the open hearings):
Chris Guay, chair of the Packaging and Labeling Subcommittee invited the group to a Wednesday morning presentation regarding the work being done by the Subcommittee.
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

270-3 D Moisture Allowance Task Group (MATG)

Source:
Moisture Allowance Task Group (2012)

Purpose:
This Task Group will provide additional guidance for making moisture allowances for products not listed in NIST Handbook 133.

Item under Consideration:
This item is under development. All comments should be directed to Mr. Kurt Floren, Moisture Allowance Task Group Chair at (626) 575-5451, kfloren@acwm.lacounty.gov or Ms. Lisa Warfield, NIST Technical Advisor at (301) 975-3308, lisa.warfield@nist.gov

Background/Discussion: See Appendix A, Page L&R-A57.

CWMA Action: Item 270-3
Summary of comments considered by the regional committee (in writing or during the open hearings):
Item as proposed by the regional committee: ***(If different than agenda item)***
Committee recommendation to the region: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
Reasons for the committee recommendation:

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☐ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

Additional letters, presentations and data may have been part of the committee's consideration. Please refer to www.ncwm.net/meetings/interim/publication-16 to review these documents.

New Item 1 UPLR 10.4. Multi-Unit Retail Packages

Source:
Monterey and Ventura Counties, California

Purpose:
Eliminate the total quantity of the multi-unit package and "bags or counts" for non-consumer packages.

Item under Consideration:
Amend NIST Handbook 130 Uniform Packaging and Labeling Regulation as follows:

10.4. Multi-unit Retail Packages. [***NOTE 7***, page 74] – Any package containing more than one individual "commodity in package form" (see Section 2.1. Package) of the same commodity shall bear on the outside of the package a declaration of:

(a) the number of individual units;

(b) the quantity of each individual unit; and

(c) the total quantity of the contents of the multi-unit package.

Example:
soap bars, 6 Bars, Net Wt 100 g (3.53 oz) each
total Net Wt 600 g (1.32 lb).

The term "total" or the phrase "total contents" may precede the quantity declaration.

A multi-unit package containing unlabeled individual packages which are not intended for retail sale separate from the multi-unit package may contain, in lieu of the requirements of section (a), a declaration of quantity of contents expressing the total quantity of the multi-unit package without regard for inner

packaging. For such multi-unit packages it shall be optional to include a statement of the number of individual packages when such a statement is not otherwise required by the regulations.

Examples:
Deodorant Cakes –
5 cakes, Net Wt 113 g (4 oz) each, Total Net Wt 566 g (1.25 lb); or
5 cakes, Total Net Wt 566 g (1 lb 4 oz)

Soap Packets –
10 packets, Net Wt 56.6 g (2 oz) each, Total Net Wt 566 g (1.25 lb); or Net Wt 566 g (1 lb 4 oz); or
10 packets, Total Net Wt 566 g (1 lb 4 oz)

(Amended 1993)

NOTE 7: *For foods, a "multi-unit" package means a package containing two or more individually packaged units of the identical commodity in the same quantity, intended to be sold as part of the multi-unit package but labeled to be individually sold in full compliance with this regulation. Open multi-unit retail food packages under the authority of the FDA or the USDA that do not obscure the number of units or prevent examination of the labeling on each of the individual units are not required to declare the number of individual units or the total quantity of contents of the multi-unit package if the labeling of each individual unit complies with requirements so that it is capable of being sold individually. (See also Section 11.11. Soft Drink Bottles and Section 11.12. Multi-Unit Soft-Drink Bottles.)*
(Added 1984)

Background/Discussion:
This will allow for the UPLR to be identical to FDA's preemptive regulation on multi-unit retail packages in 21 CFR 101.105(s).

Growers and producers are using a Product Traceability Initiative (PTI) sticker (2016 Food Safety Modernization Act requirement - http://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm) that also doubles for identity, responsibility and quantity (IRQ) requirements. Producers are no longer putting all multi-unit requirements from HB 130, Section 10.4. (omitting term "bag or counts" and total count) on their agricultural packages. This issue is prevalent in California, Arizona, Texas, and Florida.

21 CFR 101.105(s).is presented here:

[Code of Federal Regulations]
[Title 21, Volume 2]
[Revised as of April 1, 2015]

TITLE 21--FOOD AND DRUGS, CHAPTER I--FOOD AND DRUG ADMINISTRATION DEPARTMENT OF HEALTH AND HUMAN SERVICES

SUBCHAPTER B--FOOD FOR HUMAN CONSUMPTION

PART 101 -- FOOD LABELING

Subpart G--Exemptions From Food Labeling Requirements - 21 CFR Sec. 101.105 Declaration of net quantity of contents when exempt.

(s) On a multiunit retail package, a statement of the quantity of contents shall appear on the outside of the package and shall include the number of individual units, the quantity of each individual unit, and, in parentheses, the total quantity of contents of the multiunit package in terms of avoirdupois or fluid ounces, except that such declaration of total quantity need not be followed by an additional parenthetical declaration in terms of the largest whole units and subdivisions thereof, as required by paragraph (j)(1) of this section. A multiunit retail package may thus be properly labeled: "6-16 oz bottles--(96 fl oz)" or "3-16 oz cans--(net wt. 48 oz)". For the purposes of this section, "multiunit retail package" means a package

containing two or more individually packaged units of the identical commodity and in the same quantity, intended to be sold as part of the multiunit retail package but capable of being individually sold in full compliance with all requirements of the regulations in this part. Open multiunit retail packages that do not obscure the number of units or prevent examination of the labeling on each of the individual units are not subject to this paragraph if the labeling of each individual unit complies with the requirements of paragraphs (f) and (i) of this section. The provisions of this section do not apply to that butter or margarine covered by the exemptions in 1.24(a) (10) and (11) of this chapter.

CWMA Action: Item NEW #1

Summary of comments considered by the regional committee (in writing or during the open hearings):

A NIST technical advisor spoke on this proposal and stated that this FDA requirement is specific to consumer packages. The proposal requests adding the word "retail" to the title for clarification. This would align the language with FDA regulations.

Item as proposed by the regional committee: ***(If different than agenda item)***

Committee recommendation to the region:

- ☐ Voting Item on the NCWM Agenda
- ☒ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

This proposal has merit as it will align the Handbook with regulation 21 CFR 101.105(s) (box 20).

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION

Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

10.4. Multi-unit <u>Retail</u> Packages. [***NOTE 7***, page 74] – Any package containing more than one individual "commodity in package form" (see Section 2.1. Package) of the same commodity shall bear on the outside of the package a declaration of:

(a) the number of individual units;

(b) the quantity of each individual unit; and

(c) the total quantity of the contents of the multi-unit package.

Regional recommendation to NCWM for item status:

- ☐ Voting Item on the NCWM Agenda
- ☒ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*
- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

A NIST technical advisor spoke on this proposal and stated that this FDA requirement is specific to consumer packages. The proposal requests adding the word "retail" to the title for clarification. This would align the language with FDA regulations. The committee feels this proposal has merit and is fully developed but should be vetted through each region.

New Item 2 UEFALR 1Section 3. Classification and Method of Sale of Fuels ~~Petroleum Products~~

Source:
KMoore Consulting

Purpose:
1. To align the ethanol labeling language with the recently released Federal Trade Commission updates to 16 CFR 306 on the Automotive Fuel Rating Rule as it pertains to ethanol fuel blend rating, labeling on retail dispensers, certification and record keeping requirements. The FTC final rule was published in the Federal Register on January 14, 2016.

2. Eliminate the duplicative wording that appears in Section G: Uniform Engine Fuels and Automotive Lubricants Regulations and Section B: Uniform Regulation for the Method of Sale of Commodities. The same exact wording appears in both sections

Item under Consideration:
Amend NIST Handbook 130 Uniform Engine Fuels and Automotive Lubricants Regulation as follows:

Section 3. Classification and Method of Sale of Fuels ~~Petroleum Products~~

3.8. Ethanol Flex Fuel.
3.8.1. How to Identify Ethanol Flex Fuel. – Ethanol flex fuel shall be identified as Ethanol Flex Fuel or EXX Flex Fuel.
3.8.2. Labeling Requirements.
(a) Ethanol flex fuel with an ethanol concentration no less than 51 and no greater than 83 volume percent shall be labeled "Ethanol Flex Fuel~~, minimum 51 % ethanol."~~ and post either the exact % ethanol or post the ethanol content rounded to the nearest increment of 10 or post the fuel contains 51-83% ethanol.
(b) Ethanol flex fuel with an ethanol concentration no less than 50% and greater than 11% shall be labeled "Ethanol Flex Fuel" and post either the exact % ethanol or post the ethanol content rounded to the nearest increment of 10.

~~Ethanol flex fuel with an ethanol concentration less than or equal to 50 volume percent shall be labeled "EXX Flex Fuel, minimum YY % ethanol," where the XX is the ethanol concentration in volume percent and YY is XX minus five (− 5). The actual ethanol concentration of the fuel shall be XX volume percent plus or minus five (± 5) volume percent.~~

(Added 2014)
(c) A label shall be posted which states "For Use in Flexible Fuel Vehicles (FFV) Only." This information shall be clearly and conspicuously posted on the upper 50 % of the dispenser front panel in a type at least 12.7 mm (. in) in height, 1.5 mm (1/16 in) stroke (width of type). A label shall be posted which states, "CHECK OWNER'S MANUAL," and shall not be less than 6 mm (. in) in height by 0.8 mm (1/32 in) stroke; block style letters and the color shall be in definite contrast to the background color to which it is applied.

(Amended 2007, 2008, and 2014)

Eliminate the duplicative labeling wording for Gasoline- Oxygenate Blends and Ethanol Flex Fuel blends that appears in B: Uniform Regulation for the Method of Sale of Commodities and make necessary changes to the Table of Contents.

~~**2.20. Gasoline-Oxygenate Blends.**~~

~~**2.20.1. Method of Retail Sale.** – Type of Oxygenate must be Disclosed. – All automotive gasoline or automotive gasoline-oxygenate blends kept, offered, or exposed~~

for sale, or sold at retail containing at least 1.5 mass percent oxygen shall be identified as "with" or "containing" (or similar wording) the predominant oxygenate in the engine fuel. For example, the label may read "contains ethanol" or "with MTBE." The oxygenate contributing the largest mass percent oxygen to the blend shall be considered the predominant oxygenate. Where mixtures of only ethers are present, the retailer may post the predominant oxygenate followed by the phrase "or other ethers" or alternatively post the phrase "contains MTBE or other ethers." In addition, gasoline-methanol blend fuels containing more than 0.15 mass percent oxygen from methanol shall be identified as "with" or "containing" methanol. This information shall be posted on the upper 50 % of the dispenser front panel in a position clear and conspicuous from the driver's osition a type at least 12.7 mm (1/2 in) in height, 1.5 16 in) stroke (width of type).

(Amended 1996)

2.20.2. Documentation for Dispenser Labeling Purposes. The retailer shall be provided, at the time of delivery of the fuel, on product transfer documents such as an invoice, bill of lading, shipping paper, or other documentation:

1. (a) Information that complies with 40 CFR § 80.1503 when the fuel contains ethanol.
2. (b) For fuels that do not contain ethanol, information that complies with 40 CFR § 80.1503 and a declaration of the predominant oxygenate or combination of oxygenates present in concentrations sufficient to yield an oxygen content of at least 1.5 mass percent in the fuel. Where mixtures of only ethers are present, the fuel supplier may identify either the predominant oxygenate in the fuel (i.e., the oxygenate contributing the largest mass percent oxygen) or alternatively, use the phrase "contains MTBE or other ethers."
3. (c) Gasoline containing more than 0.15 mass percent oxygen from methanol shall be identified as "with" or "containing" methanol.

(Added 1984) (Amended 1985, 1986, 1991, 1996, and 2014)

2.30. Ethanol Flex Fuel.

2.30.1. How to Identify Ethanol Flex Fuel. Ethanol flex fuel shall be identified as "Ethanol Flex Fuel or EXX

Flex Fuel."

2.30.2. Labeling Requirements.

1. (a) Ethanol flex fuel with an ethanol concentration no less than 51 and no greater than 83 volume percent shall be labeled "Ethanol Flex Fuel, minimum 51 % ethanol."

   (Amended 2014)

2. (b) Ethanol flex fuel with an ethanol concentration less than or equal to 50 volume percent shall be labeled "EXX Flex Fuel, minimum YY % ethanol," where the XX is the target ethanol

~~concentration in volume percent and YY is XX minus five (− 5). The actual ethanol concentration of the fuel shall be XX volume percent plus or minus five (± 5) volume percent.~~

~~(Added 2014)~~

~~3. (c) A label shall be posted which states "For Use in Flexible Fuel Vehicles (FFV) Only." This information shall be clearly and conspicuously posted on the upper 50 % of the dispenser front panel in a type at least 12.7 mm (1/2 in) in height, 1.5 in) stroke (width of type). A label shall be posted which states, "CHECK OWNERS MANUAL," and shall not be less than 6 mm (1/4 in) in height by 0.8 in) stroke; block style letters and the color shall be in definite contrast to the background color to which it is applied.~~

~~(Amended 2014)~~

~~(Added 2007) (Amended 2014)~~

Background/Discussion:

It is important that NIST Handbook 130 language stay in alignment with government regulations. The FTC regulation update takes effect July 14, 2016. A copy of the final rule requirements are in the attachment. The proposal to eliminate the duplicative wording that appears in Section B. Method of Sale for Commodities will streamline the Handbook contents, send users of the Handbook to only one section that provides appropriate guidance on labeling for both oxygenated fuels and ethanol flex fuels. Having duplicative wording is both confusing and redundant. There is no other fuel related guidance, for gasoline or diesel for that matter, that appears in Section B. All fuel related information appears in Section G. Uniform Engine Fuels and Automotive Lubricants section.

There is currently an effort underway to review and improve the entire Section G. Uniform Engine Fuels and Automotive Lubricants Regulation. This update should not wait on this overall improvement due to the pending implementation date of July 14, 2016 for the FTC ethanol labeling regulation change.

CWMA Action: Item NEW #2

Summary of comments considered by the regional committee (in writing or during the open hearings):

An ethanol industry representative gave a presentation to explain this proposal that essentially expresses the need for Handbook 130 to be updated on the new FTC labeling requirements, which are effective July 14, 2016. A state regulator from Minnesota commented that she appreciated the efforts of the submitter, but she does not want the NCWM body to be caught between the inconsistent and ever-changing labeling requirements. A regulator from Missouri commented that his state referenced specific section numbers that were relevant from 16 CFR Part 306, and it expedited the process of bringing state regulations consistent with FTC. He asked if we should keep this proposal separate, or should the FALS Committee incorporate this item with the updating of Handbook 130 – and the working group already making updates. An API representative asked the intent of this proposal, and the ethanol industry representative clarified it was an informational item only – not intended to be voted on in July.

Item as proposed by the regional committee: ***(If different than agenda item)***

Committee recommendation to the region:

- ☐ Voting Item on the NCWM Agenda
- ☒ Information Item on the NCWM Agenda
- ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

The committee feels the proposal has merit and should be vetted through FALS.

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION
Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***
Regional recommendation to NCWM for item status: ☐ Voting Item on the NCWM Agenda ☒ Information Item on the NCWM Agenda ☐ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)* ☐ Developing Item on the NCWM Agenda *(To be developed by source)* ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*
Regional Report to NCWM: Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**
An ethanol industry representative gave a presentation to explain this proposal that essentially expresses the need for Handbook 130 to be updated on the new FTC labeling requirements, which are effective July 14, 2016. A state regulator from Minnesota commented that she appreciated the efforts of the submitter, but she does not want the NCWM body to be caught between the inconsistent and ever-changing labeling requirements. A regulator from Missouri commented that his state referenced specific section numbers that were relevant from 16 CFR Part 306, and it expedited the process of bringing state regulations consistent with FTC. He asked if we should keep this proposal separate, or should the FALS Committee incorporate this item with the updating of Handbook 130 – and the working group already making updates. An API representative asked the intent of this proposal, and the ethanol industry representative clarified it was an informational item only – not intended to be voted on in July.

New Item 3 Handbook 133, 2.3.5.1. Determination of Tare Sample and Average Tare Weight

Source:
Kansas

Purpose:
Streamline testing of packaged goods when random sample has been defined and during gross weight determination errors exceeding MAV are discovered to enhance 1.3 Sampling Plans paragraph 2, provide the public with the greatest benefit at lowest possible cost.

Item under Consideration:
Amend NIST Handboo 133 as follows:

2.3.5.1. Determination of Tare Sample and Average Tare Weight

Except in the instance of applying Unused Dry Tare, use this procedure for selecting and determining the tare sample and average tare weight. Depending upon the initial tare sample results, additional tare samples may need to be taken.

1. Determine the initial tare sample size using Column 5 under initial tare sample size in Appendix A. Table 2-1. "Sampling Plans for Category A" or Column 3 under initial tare sample size in Appendix A, Table 2-2. "Sampling Plans for Category B." Record the initial tare sample size in Box 7 on the appropriate form located in Appendix C. Model Inspection Report Forms.

Note: The initial tare sample size is considered the total tare sample size for the inspection lot when the sample size is less than 12.

2. Except in the instance of applying Unused Dry Tare, select the packages for the initial tare sample from the sample packages. Mark the first two (three or five) packages in the order the random numbers were selected; these packages provide the initial tare sample.

3. Determine the gross weight of each package and record it in Block a, "Gross Wt," under the headings "Pkg. 1," "Pkg. 2," "Pkg. 3," etc. on the report form.

4. If the lot exceeds MAV requirements anytime while determining the gross weight of sample packages, the lot fails. When an inspector determines MAV requirements are exceeded they can stop the test at that point and take enforcement action without completing further test procedures as doing so will not change the outcome of the test. Jurisdictions may choose to complete all test procedures after it is determined the lot exceeds MAV requirements if they choose, but it is not necessary.

~~4.~~ **5.** Except for aerosol or other pressurized packages, open the sample packages, empty, clean, and dry them as appropriate for the packaging material.

~~5.~~ **6.** Determine the tare weight for each package in the initial tare sample and record the value in Block b, "Tare Wt" under the appropriate package number column.

~~6.~~ **7.** For sample sizes of 12 or more, subtract the individual tare weights from the respective package gross weights (Block a, minus Block b, on the report form) to obtain the net weight for each package and record each value in Block c, "Net Wt," on the report form.

~~7.~~ **8 .**Determine and record the "Range of Package Errors (Rc)" for the initial tare sample in Box 9 on the report form. The range is the difference between the package errors. (Amended 2002)

~~8.~~ **9 .**Determine and record the "Range of Tare Weights (Rt)" in Box 10.
~~9.~~ **10.** Compute the ratio Rc/Rt by dividing the value in Box 9 by the value in Box 10. Record the resulting value in Box 11. Rc and Rt must both be in the same unit of measure or both in dimensionless units.

~~10.~~ **11.** Determine and record in Box 12 the total number of tare samples to be opened for the tare determination from either Appendix A, Table 2-3. "Category A" or Table 2-4. "Category B."

- In the first column (titled Ratio of Rc/Rt), locate the range in which the computed Rc/Rt falls. Then, read across to the column headed with the appropriate sample size.
- If the total number of packages to open equals the number already opened, go to Step 11.
- If the total number of packages to open is greater than the number of packages already opened, compute the number of additional packages to open for the tare determination.
- Open and weigh as per Steps 3, 4, and 5 and go to Step 11. Enter the total number of tare samples in Box 12.
-

~~11.~~ **12.** Determine the average tare weight using the tare weight values for all the packages opened and record the average tare weight in Box 13.

Background/Discussion:
The issue of package gross weight being deficient above the MAV arises almost daily for inspectors during package inspections slowing their productivity. Sometimes the errors are so outrageous (marked 30 lb. Net Weight, Gross on Scale of 18 lb.) and this proposed change is to cut time spent when the outcome of the test in known. The most common enforcement action in our jurisdiction is a Stop Sale Order, which means the product cannot be sold in its current condition and disposition is up to the facility. (Repackage, relabel, return to vendor, donate, etc.) Our jurisdiction is currently completing full testing on products that fail MAV before a tare is deducted so a Stop Sale Order may be issued. Our interpretation of the handbook is any deviation from the testing outlined in Handbook 133 would fall to the category of audit testing where there is no provision for compliance action is allowed. We believe the change to Handbook 133 would not undermine the Purpose as defined in the Introduction of Handbook 133 and would enhance the process outlined in 1.3 Sampling Plans. There would be no changes in results of an inspection from adding this to the testing procedures while increasing productivity.

Our view is that the determination of conformance is already decided at this point (lot fails) and continuing testing to achieve an accurate tare is not going to change the outcome of the test. Not deducting tare would be in the packages favor. We are checking packages for Net Weight compliance, and when an evaluation of the results at any point of the testing results in a rejection of the lot the inspection is considered complete.

And,

Our view is the continuation of testing including disposing of product and cleaning tare properly can be a time consuming processes that lessens the number of inspections completed in a day when the ultimate result of the inspection is already known. Using the terminology "they can stop…" and "jurisdictions may choose" in the new wording allows jurisdictions that wish to continue so that they may make additional determinations the ability to do so while allowing others the flexibility to issue stop sale orders or take similar compliance actions where no other basis is needed for action against the product and no negative changes to the outcome can come from the discontinuing of the inspection. Excerpts of Handbook 133 references are listed in evidence.

The submitter also noted the following points to support this proposal:

1. I would not reference the tables as doing so will complicate future changes and could cause inconsistencies within NIST Handbook 133 in future editions.
2. At any one time there are many different editions of NIST Handbook 133 adopted by different jurisdictions, so MAV may not be the same for each jurisdiction if MAV requirements are modified.
3. Intent of proposal is developed with multiple jurisdictions. Jurisdictions hold to the theory that if it's not addressed, compliance action could be overturned by a court.
4. Correspondence with NIST supports the premise and that this is allowed, though not explicit in the Handbook. "As you know, HB 133 requires that a sample pass two requirements: Average and MAV. If either fails the lot fails. This means that during a test, if you weigh the lightest sample first and you find a negative error that exceeds the MAV the test is over. You are not required to complete the test by determining the errors of all the packages. The sample failed one of the two requirements that must be met. With that being said, some states programs require their inspectors to complete the test in its entirety. Part of the reason they say is that the Handbook is not explicit on this topic" David Sefcik.
5. NIST HB 133 teaches this as the procedure during their classes, which is the intent of the authors.
6. Multiple jurisdictions have made proposals that haven't made it past the developing phase showing a broader need.
7. This change would give readers clarity to why one jurisdiction test one way and another jurisdiction completes it differently, but both procedures are equally valid and complete.

On the Introduction page of Handbook 133, B. Purpose - This handbook has been prepared as a procedural guide for the compliance testing of net content statements on packaged goods. Compliance testing of packaged goods is the determination of the conformance of the results of the packaging, distribution, and retailing process (the packages) to specific legal requirements for net content declarations.

In addition Handbook 133, 1.3 Sampling Plans tells us: Inspections by weights and measures officials must provide the public with the greatest benefit at the lowest possible cost. Sampling reduces the time to inspect a lot of packages, so a greater number of items can be inspected. Net content inspection, using sampling plans for marketplace surveillance, protects consumers who cannot verify the net quantity of contents of the package they purchase. This ensures fair trade practices and maintains a competitive marketplace. It also encourages manufacturers, distributors, and retailers to follow good manufacturing and distribution practices.

The submitter recognized the following points in opposition when making this proposal:

1. Unclear guidance could lead to jurisdictions taking improper shortcuts in sampling.
2. Some jurisdictions have already commented that they do not feel the change is necessary.
3. It might be interpreted as we wish to inspect and reject a package by gross weight.
4. Their might be other parts of Federal Law other regulatory agency that might overrule this change.

Item NEW #3

Summary of comments considered by the regional committee (in writing or during the open hearings):

The submitter introduced this proposal that has two components – one involving failing a lot based on the gross weight not meeting the MAV, and the other component providing language in Handbook 133 clearly stating that if the MAV requirements are exceeded, an inspector can stop the test at that point and take enforcement action without completing further testing. A state regulator from Missouri commented that if you are testing high value items especially, isn't it better to minimize the number of fails required to fail the inspection. A NIST technical advisor stated that by law, packages must pass or fail based on net weight, not gross weight. If an MAV is suspected, then all the packages in the random sample may be weighed by gross weight. Test the lightest packages first to determine net weight and MAV compliance.

Item as proposed by the regional committee: ***(If different than agenda item)***

Committee recommendation to the region:

- ☐ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☒ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
- ☐ Developing Item on the NCWM Agenda *(To be developed by source)*

Reasons for the committee recommendation:

The committee decided to not accept this proposal since this is already being addressed in agenda item 260-7. The committee recommends the submitter of this proposal work with the submitter of item 260-7 from Ventura County to develop language that will incorporate their individual proposals into a single proposal.

COMPLETE SECTION BELOW FOLLOWING VOTING SESSION

Final updated or revised proposal from the region: ***(If different than regional committee recommendation)***

Regional recommendation to NCWM for item status:

- ☐ Voting Item on the NCWM Agenda
- ☐ Information Item on the NCWM Agenda
- ☒ Withdraw the Item from the NCWM Agenda (*In the case of new items, do not forward to NCWM)*
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- ☐ Unable to consider at this time *(Provide explanation in the "Additional Comments" section below)*

Regional Report to NCWM:

Please provide your report in this section exactly how you want it to appear in the NCWM reports to represent your region's considerations, support or opposition, and recommendations. **This will replace any previous reports from your region on this item.**

The submitter introduced this proposal that has two components – one involving failing a lot based on the gross weight not meeting the MAV, and the other component providing language in Handbook 133 clearly stating that if the MAV requirements are exceeded, an inspector can stop the test at that point and take enforcement action without completing further testing. A state regulator from Missouri commented that if you are testing high value items especially, isn't it better to minimize the number of fails required to fail the inspection. A NIST technical advisor stated that by law, packages must pass or fail based on net weight, not gross weight. If an MAV is suspected, then all the packages in the random sample may be weighed by gross weight. Test the lightest packages first to determine net weight and MAV compliance. The committee decided to not accept this proposal since this is already being addressed in agenda item 260-7. The committee recommends the submitter of this proposal work with the submitter of item 260-7 from Ventura County to develop language that will incorporate their individual proposals into a single proposal.

Mr. Doug Rathbun, Illinois | Committee Chair
Ms. Lori Jacobson, South Dakota | Member
Ms. Fran Elson-Houston, Ohio | Member
Mr. Leroy Raymond, Missouri | Member
Ms. Rebecca Richardson, Marc-IV | Associate Membership Representative
Mr. John Albert, Missouri | NCWM Representative

Laws and Regulations Committee