

Quantity Control

Program Manual



**State of California
Department of Food and Agriculture
Division of Measurement Standards
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DISCLAIMER

This manual contains information, methods, and procedures to assist weights and measures officials in their duties. It is not intended to supplant or supersede any law or regulation. Officials must check the cited reference prior to taking any enforcement action.

FORWARD

The State of California has adopted, as regulation*, the most current edition of the National Institute of Standards and Technology (NIST) HANDBOOK 133 (HB 133), CHECKING THE NET CONTENTS OF PACKAGED GOODS. As of January 2005, only editorial changes have been done to the Fourth Edition.

* California Business and Professions Code Section 12211
California Code of Regulations, Title 4, Division 9, Chapter 11, Section 4600



Handbook 133 provides procedures for sampling a “lot” to determine compliance with net weight laws and regulations, and specifies test procedures for certain commodities and types of commodities. This manual does not replace or duplicate Handbook 133; it is to be used in conjunction.

Procedures should be read completely and understood before testing any commodity. As Handbook 133 is a California regulation, all of it must be implemented exactly as written. Training by Division personnel may be required prior to actual commodity testing.



The most recent Draft of Handbook 133 is available from the web site for the National Institute of Standards and Technology.

<http://ts.nist.gov/ts/htdocs/230/235/pubs.htm>

4th Edition of NIST Handbook 133 (Microsoft Word and Adobe Acrobat PDF Formats)

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Division of Measurement Standards

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QUANTITY CONTROL MANUAL

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THE QUANTITY CONTROL PROGRAM

The primary function of weights and measures is to ensure that equity prevails in all commercial transactions involving quantity representations. The assurance of full weight and measure, and the elimination of fraud and misrepresentation have been objectives from the beginning of quantity determinations.

The Quantity Control Program fulfills this objective by monitoring commerce at all levels: retail, wholesale, and manufacturing, in order to minimize measurement errors in representations for both packaged and over-the-counter sales, and to ensure the accuracy of commodity pricing.

Californians spend in excess of 136 billion dollars in commodities subject to Quantity Control inspection each year. Thousands of purchases are made each year by the program to monitor sales price accuracy. The purchased items are then tested in county and state laboratories for quantity and compliance with labeling requirements.

BASIC FUNCTIONS OF THE PROGRAM

To serve the people of California by fair and equitable enforcement of all laws relating to Quantity Control. The functions are achieved by:

- A. Evaluation of marketplace conditions.
 - 1. Package inspections to verify the accuracy of the net content statements of:
 - (a) commodities packaged and sold on the same premises;
 - (b) wholesale and retail packages at the point of packaging, shipping, destination, or sale.
 - 2. Verification of accuracy in pricing commodities assuring that the purchaser is correctly charged the stated or advertised price of an item.
 - 3. Verification of accurate weight and pricing of bulk or nonpackaged commodities sold via a scale or other weighing or measuring device.
- B. Enforcement of the California Business and Professions Code relating to the accuracy of the weight and price of commodities sold by weight, measure or count, or labeled with a weight, measure or count.
- C. Enforcement of the Fair Packaging and Labeling Act.

BENEFITS

All segments of California society benefit from the program.

- A strong economic base is formed from which commerce may grow.
- The purchaser has confidence in label representations and has the ability to compare values.
- Customers and businesses are assured through monitoring that overcharges for goods are kept to a minimum.
- Business and industry have a foundation for fair competition in the marketplace.

HISTORY

The basis for the Quantity Control Program was provided for in 1850. The first session of the California Legislature passed an act to establish standard weights and measures in conformity with the standards established by Congress.

Through the years following this act, packaged commodities were inspected on a very limited basis. There were no sampling plans, and all packages in a lot had to be individually weighed or measured. For the most part, this was time consuming and not cost effective. In an effort to increase effectiveness, several amendments were enacted which enhanced or repealed parts of the original weights and measures law.

In December 1960, California adopted Sampling Procedures into the California Code of Regulations. The average net content of a large lot of packages could now be determined by checking a few samples from the entire lot leading to cost-effective inspections of large numbers of wholesale and retail packages.

California procedures were replaced with the 1996 adoption of the National Institute of Standards and Technology Handbook 133.

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GENERAL PROCEDURES

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AUDIT

GENERAL

Informal audits may be done at wholesale, retail, or distribution locations. The purpose is to quickly identify lots with questionable contents.

One to ten packages from each lot should be selected without preliminary screening. More packages may be selected when sampling a large lot, conducting a surveillance, or sampling from a production line. A package may be opened to determine a surveillance tare, or the tare may be estimated from similar packaging. (An estimate cannot be used for a Package Inspection Report. The actual tare must be determined according to the sampling plan being used.)

A lot is suspect if one or more of the packages are labeled with the gross weight or less, or if the labeled weight is below the surveillance weight.

NOTE:

AN AUDIT IS ONLY A FAST PRELIMINARY PROCEDURE INDICATING THE POSSIBILITY OF A SHORT WEIGHT OR SHORT MEASURE LOT.

A TEST MUST BE CONDUCTED ACCORDING TO THE CURRENT SAMPLING REGULATION AND A PACKAGE INSPECTION REPORT (PIR) MUST BE COMPLETED TO MAKE A LEGAL DETERMINATION AS TO THE STATUS OF THE LOT.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
AUDIT INSPECTION REPORT
48-091 (REV. 7/84)

COPY TO STATE

PACKER DISTRIBUTOR DEALER

COUNTY	MISSION		INSPECTOR	J. STEED		DATE	8-14-96		TIME	8:10 AM																					
LOCATION	SUPER DUPER DISCOUNT CENTER 109 SO. MAIN, ROCKRIDGE																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
-				1	1	1	1		1	1											4	6	3	1	6	4	4		1		
+	2	3	0					0		0	0	1	1	2	1	2	1									0	0	0	1		
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
-																															
+	1	0	1	0	0	0	3	8	0	1	2	1	1	1	1																
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	
-																															
+																															

LOT NO.	CATEGORY NO.	COMMODITY	PACKAGES ACCEPTED	PACKAGES SAMPLED	TARE
	1.02	CHOCOLATE BLAST CANDY BARS			.014 oz.
1		PEANUT & MARSHMALLOW, 0.4oz	76	2	
2		ALMOND CRUNCH, 0.6 oz	PIR	7	
10	1.03	SMEDLEY'S MILK CHOC. ASST. 1 1/2 LB	47	7	0.06 lb
17	1.04	CLOWN AWAY ICE CREAM DIP, 12oz	23	2	0.2oz
19	12.01	EVERGRID NAILS 8d, 2 LB	PIR	7	0.12 lb
26	12.06	YOLT IN LINE SPICES, 24 COUNT	96	2	
	11.03	BRIGHTLIGHT FIREPLACE MATCHES	48		
28		100 COUNT		7	
35		11 INCH		2	
37	11.12	GRAND PUP DOG FOOD 2 kg	24	2	NEEDS 10-LB LABEL
	11.02	KITTY DELIGHT CAT FOOD			
39		TURKEY DINNER 6 oz	18	2	0.5 oz
41		SEAFOOD SURPRISE 6 oz	26	2	
43		CHICKEN LIVER 6 oz	31	2	
TOTALS			342	44	

NO LEGAL ACTION CAN BE TAKEN AGAINST SHORTWEIGHT PACKAGES UNTIL THE SHORTAGE IS CONFIRMED BY A LEGAL INSPECTION PROCEDURE.

INSTRUCTIONS FOR USE OF AUDIT INSPECTION REPORT, FORM 49-001

1. Check the appropriate box to identify the inspection location: Packer, Distributor or Dealer. When conducting an inspection at a combination location (e.g., a market which is both the packer and dealer, or at a packing location which also handles the distribution) check the box most applicable.
2. Fill in your county, your name, the date, and the time.
3. Fill in the name and address of the establishment inspected. One audit form may be used for all lots inspected at a single location.
4. The grid is designed for recording package errors. It is used according to county policy.

If more than 90 different packages are sampled and recorded on the grid, you may record the additional errors on a second form or in the same manner on notepaper.

5. When the grid is used, lot numbers should be included to indicate which plus and minus recordings go with which lots.
6. If there is an indication of a shortage, more packages from that lot should be audited.

In the example, the first two packages audited from each of lots 3, 10, 19, and 28 indicate shortages. Five more packages from each lot were audited and the errors recorded in the grid following the original two packages. Lots 10 and 28 have predominantly plus errors; further inspection may be discontinued. An official inspection (see Sampling Plan, page 83) and a Package Inspection Report (PIR) should be completed for lots 3 and 19. "PIR" should be noted in the column headed "PACKAGES ACCEPTED", and a copy of the PIR attached to the Audit.

7. Fill in the exact category number for the commodity checked. Do not use general category numbers such as 7.00, 8.00, etc. If the inspection is at the packing location, use the category number followed by .50 (e.g., Bakery Audit, 3.50).
8. Fill in the type of commodity being checked. The unit of measure may also be entered.
9. Fill in the number of packages accepted for each category number and commodity.
10. Blank columns are for recording other information as required: packages sampled, packages rejected, etc.
11. Compute the total number of packages accepted.
12. **THIS IS ONLY A WORK SHEET!!** It is to be used as the first step in locating lots with possible shortages, and as a convenient way of gathering package information and statistical data. **NO LEGAL OR OFF SALE ACTION MAY BE TAKEN BY AUDIT. A TEST MUST BE CONDUCTED ACCORDING TO THE CURRENT SAMPLING REGULATION AND A PACKAGE INSPECTION REPORT (PIR) MUST BE COMPLETED TO MAKE A LEGAL DETERMINATION AS TO THE STATUS OF THE LOT.** (See page 83 for instructions for Sampling and Testing in order to make a legal determination and for completing a PIR.)

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
AUDIT INSPECTION REPORT
49-001 (REV. 7/94)

COPY TO STATE

PACKER DISTRIBUTOR DEALER

COUNTY	MISSION		INSPECTOR	G. PERI		DATE	8-10-96		TIME	1:40 PM																					
LOCATION	SUPER DUPER MKT #4											ADDRESS	3111 RIDGEWAY, EASTWOOD, CA 90949																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
-					3																										
+	0	0	1	1	0	2	0	0	1	4	3	0	0	0	1	1	0	0	7	6	1	1	1	0	3	2	2	0			
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
-			4														3														
+	1	1	0	0	2	0	1	1	1	2	6	8	6	1	4	5	9	8	8	6	2										
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	
-																															
+																															

LOT NO.	CATEGORY NO.	COMMODITY	PACKAGES ACCEPTED	PACKAGES SAMPLED
1-	4.50	MEAT AUDIT	1260	40
3		FULL CUT ROUND STEAK	PIR	
33		SHRIMP MEAT	PIR	
41-	3.50	BAKERY AUDIT	850	12
		ANGEL FOOD CAKE 18oz	PIR	
TOTALS			2110	52

NO LEGAL ACTION CAN BE TAKEN AGAINST SHORTWEIGHT PACKAGES UNTIL THE SHORTAGE IS CONFIRMED BY A LEGAL INSPECTION PROCEDURE.

AUDIT, PACKED ON PREMISES

MEAT COUNTER, BAKERY, DELI, OTHER

A. Equipment

1. Audit Form, 49-001.
2. Scale.
3. Calibrated test weights.
4. Calculator (optional).

B. Special Notes

1. This procedure may be used for all commodities weighed, labeled, and sold on the same premises.
2. Periodic inspections of packed-on-premises meat, poultry, seafood, bakery, and deli items should be conducted on a routine basis.
3. It is recommended that inspections be made at unannounced random intervals of not less than twice a year.
4. Use of a variable frequency of inspection plan is suggested to make the best use of available resources.

C Procedure

1. Identify yourself to the store management, explain the purpose of the visit, and "set up" in a location that will not interfere with store operations.
2. Whenever possible, the inspector should use his or her own scale to minimize inconvenience to the establishment.
3. Forty to sixty packages should be selected, each from a different lot. (As an alternative, one package from each available lot may be selected.) For this audit, a lot usually includes all items of the same product and code at the same location.

The package selected should be representative of the average condition of the lot, neither the wettest nor driest.

- 4 Each package may be weighed gross and the tare estimated to determine the probable net contents, or the package may be taken to the cutting or wrapping area, opened and the commodity weighed net. If the package is opened, care must be taken to prevent contamination and maintain sanitation. **Packages should never be opened in front of the counter.**

5. If the package's labeled weight is greater than the observed or estimated weight, or if the package's labeled weight is found to be the gross weight or less, the lot is questionable.
6. An official inspection using the appropriate sampling plan must be conducted and a PIR completed in order to make a legal determination as to the status of the lot. (See page 83 for instructions for Sampling and Testing in order to make a legal determination and for completing a PIR.)

The actual tare must be determined from the random sample packages selected for each lot inspected. An estimate cannot be used for a Package Inspection Report.

7. **In no case is the inspector to give, recommend, or approve a tare used or to be used by the establishment for any lot or package.**
8. Packages weighed and labeled at a different location should be recorded separately, not treated as part of the packed on premises audit.
9. A copy of all reports, both audits and PIR's, should be left with the establishment.
10. Before leaving, discuss the inspection with store management and leave copies of all inspection documents.

CHECKSTAND SALES PRICE INSPECTION

SCANNING SYSTEM, MANUAL ENTRY, AUTOMATED PRICE LOOK-UP (PLU), STOCK-KEEPING UNIT (SKU)

A. Equipment

1. Sales Price Report, Form 49-007, original and two copies.
2. Calculator (optional).
3. Calibrated one or two-pound weight (optional).
4. "Scanning Gun" (optional).

B. Special Notes

1. This procedure may be used to check the accuracy of prices charged when the establishment uses a device to scan a code, an automated price look-up method where codes (PLU, Price Look-Up; SKU, Stock Keeping Unit) are manually entered, or where a clerk "rings up" (manually keys in a price) the item price. It also includes an optional produce price code check.
2. If the price to be verified is for items weighed or measured at the time of sale, see Test Purchase procedure, page 169.
3. A device designed to read and record or to print the bar code (scanning gun) may be used for the inspection in lieu of taking all the items to the checkstand to be scanned. Use of a "gun" may not result in a receipt. Whatever method is used, a Subtotal Price Charged must be recorded on the inspection report.

ALL ITEMS WITH A PRICING DISCREPANCY MUST BE TAKEN TO A CHECKSTAND AND PHYSICALLY SCANNED, AND A RECEIPT MUST BE OBTAINED AS PROOF OF THE PRICE CHARGED.

C. Definitions

1. Price Charged: The price displayed on the customer view screen or printed on the receipt, whether the item is scanned, entered then voided, or purchased.
2. Correct Price: The lowest of the advertised, quoted, posted, or marked price. If there are no under or overcharges, this will be the same as the price charged. Be aware that store personnel may use this term with a different meaning.
3. Undercharge: When the price charged for an item is less than the correct price. The dollar value is determined by subtracting the correct price from the price charged.
4. Overcharge: When the price charged for an item is more than the correct price. The dollar value is determined by subtracting the correct price from the price charged.
5. Percent Overcharge: The dollar value of the overcharge divided by the correct price for that item then multiplied by 100.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
SALES PRICE REPORT
OC-49-007 (Rev. 5/91)

BUSINESS NAME: Super Duper Discount Center
ADDRESS: 109 So. Main
Rock Ridge

DATE: 11-28-96
TIME: 1:20 PM
SALE ADV. DATE: 11-26-96
PUBLICATION: Daily News

COUNTY: MISSION SCANNING ROUTINE COMPLAINT FOLLOW-UP

NO	COMMODITY	Sole Price		SHELF PRICE	ITEM PRICE	REG. PRICE	Spec. disp.		Tax		PRICE CHARGED	CORRECT PRICE	Error		OTHER INFORMATION
		adv.	in store				Y	N	Y	N			under chg.	over chg.	
1	BATMAN CAP	4.99		None	None	5.99		X	X	5.99	4.99		1.00	20	copy of ad over cap display
2	MICROMACHINE 4x4	2.49		3.19	2.49	4.19		X	X	3.19	2.49		0.70	28	
3	TRUCK UP NORGE DIS MARIAS BATTERY	49.95		49.95	None	69.95		X	X	69.95	49.95		20.00	40	
4	CANTREY HOUSE PAINT		15.97	None	None	4.19		X	X	13.97	15.97	2.00			
5	MIXED NUTS - ECONOMY TRUCK		40% off 15.97	40% off None	19.95	19.95		X	X	19.95	11.97		7.98	66	MARKED CLEARANCE 40% OFF REGULAR PRICE
SUBTOTAL						177.05					149.37				
TAX						12.39					10.46				
TOTAL						189.44					159.83				

REMARKS: Complaint - Overcharges on 11-26-96 for items 1, 2, 3, 5.
Complaint advised here and was given refund.
No correction, continuing overcharges.
COMMODITIES: PURCHASED RETURNED HELD FOR EVIDENCE

Operator/Agent: Steve M. Moore Title: Director Sealer: G. Grubb By: J. Stimp

1 REVIEWED AND RECEIVED A COPY OF THIS REPORT.

6. Algebraic Error (Total Error, TE): The difference between the total of all overcharges and the total of all undercharges. The total error may be either an overcharge (+) when the customer is asked to pay more than the correct price, or an undercharge (-) when the customer is asked to pay less than the correct price.
7. Percent Total Overcharge: When there is a total overcharge, this is the dollar value of the Algebraic Error (Total Error, TE) divided by the correct price subtotal, excluding sales tax and California Redemption Value (CRV), and then multiplied by 100.

D. General Procedures

1. For a typical supermarket location, approximately 30 items from throughout the store should be selected. Fewer items may be selected for smaller stores and more for larger establishments. About half of these should be represented as on-sale, price reduced, or be indicated in some manner that they are "special buys". These should include in-store specials, markdowns, or close-outs. Advertised items may be pre-selected using flyers or newspaper advertisements. Except for multi-buy items (items priced "two [or more] for a specific price") the sample should not include more than one of the same item. No deliberate effort should be made to select mismarked or mis-priced items.

Multi-buy discount items are considered to be one item. Using the example 3 for \$1.00, all three items count as one item because all three have to be purchased to receive the \$1.00 price.

If the establishment uses equipment to print a bar code on packages weighed and labeled on the premises (e.g., meat, deli, bakery), select an additional five or more of these packages for price verification.

2. When, in addition to conducting an inspection of the store, you are investigating a complaint, following-up on a suspect item, or questioning an item not part of the sample, these specific items should be selected and evaluated separately from the rest of the sample.
4. If you are going to identify yourself before having the prices computed or scanned, proceed with Section E - Disclosure Procedure. If you are conducting an undercover inspection, skip to Section F - Undercover Procedure, on page 17.

E. Disclosure Procedure

- E3. Place the sample items in a market basket. For the optional produce check, five additional items may be selected from the produce department. Do not place these in the basket, but record the identity, product code, and price per pound for later use. Take one of each type and size of produce bags or containers available for the customer's use. These will be used to verify the tare taken at the checkstand.
- E4. Contact the store management, explain the nature of the price inspection, and request the items in the basket be scanned, or entered in a manner that will give a void receipt showing a description of each item, price charged, and the total price excluding any sales tax. **Do not conduct the test in "Training Mode" or the "Manager's price checking mode." Some systems use a different database for pricing in these modes. Do not operate the equipment or scan the items yourself; store personnel must do this.**

STATE OF CALIFORNIA
 DEPARTMENT OF FOOD AND AGRICULTURE
 DIVISION OF MEASUREMENT STANDARDS
SALES PRICE REPORT
 CC-49-007 (REV. 5/91)

BUSINESS NAME: Super Duper Mkt #8
 ADDRESS: 1061 Green St
MiddleBerrougth, CA 90811

DATE: 11-07-96
 TIME: 1:35 PM
 SALE ADV. DATE: 11-02-96
 PUBLICATION: Money Saver

COUNTY: MISSION SCANNING ROUTINE COMPLAINT FOLLOW-UP

NO	COMMODITY	Scale Price		SHELF PRICE	ITEM PRICE	REG. PRICE	Spec. disp.		PRICE CHANGED	CORRECT PRICE	Error +		OTHER INFORMATION
		adv.	store				Y	N			Under chg.	Over chg.	
1	SPARKLE-BRITE TOOTH PASTE	0.47		0.67	None	0.67	X		0.67	0.47	0.20	42	SPECIAL GOOD DISPLAY-215 UNITS
2	Endo's Friend Tooth Paste			1.19	1.19	1.19	X	X	1.13	1.19	0.06	16	10 STORE DEMONSTRATIONS
3	THE BEST YOGURT	0.59		0.59	0.69	0.69	X	X	0.69	0.59	0.10	16	HAND MARKED - 1/2 PRICE, SKINNED AT REGULAR PRICE
4	RAMIREZ TOILETS	0.49		None	0.49	0.98	X	X	0.98	0.49			
5	SPOTS AWAY DETERGENT	3.69		3.99	3.99	3.99	X	X	3.99	3.69	0.30	8	MFG PRICE 11075 304 *
6	BABY WIPES	2.59		2.49	None	4K	X	X	2.49	2.49	-		
7	SUN COOLED PAPER	0.59		0.79	0.59	0.79	X	X	0.79	0.59	0.20	33	
REMARKS:													
COMMODITIES: <input checked="" type="checkbox"/> PURCHASED <input type="checkbox"/> RETURNED <input type="checkbox"/> HELD FOR EVIDENCE		SUBTOTAL		TAX		TOTAL		No. INSPECTED:		No. OVER CHG.:		No. UNDER CHG.:	
		72.80		4.55		77.35		30		4		1	
I REVIEWED AND RECEIVED A COPY OF THIS REPORT.		Owner/Seal <u>Milinda Sandoval</u>		Title <u>Mgr</u>		Sealer <u>A. Guzman</u>		By <u>G. Patel</u>					

- E5. After the items have been scanned and replaced in the basket, place the calibrated weight, along with one of the produce bags or containers on the scale. Ask the checker to charge for this as if it were one of the selected produce items. Check for entry of the correct item, weight, price per pound, computed price, and tare deduction. Continue with the remainder of the produce codes and containers.
- E6. Taking the receipt tape, return the items to the display shelves. As each item is replaced, check for agreement between the receipt, item price, shelf price, and "special" price. Record any overcharges or undercharges. It is an overcharge, if the scanned or entered price on the receipt is greater than the lowest of the posted, marked, or advertised price, excluding sales tax and CRV. An undercharge occurs if the receipt charge is less than the lowest of the above. Carefully note all critical information, such as the number of displays and the approximate number of overcharged or undercharged items on display.
- E7. Record on the Sale Price Report all available information for each item with any difference between the advertised, item or shelf prices, and the price charged.
- E8. Discuss the results of the inspection with the person in charge and have that person sign the form along with his or her title. Leave a copy with the store. Attach the receipt tape to your copy. Mail one copy, with a copy of the receipt attached, to the local DMS office.

**ALL PRICING ERRORS MUST BE CORRECTED BEFORE LEAVING THE STORE.
SEE CITATION PROCEDURE MANUAL FOR APPROPRIATE ENFORCEMENT
ACTION.**

F. Undercover Procedure

- F3. Place the sample items in a market basket. Inconspicuously record shelf prices or "special" prices. Produce items may be included.
- F4. Proceed through the checkstand as a normal customer. At this point you may identify yourself, ask that store management be contacted and proceed as in Disclosure Procedure, Step E6. If you wish to maintain undercover identity, purchase the items, and keep the receipt.
- F5. Leave the store to check weigh any produce items and complete the report. Compare the purchase price on the receipt with the advertised, item, or shelf prices recorded earlier. Record any overcharges or undercharges. It is an overcharge if the scanned price on the receipt is greater than the lowest of the posted, marked, or advertised price, excluding sales tax and CRV. An undercharge occurs if the receipt charge is less than the lowest of the above, excluding sales tax and CRV value.
- F6. Return to the store, or if undercover identity is to be maintained, have a different official go into the store. Review displays and any placards, representations, advertisements or flyers for items having a difference between the advertised, item or shelf prices, and the price charged. Record on the Sale Price Report all available information about items with differences.

- F7. Request that the person in charge meet with you. Review the results of the inspection and have that person sign the form along with his or her title. If the items are not to be purchased, have the sale voided and return the items to the shelf. Keep the receipt or a copy and attach it to your copy of the Sales Price Report. Leave a copy with the store. Mail one copy, with a copy of the receipt attached, to the local DMS office.

**ALL PRICING ERRORS MUST BE CORRECTED BEFORE LEAVING THE STORE.
SEE PAGE 16 OF THE CITATION PROCEDURE MANUAL FOR APPROPRIATE
ENFORCEMENT ACTION**

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STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

ORIGINAL TO OFFICE
YELLOW TO REFERRAL

COMPLAINT REPORT

41-018 (Rev. 1-86)

DATE RECEIVED	TIME
11-27-96	8:20AM
TELEPHONE NO.	
899-9165	

WHO	NAME	TELEPHONE NO.
	E. RICHARD SMITH	899-9165

ADDRESS
77 CALIFORNIA DR.

CITY	COUNTY
MIDDLEBOROUGH	MISSION

WHAT COMPLAINT DESCRIBED IN DETAIL
PURCHASED SEVEN ITEMS ADVERTISED IN DAILY NEWS AND ONE IN-STORE SPECIAL. OVERCHARGED FOUR ITEMS: BATMAN CAP - ADV \$ 4.99, CHARGED 5.99; MICROMACHINE 4x4 PICK-UP - ADV 2.49, CHARGED 3.19; NEVER-DIE MARINE BATTERY - ADV 49.95, CHARGED 69.95; MIXED NUTS - CLEARANCE 40% OFF, CHARGED FULL PRICE, 19.95 INSTEAD OF 11.97

PERSON AND DESCRIPTION							
NAME							
DEBBI (NAME TAG)							
SEX	RACE	AGE	HEIGHT	WEIGHT	HAIR	EYES	
F	C	20	5'4"	115	BROWN	BLUE	
DISTINGUISHING CHARACTERISTICS:							
VERY LONG WAVY HAIR							

I HAVE ALSO CONTACTED: Name D.A. SPECIAL SERVICES UNIT Phone 494-2180

WHERE	LOCATION	TELEPHONE NO.
	SUPER DUPEr DISCOUNT CENTER	UNKNOWN

ADDRESS
109 So. MAIN

CITY	COUNTY
ROCKRIDGE	MISSION

WHEN	TIME OF VIOLATION	DATE
	6:20 PM	11-26-96

RECEIVED BY	NAME	TITLE
	MARIANNE DELPERDANG	QC SPECIALIST

COMPLAINT REFERRED TO

NAME (DEPARTMENT, DIVISION, BUREAU, FUNCTION OR PERSON)
MISSION CO. WEIGHTS & MEASURES

ADDRESS	CITY	COUNTY	TELEPHONE NO.
100 SUNSET DR.	METRO	MISSION	498-1004

HOW FINAL DISPOSITION

SIGNED	TITLE	DATE

COMPLAINTS

Consumer or other agency complaints are recorded on the Complaint Report, Form 41-108. If the complaint is regulated by a different agency or concerns another jurisdiction, the form should be sent to the appropriate agency. A complaint covering more than one local jurisdiction should be referred to the area specialist or DMS in order to coordinate the investigation.

Complaints should have the highest priority.

Each complaint should be thoroughly investigated. Many occurrences with the potential of becoming major problems have been found and corrected as the result of anonymous complaints.

Information concerning the source of the complaint or the identity of the complainant does not have to be disclosed to the subject (individual or business) of the complaint. This information may be kept confidential.

At the completion of the investigation, be sure to notify all parties, including complainant, referring agency and your Area Specialist, as to the action, correction, or disposition of the complaint.

DOOR-TO-DOOR MEAT SALES COMPLAINTCOMPLAINANT: MARY JONESAddress: 2588 MISSION HILLS RD, GREENVALEPhone: Home 686-5175 Work 254-3000

SUBJECT:

Company Name: KANSAS CITY STEAK & SEAFOODSalesman's Name: JEFFDescription: M/F, Age 35-38, Height 6'1", Weight 185-195, Race C,Hair Color BLOND, Length SHORT, STYLED Eye Color BLUE, Glasses NO,Mustache/Beard YES, Complexion/Scars/Tattoos FAIROther Characteristics DIAMOND STUD, LEFT EAR LOBEVehicle Description: IMPORT PICK-UP, SMALL, LIGHTBROWN, CHEST FREEZER IN BACK Lic # _____ State CA

DETAILS OF SALE OR ATTEMPTED SALE

Date of first contact 10-5-96 Date of sale 10-5-96How did the salesman contact you, did you call them? DROVE UP DRIVE-
WAY TO WHERE WORKING IN GARDEN. DID NOT CALL.What was his reason for selling this to you? LEFT OVER FROM RESTAURANT
DELIVERY, GIVE A GOOD DEAL SO HE WOULD NOT HAVE TO TAKE
IT BACK TO WAREHOUSE.

How did he describe the meat; grade, quality, trim, where the beef came from?

RESTAURANT TRIM, CHOICE, CORN FED KANSAS BEEF,
ALL NATURAL, NO ADDITIVESHow did he describe the weight or amount of meat? 6 boxes ofSTEAKS, ABOUT 72 PIECES.

COMPLAINT

DOOR-TO-DOOR MEAT SALES

Door-to-door meat sales complaints are a recurring problem. The complaints generally concern false and misleading statements made during the sales presentation and the quality of the meat.

On investigation, usually it is found: (1) The meats have been sold by the box or case and not by weight; (2) If there were any weight representations, they were orally stated in a manner designed to mislead the buyer into believing there was more than is actually there; (3) The packages generally are mislabeled and do not comply with all regulations; (4) The Three-Day Notice of the right to rescind the purchase has not been given as required; (5) There is no business license, health permit, or local itinerant sales permit.

Investigations can be complex and time consuming, many times involving other agencies such as Police Departments, Sheriff's Offices, local Health Departments, or USDA. Frequently, the company is based out-of-state and sales have been made in more than one county. In some unethical companies, salespersons have extensive criminal histories, change identities, and claim to have been employed a short period of time and have no knowledge of the requirements. Principals claim to be employees and deny responsibility or knowledge. Generally, the correct corporate or business information is not on file and required permits have not been obtained.

It is recommended that all complaints be investigated and the strongest legal action be taken whenever these complaints have been sustained by investigation.

Notify DMS of any door-to-door sales activity as soon as possible. Your area specialist can assist in the investigation and can provide information as to prior violations or pending legal actions in other agencies.

A. Equipment

1. Door-To-Door Meat Sale Complaint Form.
2. Scale, calibrated test weights.
3. Calculator.

B. Procedure

1. Interview the complainant, face-to-face is preferable. Generally, let the complainant relate the details of the sale, then go back over the specific questions covered in the form. Be sure to record all details of the sale including any representations as to the reasons for the sale, quantity, origin and quality of the items, and any guarantees.
2. Inspect the cases, boxes, and packages of meats, poultry, or seafood. Check that each box and case (and individual cut if sold by the piece) is properly labeled with:

How was the price quoted; per box, per piece, per pound? \$2.50 PER PORTION, \$50 PER BOX, OR \$250 FOR A CASE OF 6 BOXES

What price per pound did you think you were paying? \$3.00/LB Why did you believe this? SAID IT WAS NORMALLY \$9.00/LB, BUT HE WOULD SELL IT FOR 1/3 OF THAT.

Did he sell the box that he showed? NO What was the reason for giving a different box? WOULD GET ME A FRESH ONE

Was there a label on the case? YES Was it visible before the sale? NO

Did he leave the boxes with you? NO What reason was given for not leaving the boxes? GETS 25¢ PER BOX WHEN HE RETURNS THEM

What did you purchase? 1 CASE OF 6 BOXES OF STEAKS

How much were you charged? \$250

Were you informed of your right to cancel the purchase? NO

Were you given a receipt or invoice? YES

Did you pay by cash, credit card, food stamps, or check? CHECK

Who was the check made out to? JEFF DOWNNEY

Do you have the boxes, invoice or (receipt), business card, (brochure), or your canceled check? YES May we make copies? YES

Would you be willing to testify to the information you have given? YES

ANY OTHER INFORMATION YOU WOULD LIKE TO ADD:

MEAT VERY TOUGH, HAS STRANGE SHELL, AND SOME IS FREEZER BURNT. DOES NOT LOOK LIKE THE SAME AS HE DISPLAYED BEFORE THE SALE. PHONED AND COMPLAINED. LADY ON PHONE SAID NO REFUNDS AND HUNG UP.

Mary Jones
Complainant

PAT McDERMOTT
Investigator

10-10-96
Date

- a. Name and address of responsible party.
- b. Identity of each type and cut.
- c. Net weight of each type and cut and the total net weight.
- d. Price per pound for each type and cut and the price per pound for the total net weight.

If the sale consisted of boxes of cuts sold in a case, both the individual boxes and the case must be completely labeled with all information. A box labeled 12/6 meaning 12 - 6 ounce portions is not acceptable.

If the packages are labeled with a price per pound, verify that the values correspond with the actual purchase price. It is a violation to label the package with an inflated price per pound then discount the sales price. The price per pound must be the actual sales price.

Even if pieces have been used, the packaging is still evidence of the violation. If agreeable to the complainant, take the boxes and cases and keep as evidence.

3. If possible, check weigh the items.
4. Compute the true price per pound based on the actual net weight received and the price paid.
5. Keep or make copies of any documents left with the complainant, including advertising material, receipts, canceled checks, price lists, business cards, Three-Day Notice, etc.
6. If possible, make a controlled purchase.

Many times the salesperson will leave a contact number with the complainant. It is acceptable to phone and set up an appointment saying you are interested in the meats a friend or neighbor purchased.

Listen carefully to representations about the items, ask questions, be a hard sell. Use a credit card or check for the purchase and after it has been accepted, identify yourself, seize the check or credit card receipt, boxes or cases of meats purchased, ask for identification from the salesperson, and issue a citation.

If the salesperson has a receipt book, ask for it and copy the names, addresses, and phone numbers of previous buyers. These buyers should also be interviewed, and restitution requested for the purchasers in any subsequent civil action.

It is recommended that you have a Police Officer or Deputy Sheriff in a position to overhear the sales presentation and come out to assist you when you identify yourself. Ask the officer to check for wants and warrants, and to issue a citation for any violations of local ordinances.

If you do not have citation authority, the officer may also cite for violations of the Business and Professions Code. Provide him or her with the code section numbers and description of the violations.

Each nonconforming box or case may be considered a separate count for each section violated.

If you wish to make an undercover purchase, contact your area specialist prior to making the purchase for assistance and about the availability of investigative funds.

C. List of Possible Violations

Citation or Criminal Complaint

- 1. B&P 12024 Selling in less quantity than represented - misdemeanor
- 2. B&P 12024.2 Unlawful computation of value - misdemeanor or infraction in certain circumstances
- 3. B&P 12024.5 Sale of meat, poultry or seafood other than by weight - misdemeanor
- 4. B&P 12024.55 Door-to-door meat sales, price per pound - misdemeanor
- 5. B&P 12611 Unlawful Acts: Selling, etc., commodity in non-conforming container or with non-conforming label - misdemeanor

Criminal Complaint (Citation under certain circumstances)

- 1. PC 484 (a) Money obtained by fraudulent representation - petty theft
- 2. PC 487.1 Value exceeds \$400.00 - grand theft
- 3. B&P 17500 False and misleading advertising

Civil Action

- 1. B&P 17500 False and misleading advertising
- 2. CC 17200 Unlawful business practice
- 3. CC 1689.5 Three-Day Notice to cancel
 CC 1689.6
 CC 1689.7

Copies of code sections may be obtained on the website; www.leginfo.ca.gov/calaw.html

A blank door-to-door sales complaint form follows on Pages 25 and 25.1.

SEND A COPY OF ANY COMPLAINTS AND INVESTIGATOR'S REPORTS TO THE AREA QUANTITY CONTROL SPECIALIST.

STATE OF CALIFORNIA

Division of Measurement Standards
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828-1812
(916) 229-3000
Fax (916) 229-3064

DOOR-TO-DOOR MEAT SALES COMPLAINT

Complainant: _____
Address: _____
Phone: Home: _____ Work: _____

Company Name: _____
Salesman's Name: _____
Description: M ___ F ___ Age: ___ Height: ___ Weight: ___ Race: ___
Hair Color: ___ Length: ___ Eye Color: ___ Glasses: ___
Other Characteristics: _____
Vehicle Description: _____

DETAILS OF SALE OR ATTEMPTED SALE:

Date of first contact: _____ Date of Sale: _____

How did the salesman contact you? (Did you call them, did you have an appointment?)

What was the salesman's reason for offering this to you?

How did he describe the meats? (Grade, quality, trim, type, where it came from, special processing, etc.)

How did he describe the weight or the amount of meat? _____

How was the price quoted? (Per box, per piece, per serving, per pound, per portion, etc.)

What price per pound did you think you were paying? _____. Why did you believe this was the price? _____

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DEPARTMENT OF FOOD AND AGRICULTURE

Division of Measurement Standards
 2550 Mariposa St., Rm. 3044
 Fresno, CA 93721
 (209) 445-5403
 FAX (209) 445-5286



December 10, 1996

TO: WEIGHTS AND MEASURES OFFICIALS IN AREA 4

Listed below are the category assignments for the First Quarter of 1997.

3.00 Bakery Goods - Canned, Fresh or Frozen
 9.00 Beverages
 15.00 Paper and Plastic Products

Each county should test items of local seasonal importance such as seeds, fertilizers, and agricultural chemicals. Also listed below are holiday items for each quarter. Please allot enough time on your calendar for checking these items. This will give more emphasis to seasonal items while they are being sold. Additionally, all items such as vegetables, fruits, nuts, crustaceans, etc., packaged in your county on a seasonal basis should be placed on your scheduling calendar.

<input checked="" type="checkbox"/>	1 st Quarter:	Valentine's Day	- Candy, Cards, Gifts
		St. Patrick's Day	- Corned Beef
		Easter	- Hams, Turkeys, Candy
<input type="checkbox"/>	2 nd Quarter:	Mother's Day	- Candy, Gifts
<input type="checkbox"/>	4 th Quarter:	Halloween	- Candy, Makeup Items
		Thanksgiving	- Turkey, Hams, Candies
		Christmas &	- Wrappings, Decorations,
		New Years	- Nuts, Candies, Turkeys,
			- Hams, Gift Packages

Sincerely,

Steve Clay
 Quantity Control Specialist II

COORDINATED COMMODITY INSPECTION PROGRAM

COMMODITY CATEGORY ASSIGNMENTS

The coordinated commodity inspection program is done to evaluate marketplace conditions, identify potential problems, and to ensure that every type of commodity is periodically inspected. Category assignments are given to area specialists quarterly. The assignments are selected: (1) according to the need to follow-up problem areas; (2) to inspect regional specialties and seasonal commodities; and (3) so that each category is periodically inspected by every region of the State.

Category assignment commodity items can be:

1. Audited at retail incidental to routine inspections.
2. Selected for purchase while conducting scanning or sales price inspections.
3. Inspected at the manufacturer, packer, or distributor.

Any shortages found should be followed up by testing according to Sampling Procedures, page 83. Shortages verified by Sampling Procedures should be handled according to the procedure for "Surveillance Requests", page 159.

INSPECTION PROCEDURE

Test according to the procedures in the National Institute of Standards and Technology Handbook 133 or this manual.

INSTRUCTIONS FOR COMMODITY TEST REPORT, FORM 49-005

Fill in all information in the heading and complete all the information in each column for each item as follows. If the item has more than one content statement (e.g., tortillas, three dozen, 2 lb) use a separate line for each content statement.

"CAT. NO.": Category Number - The commodity classification number used by California to designate the specific category of the item. Use the specific number: e.g., 2.06 (Cottage Cheese), not the general classification (2.00) or Audits-Point of Pack (2.50). Commodity classification numbers are listed on page 279.

"BRAND NAME": The trademark or name the commodity is marketed under (e.g., for Green Meadows Low Fat Cottage Cheese, the brand would be Green Meadows).

"COMMODITY": The complete identity of the product under test. In the above example, this would be "Low Fat Cottage Cheese" not just Cottage Cheese.

"RESPONSIBLE PARTY & ADDRESS": The statement of responsibility on the package; it may be the packer, manufacturer, distributor, or retailer.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
COMMODITY TEST REPORT
49-009 (Rev. 1/90)
COUNTY: MISSION

BUSINESS NAME: Super Duper Mkt. #8
ADDRESS: 1061 Green St
Middleborough, CA 90111
 RETAIL WHOLESALE PACKER/MANUFACTURER

DATE PURCHASED: 11-07-96
DATE INSPECTED: 11-09-96
NOTE IF SLACK FILL OR DECEPTIVE PACKAGE

LOT NO.	BRAND NAME	COMMODITY	RESPONSIBLE PARTY & ADDRESS	CODE(S)	PRICE	LABELLED QUANTITIES	UNIT OF MEASURE	GROSS WEIGHT	NET WEIGHT	DIFFERENCE	TARE WEIGHT	OTHER INFORMATION
100	SPARKLES - BRITE	TOOTH PASTE	NATIONAL MILK & BREAD CO DORFERT, MICH 20110	H0665-9165	\$ 0.47	18 02	0.0502	3.0502	36	35	1	1.302
112	Fido's	DOG TREATS	ALFREDI SPECIALTIES LOS ANGELES, CA 90015	E85112	\$ 1.19	18 02	1/8 02	21 5/8 02	144	156	12	2 1/2 02
207	TIE BERT	YOGURT - BERRY	AUGIE'S DAIRY DANA POINT, CA 94365	12-01-00	\$ 0.59	12 02	0.0502	12.1502	240	240	-	0.1502
311	RIVERVIEW	COCA COLA	SINAIANA INDUSTRIES MEMPHIS, TN 38185	A-15	\$ 0.49	24 02	0.102	22.7502	240	225	15	0.2502
400	SPORTS AWAY	LAUNDRY DETERGENT	JUNIOR, LTD. CHICAGO, IL 60611	876545-1147854	\$ 3.69	4 POUNDS	0.01 LB	4.86 LB	462	468	6	0.18 LB
106	BABY WIPER	CLEANING TISSUES	SOLIDON & SHAWNEY, INC P.O. BOX 57441	BA B9-C559951	\$ 2.49	36 TISSUES	COUNT	NA	36	36	-	NA
702	SUN	PEACH HALVES	SUN & MOON CANNING CO FT. LAUDERDALE, FL 33314	09-F-FA8422	\$ 0.59	18 02	1/4 02	19 1/4 02	72	71	1	1 1/2 02
503	NIGHT FLOWER	PAINT OIL	WINT LEE, 1815 RAPTUS SILVERDALE, IL 61571-001	6FC8590688	\$ 12.99	1/2 GAL	0.01 LB	4.11 LB	371	367	4	0.44 LB
902	DAK CASCAR	CASHEW	DAK CASCAR VINEYARD 15 BROADWAY LN, ROCKFORD	1979 SUNG MENTAL	\$ 13.99	750 ML	1 ML	NA	750	744	4	GROSS CONTAINMENT NET WT 4.15 LB
412	BIG RIDGE	NATURAL CHICKENS	ROYAL SUPERVIL, INC FARMVILLE, VA 28716	None	\$ 15.99	3 1/2 SACKS	2 5/8 IN.	NA	252	246	6	

REMARKS:

SI 8000 / 5.7201
WEIGHTS AND MEASURES OFFICIAL

“CODE(S)”: Any code or identifying marks on the package designating the part of the production this package is from. It may be a sell-by or pull-by date.

“PRICE”: The selling price when purchased at this location.

“LABELED NET CONTENTS”: The content statement exactly as written on the label (e.g., 8 oz not .5 lb or 1/2 lb).

“UNIT OF MEASURE”: The weight or measure value used to record errors and other information in whole numbers. The unit must be identified: .01 lb not just .01, 1 g, not just 1.

“RECORD IN UNITS OF MEASURE”: The values in the next four columns are to be recorded only in units of measure (UOM).

“LABELED NET CONT.”: The content statement converted to units of measure. If testing a liquid by weight, this will be the net control weight stated in units of measure: e.g., if using a unit of measure of 0.05 ounce for a package labeled 14 ounces, the total UOM would be 280.

$$(14 \div 0.05 = 280)$$

“MEASURED NET CONT.”: The actual weight or measure of the contents of the package as found by testing.

“ERROR” “+ or -”: The difference between the “LABELED NET CONTENT” and the “MEASURED NET CONTENT.” The “ERROR” is + if the “MEASURED NET CONTENT” is greater than the “LABELED NET CONTENT.” The “ERROR” is - if the “LABELED NET CONTENT” is greater.

“TARE WEIGHT”: The weight of the package or container not including the “MEASURED NET CONTENT.”

“OTHER INFORMATION”: Any other information pertinent to the commodity.

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DECEPTIVE CONTAINER DETERMINATIONS

The following procedures are taken from the Federal Food and Drug Net Quantity of Contents Compendium and can be helpful in reporting deceptive packaging violations (Section 12606 California Business and Professions Code).

GENERAL

While the problems of reporting results on deceptive containers are extremely diversified, a general pattern to be followed by all officials will be helpful. It is not presumed that instructions will cover all cases. The official will be left to exercise good judgment when omissions or additions in the outline are indicated. It is important that the summary sheet contains a clear and accurate description of the container together with drawings and/or photographs. A sample package should be submitted with the summary sheet. If a report is forwarded without a sample package, the summary sheet should contain a complete description and drawing or photographs.

DEFINITIONS

In order to avoid confusion and misunderstanding, the following definitions can be used for the purpose of reporting results:

- A. The term "**Headspace**" is the distance from the top of the container to the top of the product. In making this measurement, any extensions of the cover or lid above the body of the container are disregarded.
- B. The terms "**Volume of Container**," "**Internal Volume of Container**," and "**Capacity of Container**" are synonymous and mean the space occupied by the product plus the headspace. (Methods I and II below)
- C. The term "**Calculated Volume of Container**" means the internal volume (capacity) of the container obtained solely by calculation from dimensional measurements of length, height, and thickness.
- D. The terms "**Displacement Volume of Container**" and "**External Volume of Container**" are synonymous and refer solely to the external volume of the container exclusive of paneling, indentations, etc. (Method III)
- E. The term "**Apparent Displacement Volume of Container**" means the external volume of the container plus the volume due to paneling, indentations, etc. (Method IV)
- F. The terms "**False Bottom Volume of Container**," "**Raised Cover Volume of Container**," etc., mean the additional volumes which are added to the internal volume of the container by means of these devices.
- G. The term "**Maximum Volume of Product**" means the largest space occupied by the product after fluffing. (Method V)
- H. The term "**Minimum Volume of Product**" means the smallest space occupied by the product. (Method V)
- I. The term "**Average Volume of Product**" means the average of G and H.

LABORATORY EXAMINATION

It has been found that determination of volume by direct measurement is more accurate in most cases than calculated volume. This is due to the fact that many containers are not perfect geometric figures. Volumes, therefore, should be determined by direct measurement whenever possible and direct measurement should be used for all subsequent calculations. Calculated values, using dimensional measurements, may be used for check purposes and in cases where there is no doubt as to their accuracy.

Method I - (Volume of bottles, tin cans, etc.)

Run water at 20°C (68°F) directly into the container from a burette or other calibrated apparatus.

Method II - (Volume of cartons, baskets, etc.)

Pour mustard seed, turnip seed, or other small spherical seed directly into the container, tapping and shaking the container gently until level full. Transfer seed to graduated cylinder, tapping and shaking gently until there is no further decrease in volume.

Method III - (External volume of bottles, jars, tubes, etc.)

(a) By Weight:

Using a suitable balance, weigh the container full of water at 20°C in the air, and then weigh it submerged in water at 20°C (68°F). The difference in weight in avoirdupois ounces divided by the conversion factor 0.0352 is the displacement volume in cubic centimeters.

(b) By Volume:

Using a graduated cylinder containing a known amount of water at 20°C (68°F). submerge container and read the increase in volume.

Method IV - (Apparent displacement volume)

(a) By Weight:

Fill indentations with modeling clay (Permoplast) and proceed by Method III above. To fill indentations, remove labels and press in an excess of plastic. Excess plastic is removed and leveling accomplished by means of a knife blade held perpendicular to the plastic surface. All extraneous plastic is removed by means of a cloth; and weighings are then performed in the usual manner, although the container should not be placed in direct contact with balance pan.

(b) By Volume:

Run colored kerosene or a liquid with low surface tension at 20°C (68°F) into panels or depressions until level full. The external or displacement volume of the container plus the volume due to paneling or depressions is the apparent displacement volume.

Method V - Maximum and Minimum Volume of Product (not applicable to products where breakage will result).

The maximum and minimum volumes are determined on 2 ounces of the product; the space occupied by other weights being determined by direct proportion.

When extrapolating the maximum and minimum volumes from 2 ounces to x ounces, be sure to determine the total weight (x ounces) of the product in the container by direct weighing. Relying on the labeled weight of the commodity when computing these values can sometimes render incorrect results. If the contents of the container are greater than or less than the labeled weight, an inaccurate representation of the maximum and minimum volume in the container will occur.

Roll 2 ounces of the material back and forth on a sheet of paper 10 times. Fill into a 250 ml graduated cylinder without shaking or moving the cylinder. Level material in cylinder gently with a spatula and read maximum volume.

Tap cylinder 100 times and read volume. Tap 20 times and again read volume. Continue until 20 taps reduce the volume by less than 1 ml and read the minimum volume.

REPORT RESULTS AS FOLLOWS

The data desired on the summary sheet is illustrated below by typical examples. The determinations listed deal solely with deceptive container factors.

A. OVERSIZED CONTAINER (SLACK FILLED) (e.g., Grated Cheese)

1. Description of sample.
2. Headspace (as received).
3. Inside dimensions of container.
4. Volume of container: (direct) - (calculated).
5. Minimum volume occupied by product.
6. Maximum volume occupied by product.
7. Average volume occupied by product.
8. Percent fill of container (minimum volume).
9. Percent fill of container (maximum volume).
10. Percent fill of container (average volume).
11. Drawings or photographs of container and contents.
12. Sample to accompany summary sheet.

Illustration of Method for Reporting Results

The containers are of the shaker type and of uniform size. They are cylindrical in shape with tin ends and cardboard bodies. The bottom end is solid metal and indented .12 inch. The top end has 3 holes, each .44 inch in diameter, which are opened and closed by means of rotating the lid (not hermetically sealed). When received, the holes were covered with cellophane that must be removed before the cheese can be shaken out.

<u>headspace (inches)</u> (as received)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>Avg.</u>
	2.00	1.90	1.95	1.93	2.00	2.00	1.96

Inside dimensions of container = 2.30" diameter by 3.30" height

Volume of container (direct) = 224 ml

(calculated) = 13.68 cu. in. or 224.2 ml (see page 286 for conversion)

Minimum volume occupied by product = 93.7 ml

Maximum volume occupied by product = 124.9 ml

Average volume occupied by product = 109.33 ml

Fill of container (minimum volume) = 41.8%

Fill of container (maximum volume) = 55.8%

Fill of container (average volume) = 48.8%

B. OVERSIZED CARTON (container within carton) (e.g., Toothpaste)

1. Description of sample.
2. Distance from top of outside container to top of inside container.
3. Inside dimensions of outside container.
4. Volume of outside container: (direct) - (calculated).
5. Displacement volume of inside container.
6. Percent of height of outside container occupied by inside container.
7. Percent of volume of outside container occupied by inside container.
8. Drawings or photographs showing both containers.
9. Sample to accompany summary sheet.

Illustration of Method for Reporting Results

The package consists of tubes of toothpaste in rectangular cardboard cartons. The tubes and cardboard cartons are of uniform size. The tube has a screw top and the bottom of the tube is crimped. There are no circulars or other literature inside the carton.

Distance from top of outside container to tube = 1.60"

Inside dimensions of container = 6.40" x 1.68" x 1.16"

Volume of outside container (direct) = 204 ml
(calculated) = 12.47 cu. in. or 204.4 ml (see page 286)

Displacement volume of inside container = 52 ml

Height outside container occupied by inside container = 75.0%

Volume outside container occupied by inside container = 25.5%

C. FALSE BOTTOM CONTAINER (e.g., Candy)

1. Description of sample.
2. Distance from top of container to top of false bottom.
3. Total inside dimensions of container including false bottom.
4. False bottom dimensions (derived from 2 and 3).
5. Volume of container including false bottom: (direct) - (calculated).
6. False bottom volume.
7. Percent volume available for product.
8. Percent false bottom volume.
9. Drawings or photographs showing false bottom.
10. Sample to accompany summary sheet.

Illustration of Method for Reporting Results

The package is a cardboard box with extension edges (2/16 inch). It contains two layers of candy. The bottom layer has a W-shaped strip of cardboard so that it contains fewer pieces of candy than would be the case if this device were not used. The top layer contains 22 pieces of candy while the bottom layer contains 12 pieces. The box has a false bottom consisting of a sheet of cardboard supported by a .56-inch turn down side and end.

Distance from top of container to top of false bottom = 1.63"

Total inside dimensions of container including false bottom = 2.19" deep x 4.50" x 6.50"

False bottom dimensions (derived from preceding measurement) = 0.56" deep x 4.50" x 6.50"

Volume of container including false bottom (direct) = 1050 ml
(calculated) = 64.06 cu in or 1049.9 ml (see page 286)

False bottom volume = 269 ml

Percent volume available for product = 74.4%

Percent false bottom volume = 24.6%

D. INDENTED BOTTOM and RAISED COVER CONTAINER (e.g., Deodorant Cream)

1. Description of sample.
2. Overall height of container.
3. Height of cover above full container.
4. Depth of indented bottom.
5. Capacity of container.
6. Displacement volume of container.
7. Volume of indented bottom.
8. Apparent displacement volume.
9. Percent apparent displacement volume occupied by product.
10. Drawings or photographs of container.
11. Sample to accompany summary sheet.

Illustration of Method for Reporting Results

The package consists of a round, lithographed, metal box that fits snugly into a cardboard carton. The metal box has an indented bottom and a slip cover which extends above the contents of the box. The inside compartment, which is basin-shaped, contains a white perfumed cream.

Overall height of container = 0.64"

Height of cover above full container = 0.25"

Depth of indented bottom = 0.10"

Capacity of container = 9.0 ml

Displacement volume of container = 28.5 ml

Volume of indented volume = 5.2 ml

Apparent displacement volume = 33.7 ml

Percent apparent displacement volume occupied by product = 26.7%

NOTE: In the case of bottle measurements, the ratio of apparent displacement volume to capacity of bottle should always be included in the report.

Method VI - (For products such as breakfast cereals, canned nuts, etc.)

A Procedure for Determining Minimum and Maximum Bulk Density of Free-Flowing Food Products and Minimum and Maximum Percent of Fill.

PURPOSE

The method outlined below involves transferring the contents of a readily available standardized graduated container from which the volume of the contents can be read directly.

The inside of container is measured when empty, to the nearest 0.1 cm, so that the effects of bulge are eliminated. For a container containing a liner, determine the volume of the liner occupied in the container.

PROCEDURE

- A. Open the container and transfer its contents to a standard graduated glass cylinder of such size that untapped volume will occupy more than half of the capacity of the cylinder. (Fill as many times as is necessary to get the entire volume of product.) Before reading a volume, the top surface should be leveled. (A point midway between the highest and lowest point of the inclined surface may be used in place of leveling the surface.)
- B. Record this total volume as the maximum volume in cubic centimeters.
- C. Carefully pour out the product and divide into quarters. Transfer each quarter successively to the graduate cylinder, firmly tapping the container 5 times after addition of each quarter. When all of the product is transferred, or the cylinder is filled, continue tapping to obtain full settling -- when 5 taps result in additional settling of less than 2.0%. Fill cylinder as many times as is necessary to obtain the total settled volume of the contents (level top surface of contents as before). It is desirable to use a cylinder of such size that the four quarters will be contained in one filling.

NOTE: Tapping is accomplished by raising the cylinder vertically about 2" and then dropping onto a firm, level surface; impact should be sufficient to effect settling of the product but not so severe as to cause product breakage. The cylinder should be tapped onto a cork pad or corrugated cardboard paper.

- D. Record this total volume as the minimum volume in cubic centimeters.

- E. Determine the available volume of the container in the following manner: calculate the inside volume of the container in cubic centimeters.
- F. Calculate the percent fill as follows:

$$\frac{\text{Maximum volume of product in ml}}{\text{Available volume of container in ml}} \times 100 = \text{maximum \% fill}$$

$$\frac{\text{Minimum volume of product in ml}}{\text{Available volume of container in ml}} \times 100 = \text{minimum \% fill}$$

NOTE: Many products are fragile and subject to breakage. If excessive, breakage can significantly lower the apparent percent fill determined by the above method. If the percent fill for a particular lot of product appears low, the possibility of excessive breakage should be investigated.

SUGGESTED OPERATIONAL STEPS

Measuring volume and fill of container for free-flowing food products such as mixed nuts in cans, jars, etc., using Method VI.

- A. Determine gross weights of 10 full and intact containers.
- B. Open can from the top, using a can opener. Do not use key.
- C. Determine headspace on 5 containers (with liner in place).
- D. Determine maximum and minimum fill of 5 containers by the above procedure.
- E. Calculate apparent volume of containers, subtracting from the height the two double seams. Do not correct for indentations; assume ends (lids) to be flat.
- F.
 1. Determine water capacity of one container opened at the top.
 2. Refill the container to water capacity with the nut product, adding as required from contents of other containers. Add about a quarter of the estimated required quantity at a time and tap in the container as directed in Method V, last paragraph, page 33. The surface of the product should be level, and as near 3/16" below the top edge of the double seam as possible. Determine the weight of the contents.
- G. For the purpose of obtaining the volume of indentations, proceed as follows:

Determine the water capacity of one can from the top and one can from the bottom, using the countersink dimension as measured for the height of the double seam instead of 3/16" or titrate top and bottom indentations, using odorless kerosene or another liquid of equal or lower capillary action.

- H. Compute volume of indentations of the top and bottom lids by taking the difference between the calculated apparent volume and the water capacities as previously determined (e.g., calculated apparent volume minus water capacity determined from bottom equals volume of top indentation).
- I. Determine volume of corrugated liners, using the distance from trough to crest as thickness.
- J. Sketch cross section of container (side view).
- K. Submit 2 intact containers.
- L. Submit a color photograph of a representative portion of the nuts.
- M. Report results as in following format.

REPORTING FORMAT

- A. Net contents declared.
- B. Net contents found.
- C. Maximum volume of nuts.
- D. Minimum volume of nuts.
- E. Calculated apparent volume of can.
- F. Measured water capacity of can:
 1. Maximum weight the can will hold when completely filled to water capacity.
 2. Divide net contents (B) by (A) and multiply by 100 to obtain percent.
- G. Calculate available volume: (Subtract volume of bottom indentation from water capacity F).
- H. Volume occupied by corrugated liner.
- I. Volume of top indentation (countersink dimension).
- J. Volume of bottom indentations (countersink dimensions).
- K. Headspace.
- L. % Maximum fill based on:

Measured available volume	$[C/(F-I)] \times 100 =$
Calculated available volume	$(C/G) \times 100 =$
Calculated apparent volume	$(C/E) \times 100 =$
- M. % Minimum fill based on:

Measured available volume	$[D/(F-I)] \times 100 =$
Calculated available volume	$(D/G) \times 100 =$
Calculated apparent volume	$(D/E) \times 100 =$

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FORMS AND ROUTING

A. Audit Form, Notice of Violation, Sales Price Report

1. Original for County records.
2. Copy to your area Quantity Control Specialist.
3. Copy to the person in possession.

B. Package Inspection Report (PIR)

1. Original for County records.
2. Copy to your area Quantity Control Specialist.
3. Copy to the person in possession.
4. Copy to the county where the packer or warehouse facility is located.
5. If the lot has been ordered Off Sale and will be transported to another location:
 - a. Copy to the destination county.
 - b. Copy in the "Hold - Off Sale" card envelope.

C. Test Purchase/Sale Report, Commodity Test Report, Legal Action Report

1. Original for County records.
2. Copy to your area Quantity Control Specialist.

D. "Hold - Off Sale" Card

Attach the card to the lot, using the provided self-stick envelope. The Hold - Off Sale card is in a postcard format. The issuing agency is to place its name and address on the reverse side so that the card may be mailed back by the agency supervising the disposition of the lot.

E. Official Property Receipt

Available from your area Quantity Control Specialist. Used as a receipt for, and record of, property that is being taken by a weights and measures official. The white copy is given to the person from whom the property was taken. The canary copy is retained by the weights and measures official now in possession of the property, and the pink copy is attached to the property.

F. Labeling Violation Report and Inquiry

1. Original for County records.
2. Copy to your area Quantity Control Specialist.
3. Copy to the person in possession.
4. If the packages have been ordered Off Sale and will be transported to another location:
 - a. Copy to the destination county.
 - b. Copy in the "Hold - Off Sale" card envelope.
5. If the violation will be referred to another county or agency, in or out-of-state, complete the "Inquiry" section and send copies according to the following section, "Label Violations, Label Violation Report: Procedure and Routing."

G. Out-of-State Correspondence

Except for label violations covered under the section, "Labeling Violations, Proper Handling" on the following page, matters involving out-of-state correspondence should be handled through the Division of Measurement Standards.

NOTE: Please fill in all forms legibly, correctly, and completely.

Mail copies of all audits, inspection and violation reports, NOV's, and legal action reports to your local Quantity Control Specialist weekly.

LABEL VIOLATIONS

Label Violation Report; Procedure And Routing

Follow the steps in the section which best describes where the package was labeled and which agency regulates the commodity. Instructions for filling out the report begin on page 51. Examples of completed reports are on pages 53 through 56.

1. LABELED IN YOUR COUNTY

- Personally contact the party responsible for label compliance (usually this is the party in the Statement of Responsibility on the package) and supervise the correction.
- Send a copy of the completed Label Violation Report to your area Quantity Control Specialist. Note in the “remarks” section the corrective action taken by the responsible party.

Reports are kept in an information file at DMS in Sacramento.

2. LABELED IN CALIFORNIA, NOT REGULATED BY A FEDERAL AGENCY

The list, beginning on page 45, identifies these commodities with (CA).

- Complete the Labeling Violation Report, including the Inquiry Section.

In the inquiry section, the “Agency Violation Referred To” is the County Weights and Measures Office for the packing location. List your county name and address in the Section “To Receiving Agency...”

Attach or include a label, a copy of the label, or a diagram with the report.

- Send a copy of the completed Labeling Violation Report to the Sealer of the county where the packages are labeled. That county will contact the labeler and oversee the correction.
- Send a copy of the completed report to your area Quantity Control Specialist.

Reports are kept in an information file at DMS in Sacramento.

- In some situations additional copies may be required, see page 42.

3. LABELED IN CALIFORNIA AND REGULATED BY A FEDERAL AGENCY

The list, beginning on page 45, identifies the appropriate agency in parenthesis behind each category [(FTC), (FDA), (USDA), (EPA), and (UST)]. Agency addresses are listed on page 50 of this procedure.

- Complete the Labeling Violation Report, including the Inquiry Section.

In the inquiry section, list the federal agency as the “Agency Violation Referred To” and your county’s name and address in the Section “To Receiving Agency...”

Attach or include a label, a copy of the label, or a diagram with the report. The Food and Drug Administration (FDA) requires an actual label before action may be taken.

- Send a copy of the completed Labeling Violation Report to the Sealer of the county where the packages are labeled. That county will contact the labeler and oversee the correction.
- Send a copy of the completed report to the federal agency.
- Send a copy of the completed report to your area Quantity Control Specialist.
Reports are kept in an information file at DMS in Sacramento.
- In some situations additional copies may be required, see page 42.

4. LABELED **OUTSIDE** OF CALIFORNIA, **NOT** REGULATED BY A FEDERAL AGENCY

The list, beginning on page 45, identifies these commodities with (CA).

Complete the Labeling Violation Report, including the Inquiry Section.

- In the inquiry section, list the DMS Office for your area Quantity Control Specialist as the “Agency Violation Referred To” and your county name in the Section “To Receiving Agency...”

Attach or include a label, a copy of the label, or a diagram with the report.

- Send the completed Report to your area Quantity Control Specialist.

The Quantity Control Specialist will send a “violation notice” letter and copy of the Violation Report to the labeler and to the Weights and Measures Agency where the labeler is located. A copy of the letter will be sent to you for your county records.

Reports are kept in an information file at DMS in Sacramento.

- In some situations additional copies may be required, see page 42.

5. LABELED **OUTSIDE** CALIFORNIA **AND** REGULATED BY A FEDERAL AGENCY

The list, beginning on page 45, identifies the appropriate agency in parenthesis behind each category [(FTC), (FDA), (USDA), (EPA), and (UST)]. Agency addresses are listed on page 50 of this procedure.

- Complete the Labeling Violation Report, including the Inquiry Section.

In the inquiry section, list the federal agency as the “Agency Violation Referred To” and your county’s name and address in the Section “To Receiving Agency...”

Attach or include a label, a copy of the label, or a diagram with the report. The Food and Drug Administration (FDA) requires an actual label before action may be taken.

- Send the completed Report to your area Quantity Control Specialist.

The Quantity Control Specialist will send a “violation notice” letter and copy of the Violation Report to the labeler, to the Federal agency, and to the Weights and Measures Agency where the labeler is located. A copy of the letter will be sent to you for your county records.

Reports are kept in an information file at DMS in Sacramento.

- In some situations additional copies may be required, see page 42.

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Label Violation; Procedure For Correction

1. When a Label Violation Report has been referred to your county.

- Personally contact the responsible party. Determine how the violation will be corrected.
- If the packages have been ordered Off Sale, ensure that all packages are present.

Do not release the packages until the violation or violations have been corrected and the required information appears on the labels.

- If the violation is technical, e.g., letter size too small, incorrect abbreviation, etc.

Establish the time needed for correction and an estimate of the time required for the corrected packages to be in retail outlets.

- Notify the county or agency listed in the Inquiry Section as to the corrective action and required times.
- Notify your area Quantity Control Specialist as to the corrective action and required times.

2. When a violation is found on a package labeled at the inspection site.

- Complete the Label Violation Report in order to document the violation.
- Determine how the violation will be corrected
- If there is no net content statement, order the packages “Off Sale”

Do not release the packages until the violation or violations have been corrected and the required information appears on the labels.

- If the violation is technical, e.g., letter size too small, incorrect abbreviation, etc.

Establish the time needed for correction and an estimate of the time required for the corrected packages to be in retail outlets.

Send a copy of the report, including the corrective action, to your area Quantity Control Specialist.

FTC - Federal Trade Commission -- Designates commodities under jurisdiction of the Federal Trade Commission. (FPLA, Title 16, Part 500)

CA - Per Federal Trade Commission Interpretation -- Designates categories that have been excluded by the Commission in the light of legislative history of the definition of "consumer commodity." (Section 503.5.) These commodities are controlled by California laws only.

FDA - Food and Drug Administration -- Designates commodities subject to regulation by the Food and Drug Administration and under the portion of the FPLA administered by that agency or the Federal Food, Drug, and Cosmetic Act. (Section 10 (a)(3) and Section 7 of the FPLA.)

USDA - U.S. Department of Agriculture -- Designates commodities excluded from jurisdiction under Section 10(a) of the FPLA and subject to regulation by the Department of Agriculture.

EPA - Environmental Protection Agency -- Designates commodities excluded from jurisdiction under Section 10(a) of the FPLA and are subject to regulation by the Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act.

UST - U.S. Department of the Treasury -- Designates those commodities excluded from jurisdiction under Section 10(a) of the FPLA and subject to regulations administered by the Alcohol, Tobacco and Firearms Division, Internal Revenue Service, Department of the Treasury.

The list of commodities and commodity groups, beginning on the following page, is quite broad for some categories and quite specific for others. The list was prepared by the Federal Trade Commission and is the best reference currently possessed by the Division. Officials should familiarize themselves with the list and refer to it to ensure the appropriate regulations are followed for correct labeling. When it is not clear which agency should be contacted, consult your area Quantity Control Specialist.

Federal agency addresses are on page 50.

COMMODITIES

ADHESIVES AND SEALANTS: Pastes, glue, specialty adhesives and sealants, tapes including pressure sensitive, masking, electrical, binding, etc. (FTC)

ADHESIVE TAPE FOR BANDAGES (FDA)

AIR FRESHENERS AND DEODORIZERS (FTC)

ALCOHOLIC BEVERAGES (UST)

ALUMINUM CLOTHESLINE: Including plastic clothesline with a steel core (CA)

ANTIFREEZE (CA)

ARTIFICIAL FLOWERS AND PARTS (CA)

AUTOMOTIVE ACCESSORIES: Floor mats, seat covers, spare parts, etc. (CA)

AUTOMOTIVE CHEMICAL PRODUCTS: Auto polish, wax and finish conditioner, rubbing compound, tire paint, chrome polish, gasoline additives, etc. (CA)

BATH OIL AND BUBBLE BATH (FDA)

BICYCLE TIRES AND TUBES (CA)

BOOKS (CA)

BOTTLED GAS FOR COOKING OR HEATING (CA)

BRUSHES: Paint brushes, etc. (CA)

BROOMS AND MOPS: Glass, dish mops, floor mops, etc. (CA)

“BUG PROOF” SHELF PAPER (EPA)

CANDLE HOLDERS: Packaged without candles (CA)

CAMERAS (CA)

CHINAWARE (CA)

CHRISTMAS LIGHT SETS (CA) Note: Replacement or other bulbs sold separately are FTC.

CIGARETTE LIGHTERS (CA)

CLEANING DEVICES: Sponges, steel wool, scouring soap pads, chamois (FTC)

CLEANING COMPOUNDS: Liquid, powder, paste or cake (FTC)

CLOTHESPINS (CA)

CLOTHING AND WEARING APPAREL: Socks, gloves, shoelaces, underwear, etc. (CA)

COMPACTS AND MIRRORS (CA)

CONTAINERS: Paper (plain, waxed or plastic coated), foil, plastic, styrofoam, vacuum cleaner bags, etc. (FTC)

COSMETICS: Defined by Section 501(l) of the Food, Drug, and Cosmetic Act as “(1) articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance; and (2) articles intended for use as a component of any such articles; except that such term shall not include soap.” (FDA)

COTTON PUFFS, STERILIZED (FDA)

CRYSTAL WARE (CA)

DETERGENT BAR WITH A DRUG OR COSMETIC CLAIM (FDA)

DECORATIONS: Christmas, birthday, other holidays and special events (FTC)

DECORATIVE MAGNETS (CA)

DEVICES: Defined by Section 201(h) of the Food, Drug, and Cosmetic Act as “instruments, apparatus, and contrivances, including their components, parts and accessories, intended (1) for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; or (2) to affect the structure or any function of the body of man or other animals.” This category includes trusses, syringes, arch supports, etc. (FDA)

DIARIES AND CALENDARS (CA)

DISINFECTANTS (EPA)

DRUGS: Defined by Section 201(g)(l) of the Food, Drug, and Cosmetic Act as “(a) articles recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia, or official National Formulary, or any supplement to any of them; (b) articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; (c) articles (other than food) intended to affect the structure or any function of the body of man or other animals; and (d) articles intended for use as a component of any articles specified in clauses (a), (b) or (c); but does not include devices or their components, parts, or accessories.” (FDA)

DURABLE ARTICLES OR COMMODITIES (CA)

ELECTRICAL SUPPLIES: Light and flashlight bulbs, household batteries, fuses, etc. (FTC)

FIFRA COVERED PRODUCTS: Products subject to regulation under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) which is now administered by the Environmental Protection Agency. Normally the label will bear an EPA or USDA number if subject to. (EPA)

FINGERNAIL FILES (CA)

FLOWERS, FLOWER SEEDS, FERTILIZER AND FERTILIZER MATERIALS, PLANTS OR SHRUBS, GARDEN AND LAWN SUPPLIES (CA)

FOOD: Defined by Section 201(f) of the Food, Drug, and Cosmetic Act as “(1) articles used for food and drink for man or other animals; (2) chewing gum; and (3) articles used for components of any such article.” (FDA)

FOOD WRAPS: Plastic, cellophane, wax paper, paper, foil or other types (FTC)

FOUNTAIN PENS, MECHANICAL PENCILS, AND KINDRED PRODUCTS: Ballpoint pens, pencils, lead refills, etc. (CA)

GARDEN TOOLS: Hose, trowels, grass clippers, etc. (CA)

GERM KILLING OR GERM PROOFING PRODUCTS (EPA)

GIFT TAPE AND TIES (CA)

GIFT WRAPPING MATERIAL: Decorative wrapping foil, paper, cellophane, etc. (CA)

GLASSES AND GLASSWARE: Note, disposable plastic glasses are regulated by FTC (CA)

GLOVES (CA)

GREETING CARDS (CA)

HAIR COMBS, HAIR NETS, HAIR PINS (FDA)

HAND TOOLS (CA)

HANDICRAFT, SEWING THREAD, YARN (CA)

HARDWARE: Extension cords, thumbtacks, hose clamps, nails and screws, picture hangers, etc. (CA)

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HOUSEHOLD APPLIANCES, EQUIPMENT OR FURNISHINGS: Feather and down-filled products, synthetic-filled bed pillows, mattress pads, quilts, comforters, and decorative curtains (CA)

HOUSEHOLD SUPPLIES: Matches, candles, toothpicks, cordage (string, twine, rope, clothes-line, etc.), drinking straws, lighter fluid, propane torch fuel, flints, pipe cleaners, household lubricants, picnic supplies, sandpaper, emery paper, charcoal briquettes, chips, logs, dyes, tints, camera film, photo supplies, protective fabric sprays, plastic or paper drop cloths, etc. (FTC)

INK (CA)

INSECTICIDES: Insect repellents in any form, mothballs, etc. (EPA)

IRONING BOARD COVERS (CA)

JEWELRY (CA)

LAMBS WOOL DUSTERS (CA)

LAUNDRY SUPPLIES: Conditioners, softeners, ironing aids, distilled water, sizing, starches, bluing, bleaches, presoaks, enzymes, etc. (FTC)

LUGGAGE (CA)

MAGNETIC RECORDING TAPE: Reels, cassettes, and cartridges (CA)

MEAT AND MEAT PRODUCTS (USDA)

METAL PAILS (CA)

MOTOR OIL AND ADDITIVES (CA) Note: Household multipurpose oil is regulated by FTC.

MOUSE AND RAT TRAPS (CA)

MOUTHWASH (FDA)

MUSICAL INSTRUMENTS (CA)

PAINTS AND KINDRED PRODUCTS: Wallpaper, turpentine, putty, paint removers, glazing compounds, wood fillers, etc. (CA) Note: Caulking materials, patching plaster, spackling compound, and plastic wood are regulated by FTC.

PAINTINGS AND WALL PLAQUES (CA)

PAPER PRODUCTS: Toweling, napkins, tablecloths, place mats, facial tissues, bathroom tissues, disposable diapers, crepe paper, shelf paper, wrapping paper, eye glass tissues, etc. (FTC)

PET CARE SUPPLIES (CA)

PEWTER WARE (CA)

PHOTO ALBUMS (CA)

7n

PICTURES (CA)

PLASTIC BUCKETS AND GARBAGE CANS (CA)

PLASTIC SHELF LINING (CA)

PREMOISTENED TOWELETTES (FDA)

POLISHING CLOTHS (CA) Note: Polishing cloths impregnated with polish or chemicals (silicone, etc.) are regulated by FTC.

POULTRY AND POULTRY PRODUCTS (USDA)

RUBBER GLOVES (CA)

RUBBING ALCOHOL (FDA)

SAFETY FLARES (CA)

SAFETY PINS (CA)

SANITARY NAPKINS, TAMPONS (FDA)

SCHOOL SUPPLIES: Rulers, crayons, paper, pencils, etc. (CA)

SEEDS, AGRICULTURAL (USDA)

SELF-STICK PROTECTIVE FELT PADS (CA)

SEWING ACCESSORIES: Needles of any type, thimbles, kindred articles, etc. (CA)

SHAMPOO (FDA)

SHOELACES (CA)

SMALL ARMS AMMUNITION (CA)

SILVERWARE, STAINLESS STEEL WARE, AND PEWTER WARE (CA)

SMOKING PIPES (CA)

SOAP BARS WITH A DRUG CLAIM: Includes any claim for removing facial blemishes, etc. (FDA)

SOAPS AND DETERGENTS: Powder, flakes, chips, liquid, paste, cake, or tablet (FTC)

SOAP DISHES (CA)

SOUVENIRS (CA)

SPORTING GOODS (CA)

STATIONERY AND WRITING SUPPLIES: Loose-leaf binders, paper tablets, etc. (CA)

TEXTILES AND ITEMS OF WEARING APPAREL: Cloth laundry bags, towels, cheesecloth, shoe shine cloths, etc. (CA)

TOBACCO AND TOBACCO PRODUCTS (UST)

TOOTHPASTE (FDA)

TOYS (CA)

TYPEWRITER RIBBON (CA)

WAXES AND POLISHES: Powder, liquid, paste, cake, polish impregnated cloths, scratch removers, etc. (FTC)

WIRE OF ANY TYPE (CA)

WOODEN WARE (CA)

Reference: FTC Correspondence

FEDERAL AGENCIES AND ADDRESSES

UST

Product Compliance Branch
Bureau of Alcohol Tobacco and Firearms
Washington, D.C. 20226

FTC

Division of Enforcement
Bureau of Consumer Protection
Federal Trade Commission
Washington, D.C. 20580

EPA

Environmental Protection Agency
Office of Pesticide and Toxic
Substance Registration Division (TS-767 C)
401 M Street, SW
Washington, D.C. 20460

FDA

Division of Enforcement (HFS-607)
CFRAN FDA
5100 Paint Branch Parkway
College Park, MD 20740-3835

USDA (Meat and Poultry Products)

U.S. Department of Agriculture
Standards and Labeling Division (MPITS)
Washington, D.C. 20250

USDA (Seed Products)

Federal Seed Regulatory Branch
1400 Independence Avenue, SW
Washington, D.C. 20250

INSTRUCTIONS FOR LABELING VIOLATION REPORT, FORM 49-062

A. Heading

1. The Date and Time the inspection begins.
2. The full County name. S.C. could be Santa Clara or Santa Cruz
3. Report or Off Sale Number (optional): Used according to county policy. It is the number used by some jurisdictions to identify the inspection or for tracking off sale commodities.
4. Commodity Number: The number used by the State of California to designate the specific classification of the commodity under inspection. If the commodity is being inspected at the packing location, it is considered to be an audit and the number is the general classification followed by .50. For example, 2.00 is the general classification for Dairy Type Products. The commodity number for an inspection of packages of cottage cheese at the packing plant would be "2.50-Prepackaged Dairy Type Products (Audits)." If this same cottage cheese were to be inspected at the retail market, the classification would be "2.06-Cottage Cheese."

The next section contains information about the inspection and commodity. The information is used to identify and locate all parties having some control over the commodity. Always enter the complete name and address of all the parties. If at a retail location, it may be necessary to ask for or to check invoices to determine the distributor.

5. Packer is the name and address of the party actually placing the commodity into the package. Usually this is the Statement of Responsibility (i.e., the company name and address printed on the label).
 6. Distributor is the party transferring the commodity from the packer to the sales location. It may be the packer if the lot was a direct shipment to the sales location. The dealer's distribution center or warehouse is considered to be the distributor when the packer ships to that location.
 7. Dealer is the party selling the commodity. The location may be wholesale or retail location.
- 3 Check the box in front of Packer, Distributor, or Dealer to indicate which one of these parties is responsible for the accuracy of the label (i.e., the one that specified the content of the label).
- 3 Check the appropriate box following Packer, Distributor, and Dealer to indicate at which location the inspection is taking place.

B. Commodity information

1. Brand Name: Trademark or the name the commodity is marketed under (e.g., for Blue Seas Chunk Light Tuna, "Blue Seas" is the brand name).
2. Commodity: Identity of the commodity. In the above example, it is "Chunk Light Tuna."
3. Marked Contents: The content statement exactly as written on the package. If there is none, write "None."

4. Other Identification - Code/Symbols:

- a. Date: Any and all dates printed on the label. If there is more than one, record all of them and identify the type. Types of dates may include pack, best used by, or sell by.
- b. Other: Any code or identifying marks on the package designating the part of the production or the location that this commodity is from.

5. Container Description: A complete explanation of everything considered tare for this commodity. This is any part of the whole package and commodity not considered to be the net contents. The description should give enough detail so that someone not familiar with the package could recognize the container and tare.

C. Out-of-Compliance Section

- 1. Check the box in front of the type of violation(s), Identity, Responsibility, Quantity, and/or Other.
- 2. Check the box in front of the B&P Code and CCR section numbers of the violation(s). If the section is not listed, check the box in front of the blank line in the appropriate area and write in the section number. If in doubt, look up the sections.
- 3. Description: Write a brief description of the violation (e.g., **Qualifying Terms** “*may not use the words when packed*”).
- 4. Complete description of label: Attach the label or a copy of the label to the report. If this is not possible, draw a picture of the package and label in this area. Show the dimensions of the principal display panel, wording, and letter size used in the quantity statement.

This area may also be used for an explanation of the violation(s) or the needed corrections.

D. Off Sale Order: If the lot has been rejected as a result of the violation(s), it is ordered “Off Sale” by checking this box.

- 1. If CORRECTED AND RELEASED: Write in the date of release. This may be different from the inspection date. If the disposition is not determined, a follow-up will be necessary.
- 2. Number of Packages: The number of packages placed Off Sale.
- 3. The next line contains the signature and title of the Owner or Agent for the owner, of the lot inspected, and the names of the County Sealer and the Inspector conducting the inspection. The signature of the agent or owner signifies his or her understanding of the conditions of the Off Sale order. If there is no Off Sale as a result of the violation(s), it is not necessary to obtain the Owner or Agent’s signature.

E. Labeling Violation Inquiry

Complete this section when the correction or follow-up to this violation is being referred to a federal agency, DMS, or another county or agency. See pages 43 and 44. Be sure to complete your agency name and address so that you will receive notification of the correction or investigation results.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

COUNTY: MISSION

LABELING VIOLATION REPORT

DATE: 12-6-96

49-052 (Rev. 4/95)

CATEGORY NO.: 11.05

Check Person Responsible for Net Contents

Inspected At

<input checked="" type="checkbox"/> Packer	<u>KANE KEMICAL COMPANY</u>	Address	<u>167 ROAD D OUTLAND, TX 49608</u>
Distributor	<u>NATIONAL MERCHANDISING</u>	Address	<u>18557 INDUSTRIAL, BRIDGER NJ 88571</u>
Dealer	<u>SUPER DUDE DISCOUNT CENTER</u>	Address	<u>109 So. MAIN, ROCKRIDGE, CA</u>
Brand Name	<u>KEEP AWAY</u>	Commodity	<u>INSECT REPELLENT</u>
Other Identification - Code / Symbols	<u>79-00684 ZBN</u>	Container Description	<u>FIBERBOARD CAN, METAL ENDS</u>
Marked Contents	<u>1 LB. (16oz) 1/2 KILG</u>		

CHECK WHERE OUT OF COMPLIANCE WITH CALIFORNIA LAWS(S) OR REGULATION(S)

VIOLATION	BUSINESS & PROFESSIONS	CCR 4510	DESCRIPTION
<input type="checkbox"/> IDENTITY	<input type="checkbox"/> 12603(a) <input type="checkbox"/> 12603(a) <input type="checkbox"/>	<input type="checkbox"/> 3.1 <input type="checkbox"/> 4. <input type="checkbox"/>	Consumer Package Nonconsumer
<input checked="" type="checkbox"/> RESPONSIBILITY	<input checked="" type="checkbox"/> 12603(a) <input type="checkbox"/>	<input checked="" type="checkbox"/> 5. <input type="checkbox"/>	<u>NO STATEMENT OF RESPONSIBILITY</u>
<input checked="" type="checkbox"/> QUANTITY	<input type="checkbox"/> 12603(b) <input type="checkbox"/> 12603(b) <input type="checkbox"/> 12605 <input checked="" type="checkbox"/> 12602(a) <input type="checkbox"/> 12602(a) <input type="checkbox"/> 12603(b) <input checked="" type="checkbox"/> <u>12611</u> <input checked="" type="checkbox"/> <u>12611</u>	<input type="checkbox"/> 6.3 <input type="checkbox"/> 6.1 <input type="checkbox"/> 6.14 <input checked="" type="checkbox"/> 8.1 <input type="checkbox"/> 8.2.1. <input type="checkbox"/> 7.2 <input type="checkbox"/> <u>6.5 (f)</u> <input type="checkbox"/> <u>6.5 (f)</u>	None Metric & inch-pound Qualifying Terms Prominence & Placement <u>MUST BE ON PRINCIPAL DISPLAY PANEL</u> Letter Size Nonconsumer <u>SI NUMERICAL VALUES TO BE BTWN 1-1000</u> <u>INCORRECT SI SYMBOLS</u>
<input type="checkbox"/> OTHER			

Complete description of label; include area of principal display panel and package dimensions.

	<u>CONTAINER DIAMETER = 3 INCH</u>		<u>QUANTITY STATEMENT</u>
	<u>CONTAINER HEIGHT = 7 INCH</u>		<u>INSTRUCTIONS FOR USE</u>
	<u>PRINCIPAL DISPLAY PANEL</u>		<u>REAR PANEL</u>

THESE PACKAGE HAVE BEEN ORDERED OFF SALE UNDER PROVISION OF DIVISION 5, CHAPTER 6 OF THE CALIFORNIA BUS. & PROF. CODE. DO NOT MOVE OR IN ANY WAY DISPOSE WITHOUT WRITTEN AUTHORIZATION. CORRECTED AND RELEASED: / / Number of Packages: _____

Owner / Agent	Title	Sealer	By
		<u>G. GUERRA</u>	<u>E. PEEL</u>

LABELING VIOLATION INQUIRY DO NOT SEND THIS INQUIRY WITHOUT ACTUAL LABEL, DIAGRAM, PHOTO, ETC.

Agency Violation Referred To	<u>EPA OFFICE OF PESTICIDE AND SUBSTANCE REGISTRATION DIV (TS-767C)</u>
Address	<u>401 M STREET SW, WASHINGTON DC 20460</u>

TO RECEIVING AGENCY; UPON COMPLETION OF INVESTIGATION, PLEASE SUBMIT YOUR FINDINGS TO AGENCY

Agency	Office	Phone
<u>MISSION COUNTY DEPT OF WEIGHTS & MEASURES</u>	<u>E. PEEL</u>	<u>(713) 452-9768</u>
Address		
<u>100 SUNSET DR, METRO CA 96605</u>		

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

COUNTY: MISSION

DATE: 12-2-96

CATEGORY NO.: 15.13

LABELING VIOLATION REPORT

49-052 (Rev. 4/95)

Check Person Responsible for Net Contents		Inspected At
<input checked="" type="checkbox"/> Packer	<u>SMART BROS. INC 10213 FIRST ST</u>	<u>PACCO, CA 94021</u>
<input type="checkbox"/> Distributor	<u>TRI CITY PAPER BROKER HWY 40 #12</u>	<u>AYALA CA 98017</u>
<input type="checkbox"/> Dealer	<u>SUPER DUPEL DISCOUNT CENTER 109 So. MAINA,</u>	<u>ROCKRIDGE CA</u>
Brand Name	Commodity	Marked Contents
<u>SMART'S</u>	<u>TYPING PAPER</u>	<u>200</u>
Other Identification -- Code / Symbols	Container Description	
<u>None</u>	<u>FIBERBOARD BOX</u>	

CHECK WHERE OUT OF COMPLIANCE WITH CALIFORNIA LAWS(S) OR REGULATION(S)

VIOLATION	BUSINESS & PROFESSIONS	CCR 4510	DESCRIPTION
<input type="checkbox"/> IDENTITY	<input type="checkbox"/> 12603(a) <input type="checkbox"/> 12603(a) <input type="checkbox"/>	<input type="checkbox"/> 3.1 <input type="checkbox"/> 4. <input type="checkbox"/>	Consumer Package Nonconsumer
<input type="checkbox"/> RESPONSIBILITY	<input type="checkbox"/> 12603(a) <input type="checkbox"/>	<input type="checkbox"/> 5. <input type="checkbox"/>	
<input checked="" type="checkbox"/> QUANTITY	<input type="checkbox"/> 12603(b) <input type="checkbox"/> 12603(b) <input type="checkbox"/> 12605 <input checked="" type="checkbox"/> 12602(a) <input type="checkbox"/> 12602(a) <input type="checkbox"/> 12603(b) <input checked="" type="checkbox"/> 12602 <input checked="" type="checkbox"/> 12602	<input type="checkbox"/> 6.3 <input type="checkbox"/> 6.1 <input type="checkbox"/> 6.14 <input checked="" type="checkbox"/> 8.1.1 <input type="checkbox"/> 8.2.1. <input type="checkbox"/> 7.2 <input checked="" type="checkbox"/> 3.1.1 <input checked="" type="checkbox"/> 6.9	None Metric & inch-pound Qualifying Terms Prominence & Placement <u>REQUIRED IN LOWER 30%</u> Letter Size <u>OF PRINCIPAL DISPLAY</u> Nonconsumer <u>STATEMENT TO BE PARALLEL</u> <u>BOTH COUNT & DIMENSIONS REQUIRED</u>
<input type="checkbox"/> OTHER			

Complete description of label; include area of principal display panel and package dimensions.

	<p>NOTE: QUANTITY COMPLAINT: SEE DIR 12-2-96, AVG SHORTAGE 3.2 SHEETS / PACKAGE</p>
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THESE PACKAGE HAVE BEEN ORDERED OFF SALE UNDER PROVISION OF DIVISION 5, CHAPTER 6 OF THE CALIFORNIA BUS. & PROF. CODE.
DO NOT MOVE OR IN ANY WAY DISPOSE WITHOUT WRITTEN AUTHORIZATION. CORRECTED AND RELEASED: / / . Number of Packages: _____

Owner / Agent	Title	Sealer	By
		<u>G. GONZALES</u>	<u>J. STEED</u>

LABELING VIOLATION INQUIRY

DO NOT SEND THIS INQUIRY WITHOUT ACTUAL LABEL, DIAGRAM, PHOTO, ETC.

Agency Violation Referred To
<u>GOLDEN CO. DEPT WEIGHTS & MEASURES</u>
Address
<u>11882 GREEN ST. BERNAL, CA 94270</u>

TO RECEIVING AGENCY; UPON COMPLETION OF INVESTIGATION, PLEASE SUBMIT YOUR FINDINGS TO AGENCY

Agency	Officer
<u>MISSION COUNTY W M</u>	<u>J. STEED</u>
Address	Phone
<u>100 SUNSET DR. METRO CA 94605</u>	<u>(913) 452-9768</u>

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

COUNTY: MISSION

DATE: 12-5-96

CATEGORY NO.: 11.04

LABELING VIOLATION REPORT

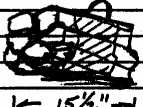
49-052 (Rev. 4/86)

Check Person Responsible for Net Contents		Inspected At
<input checked="" type="checkbox"/> Packer	<u>NORTHWOODS FORESTRY PRODUCTS</u>	Address <u>SITKA, WA</u>
Distributor	<u>HOME SUPPLY</u>	Address <u>8585 FOUNDRY WAY, BAYSIDE CA 98620</u>
Dealer		Address
Brand Name	Commodity	Marked Contents
<u>HEARTH SIDE</u>	<u>PREMIUM HARDWOOD</u>	<u>NONE</u>
Other Identification - Code / Symbols	Container Description	
<u>NAME</u>	<u>SHRINK WRAP BUNDLE OF SPLIT FIREWOOD</u>	

CHECK WHERE OUT OF COMPLIANCE WITH CALIFORNIA LAWS(S) OR REGULATION(S)

VIOLATION	BUSINESS & PROFESSIONS	CCR 4510	DESCRIPTION
<input type="checkbox"/> IDENTITY	<input type="checkbox"/> 12803(a) <input type="checkbox"/> 12803(a) <input type="checkbox"/>	<input type="checkbox"/> 3.1 <input type="checkbox"/> 4. <input type="checkbox"/>	Consumer Package Nonconsumer
<input checked="" type="checkbox"/> RESPONSIBILITY	<input checked="" type="checkbox"/> 12803(a) <input type="checkbox"/>	<input checked="" type="checkbox"/> 5. <input type="checkbox"/>	<u>NO ZIP, NO ADDRESS, NOT IN DIRECTORY</u>
<input checked="" type="checkbox"/> QUANTITY	<input checked="" type="checkbox"/> 12803(b) <input type="checkbox"/> 12803(b) <input type="checkbox"/> 12805 <input type="checkbox"/> 12802(a) <input type="checkbox"/> 12802(a) <input type="checkbox"/> 12803(b) <input type="checkbox"/>	<input checked="" type="checkbox"/> 6.3 <input type="checkbox"/> 6.1 <input type="checkbox"/> 6.14 <input type="checkbox"/> 8.1 <input type="checkbox"/> 8.2.1. <input type="checkbox"/> 7.2 <input type="checkbox"/>	None Metric & inch-pound Qualifying Terms Prominence & Placement Letter Size Nonconsumer
<input checked="" type="checkbox"/> OTHER	<u>12026</u>	<u>4534 (C)</u>	<u>NAME OR GROUP OF ORIGIN OF WOODS REQUIRED</u>

Complete description of label; include area of principal display panel and package dimensions.



15 1/2"

THESE PACKAGE HAVE BEEN ORDERED OFF SALE UNDER PROVISION OF DIVISION 5, CHAPTER 6 OF THE CALIFORNIA BUS. & PROF. CODE. DO NOT MOVE OR IN ANY WAY DISPOSE WITHOUT WRITTEN AUTHORIZATION. CORRECTED AND RELEASED: / / . Number of Packages: 1350

Owned Agent <u>[Signature]</u>	Title <u>[Signature]</u>	Sealer <u>[Signature]</u>	By <u>E. PEEL</u>
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LABELING VIOLATION INQUIRY DO NOT SEND THIS INQUIRY WITHOUT ACTUAL LABEL, DIAGRAM, PHOTO, ETC.

Agency Violation Referred To <u>DMS SACRAMENTO</u>
Address <u>8500 FRUITRIDGE RD. SACRAMENTO</u>

TO RECEIVING AGENCY; UPON COMPLETION OF INVESTIGATION, PLEASE SUBMIT YOUR FINDINGS TO AGENCY

Agency <u>MISSION Co. WEIGHTS & MEASURES</u>	Officer <u>E. PEEL</u>
Address	Phone <u>(713) 452-9768</u>

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

COUNTY: MISSION

DATE: 8-10-96

CATEGORY NO.: 3.01

LABELING VIOLATION REPORT

49-052 (Rev. 4/95)

Check Person Responsible for Net Contents

Inspected At

<input checked="" type="checkbox"/>	Packer <u>SUPER DUPER MKT #4</u>	Address <u>3111 RIDGEWAY, EASTWOOD CA 90949</u>	<input checked="" type="checkbox"/>
	Distributor	Address	
	Dealer	Address	
Brand Name <u>SUPER DUPER</u>		Commodity <u>DINNER ROLLS</u>	Marked Contents <u>ONE DOZEN</u>
Other Identification -- Code / Symbols <u>8-8-96</u>		Container Description <u>PLASTIC BAG, SPOT LABEL, TWIST TIE</u>	

CHECK WHERE OUT OF COMPLIANCE WITH CALIFORNIA LAWS(S) OR REGULATION(S)

VIOLATION	BUSINESS & PROFESSIONS	CCR 4510	DESCRIPTION
<input type="checkbox"/> IDENTITY	<input type="checkbox"/> 12603(a) <input type="checkbox"/> 12603(a) <input type="checkbox"/>	<input type="checkbox"/> 3.1 <input type="checkbox"/> 4. <input type="checkbox"/>	Consumer Package Nonconsumer
<input type="checkbox"/> RESPONSIBILITY	<input type="checkbox"/> 12603(a) <input type="checkbox"/>	<input type="checkbox"/> 5. <input type="checkbox"/>	
<input checked="" type="checkbox"/> QUANTITY	<input type="checkbox"/> 12603(b) <input type="checkbox"/> 12603(b) <input type="checkbox"/> 12605 <input type="checkbox"/> 12602(a) <input type="checkbox"/> 12602(a) <input type="checkbox"/> 12603(b) <input checked="" type="checkbox"/> <u>12602</u> <input type="checkbox"/>	<input type="checkbox"/> 6.3 <input type="checkbox"/> 6.1 <input type="checkbox"/> 6.14 <input type="checkbox"/> 8.1 <input type="checkbox"/> 8.2.1. <input type="checkbox"/> 7.2 <input checked="" type="checkbox"/> <u>6.4</u> <input type="checkbox"/>	None Metric & inch-pound. Qualifying Terms Prominence & Placement Letter Size Nonconsumer <u>NET WEIGHT REQUIRED *</u>
<input type="checkbox"/> OTHER			

Complete description of label; include area of principal display panel and package dimensions.

* COUNT ALONE DOES NOT PERMIT PRICE AND QUANTITY COMPARISONS AS ROLLS MAY BE HIGHLY VARIABLE IN DENSITY BUT APPEAR THE SAME. SECTION 6.4.1 PERMITS THE USE OF COUNT IN ADDITION TO NET WEIGHT

THESE PACKAGE HAVE BEEN ORDERED OFF SALE UNDER PROVISION OF DIVISION 5, CHAPTER 6 OF THE CALIFORNIA BUS. & PROF. CODE. DO NOT MOVE OR IN ANY WAY DISPOSE WITHOUT WRITTEN AUTHORIZATION. CORRECTED AND RELEASED: 8/10/96 Number of Packages: 47

Owner Agent <u>Officer Oeder</u>	Title <u>Bakery Rep</u>	Sealer <u>SEALED</u>	By <u>J. STEED</u>
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LABELING VIOLATION INQUIRY

DO NOT SEND THIS INQUIRY WITHOUT ACTUAL LABEL, DIAGRAM, PHOTO, ETC.

Agency Violation Referred To
Address

TO RECEIVING AGENCY; UPON COMPLETION OF INVESTIGATION, PLEASE SUBMIT YOUR FINDINGS TO AGENCY

Agency	Officer
Address	Phone

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BUSINESS NAME: SPECTER FOODS, LTD.
 ADDRESS: 1015 MONUMENT BLVD
HILL PARK, CA 91999
 TYPE LIC. & NO.: N/A
 PRODUCT/TYPE (e.g. ACME Soap, bakery, meat counter, etc.):
MEAT COUNTER, TEST PURCHASE, SCANNING
 SUBJECT: E. A. MARTIN
 ADDRESS: 384 EL DORADO BLVD
WESTFIELD, CA 98812
 TITLE/OCCUPATION: CEO
 DR. LIC. NO.: UNAVAILABLE D.O.B.: 10-31-67
 REMARKS: _____

PROGRAM: QC
 COUNTY: MISSION REGION: 9
 COURT DISTRICT: SO. MISSION MUNI
 CIVIL CRIMINAL, CITE NO.: _____
 OTHER: _____
 CASE NO.: 84-47-008 DOCKET NO.: MA012-9
 DATE (opened/issued/presented): 11-28-96
 VIOLATIONS: 12023, 12024, 12024.2 (b),
12024.3 (a), 17200, 17500
 TO (court/D.A.'s name/etc.): DDA D. FIELDING
 BY Investigator: ROGER MACEY

DISPOSITION DATE: 12-29-96 TRIAL HEARING, TYPE: PRETRIAL
 PLEA: GUILTY NOT GUILTY NO CONTEST FINE/PENALTY: \$ 54,000.00
 JUDGEMENT/SETTLEMENT: PLEA CHANGED TO NO CONTEST PENALTY ASSESSMENT: NA
 JUDGE: H. STONE COST RECOVERY: 5,940.68
 PROSECUTOR: D. FIELDING TOTAL: 59,940.68
 DEFENSE REPRESENTATIVE: M. SULLIVAN SUSPENDED: NA
 OTHER REPRESENTATIVE: _____ PROBATION TERMS: PERMIT INJUNCTION

ACTIVITIES CONSUMER COMPLAINT, UNDER INVESTIGATION, ARRAIGNMENT, TRIAL, ETC.

DATE	ACTION
10-26-96	CITE #12264 ISSUED TO SUPER DUPER #4 FOR GROSS WEIGHT & SHORT WEIGHT MEAT COUNTER DURING ROUTINE SURVEY
11-7-96	CITE #12385 ISSUED TO SUPER DUPER #8, SCANNING OVERCHARGES, TEST PURCHASE OVERCHARGES
11-28-96	CITABLE VIOLATIONS, SCANNING CONSUMER COMPLAINT INVESTIGATION AT SUPER DUPER DISCOUNT MART
11-28-96	CONF DDA, CIVIL COMPLAINT WILL BE FILED AGAINST SPECTER FOODS, PARENT CORP OF SUPER DUPER

42-038(est. 02/90)

STATE OF CALIFORNIA
 DEPARTMENT OF FOOD AND AGRICULTURE
 DIVISION OF MEASUREMENT STANDARDS
 LEGAL ACTION REPORT

LEGAL ACTION REPORT, FORM 42-038

This report is used to summarize the basic facts of any legal case: e.g., investigations or complaints resulting in, or that could result in, enforcement action, office or district attorney hearings, citations, and criminal or civil complaints. It replaces the Violation Hearing Report (40-002) and the court case status file card (49-027).

The form is printed on 8 x 10 stock without a heading so it may be folded and filed directly in the 5 x 8 status card file box used for permanent records. Reports submitted on other forms or in other formats cannot be entered into the database.

At the beginning of any investigation that could result in some type of legal action, a report should be filled out and a copy sent to your area Quantity Control Specialist. Updates may be added as necessary to keep the information up to date. Upon completion, a copy of the report along with copies of any dispositions, judgments or injunctions should be sent to the Area Specialist.

Information received from counties and area offices is combined into a central file at DMS-Sacramento. It is used to provide a history of actions against individuals or companies and to coordinate actions by different jurisdictions.

If you wish information about previous action against an individual or company, contact your area Quantity Control Specialist.

LEGAL ACTION REPORT INSTRUCTIONS

BUSINESS NAME, ADDRESS: The name and address of the party responsible for the violation(s). If this is an individual (e.g., Mary Jones selling firewood), list the business name as Jones, Mary Firewood. If the business is owned by another entity, list the parent company under Remarks. In many cases, a corporation or parent company will assume responsibility for the violations. If this occurs, do not change the original name, but list the details under Activities.

TYPE LIC. & NO.: If a business license or seller's permit is relevant to the legal action, enter the type and number here.

PRODUCT/TYPE: The commodity under investigation (e.g., Big Chicken fryers, or Acme soap). If this action is a result of violations found during a compliance test, list the type of inspection, meat counter, scanning, etc.

SUBJECT: The name of the individual party being held responsible for the violation or the name of the individual representing a business or corporation.

ADDRESS: The address to be entered for an individual is his or her home address, not the business address. If the subject is representing the business or corporation, the address should be the home company or corporate address.

TITLE/OCCUPATION: The SUBJECT'S title or occupation (e.g., Department Manager, Owner, CEO, etc.).

DR. LIC. NO., D.O.B.: The SUBJECT'S driver's license number (and state if other than California) and date of birth.

REMARKS: Any other useful information.

PROGRAM: QC for all quantity control cases.

COUNTY, REGION: Name of the county taking the action. Please do not abbreviate. SB could be Santa Barbara, San Benito, or San Bernardino. Region is the number used by DMS to identify the area of the State.

COURT DISTRICT: Name of the local court where the violation occurred or where the citation or the case will be filed.

TYPE OF LEGAL ACTION: Check the appropriate box. If a Notice to Appear (Citation or Cite) was issued, fill in the number. "Other" includes an investigation, DA's review, administrative hearing, probation violation, etc.

CASE NUMBER: Identification number used by the agency or the prosecutor.

DOCKET NUMBER: File number issued by the court clerk.

DATE: The date the investigation began (opened), the citation was issued, or the case was given to the prosecutor (presented).

VIOLATION(S): The abbreviation for the code and the section numbers, followed by the number of counts for each section (e.g., B&P 12024.3a, 4 counts).

TO: Prosecutor's name and title. For direct citations, write in "court" to indicate the subject was cited directly into court for arraignment.

BY: Investigator's name.

DISPOSITION

DATE: The date the case is settled, completed, or closed.

TRIAL or HEARING: Check the appropriate box:

If a hearing, state the type: office, administrative, DA's, pretrial conference, arraignment, etc.

If a trial, check the box for the plea entered.

The findings of the court or the type of agreement between parties (e.g., guilty, stipulated judgment, civil compromise, etc.).

List the names of the judge, prosecutor, defense attorney, and any other party.

FINE/PENALTY: Circle the one that applies, and follow with the dollar amount of the fine (criminal) or penalty (civil).

PENALTY ASSESSMENT: The dollar amount of any court imposed assessment in addition to the FINE\PENALTY.

COST RECOVERY: The dollar amount of investigative or other costs awarded by the court. Restitution may be listed here.

TOTAL: The total of the dollar amounts listed above.

SUSPENDED: May be the dollar amount of any fine or penalty suspended by the court or may be all or part of a jail term suspended by the court.

PROBATION: The length of time a subject is placed on probation by the court, or the length of time an injunction (civil) remains in place. If the injunction does not have a termination date, state "permanent injunction."

ACTIVITIES

This space is for listing progress during the investigation or action (e.g., arraignments, conferences, details of settlements, etc.).

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MOISTURE LOSS ALLOWANCE, DETERMINING WHEN TO APPLY

Most federal agencies require commodities under their jurisdiction be given consideration for reasonable moisture loss in good distribution.*

The Federal Food and Drug Administration (FDA); United States Department of Agriculture (USDA); United States Department of Treasury, Bureau of Alcohol, Tobacco and Firearms (UST); and Federal Trade Commission (FTC) allow for reasonable moisture loss occurring in the course of good distribution practices. The United States Supreme Court Rath decision requires local officials to recognize reasonable moisture loss during distribution for items regulated by these federal agencies.

When no other agency has concurrent jurisdiction, there is no moisture loss allowance for commodities regulated by California (CA), the Environmental Protection Agency (EPA), or USDA Seed Laws.

The list, beginning on page 64, indicates commodities controlled by each agency. Any commodity class with (CA) or (EPA) after it does **not** require moisture loss allowance consideration. Any commodity class with (FDA), (UST), (FTC), or (USDA), with the exception of agricultural seed, require that a moisture loss allowance be considered.

There are a variety of products where moisture loss normally will not occur. Some examples are dehydrated seasoning mixes, vacuum-packed coffee, or canned fruit. (FDA tests on cake mixes, flour mixes, and breakfast cereals concluded that they gain moisture in distribution.) Even though moisture loss is recognized by FDA, and page 65 indicates that foods are regulated by FDA, these types of products and their packaging make moisture loss in good distribution unlikely. In these cases, moisture loss would be a consideration and would be determined to be 0%.

Moisture loss occurs both through evaporation to the atmosphere as with laundry detergent, flour, noodles or beans, and through transfer from the product to or through the packaging material, either absorbed or free flowing, as with corned beef, hot dogs, poultry, fish, tofu, or bacon.

* If a commodity has been improperly handled (e.g., held at an incorrect temperature, offered for sale after the sell by date, etc.) "good distribution" does not exist and moisture loss allowance is not considered. Investigation is necessary to determine the responsible party; usually it will be the one who did not maintain the "good distribution practices."

Examples: Whether to consider moisture loss and how to determine the value to be given.

- A. Bottled Glue: An official is testing bottled glue at a stationery supply store. Checking the list on page 64, he finds glue is subject to moisture loss allowance consideration because it is regulated by the Federal Trade Commission (FTC). The bottle appears to be sealed; moisture loss is not likely. A reasonable moisture loss allowance (MLA) would be 0%.
- B. Snail and Earwig Bait: An official is testing the net contents of snail and earwig bait. According to the list of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) covered products (page 66) EPA has concurrent jurisdiction. EPA regulations specifically require an accurate net content declaration with no allowances for moisture loss, so there is no MLA for this product.

- C. Water-Added Hams: An official is testing water-added hams from the packaging line at the point of pack. Even though hams are under USDA jurisdiction, moisture loss allowance consideration does **not** apply since the packages have not yet entered into distribution. The official would use dry tare for the inspection.
- D. Dried Fruit: An official receives a complaint concerning dried apricots, and finds this brand is being distributed by a local produce mart. Since food or drink for man or animal is regulated by FDA and the dried apricots have entered into distribution, moisture loss must be considered. The official refers to the FDA recommended moisture allowances (page 68) and finds 3% is recommended for dried fruits and vegetables.
- E. Bars of Soap: Soap is under FTC regulation (page 66) and is subject to moisture loss allowance. However, FTC has not recommended any allowances nor is there an established gray area for soap. The official has not tested this product in the lab for moisture loss, nor is there any evidence of testing or studies done by other officials.

Where comprehensive test data is not available for reference, experience with similar commodities or inferences drawn from testing other brands or package sizes can still form the basis for establishing a “reasonable” allowance to permit testing of a commodity that has entered distribution.

The official should be prepared to discuss his or her reasoning with other officials and with the manufacturer in order to develop further information about the product’s moisture loss characteristics. It should be noted that the date of pack and the date distribution begins may be quite different.

- F. Freshly Baked Bread at the Bakery: The Food and Drug Administration (FDA) recommends percentages for moisture loss allowances for certain foods in distribution (page 68). It also provides for moisture loss allowances prior to distribution under specific conditions when the packer provides “Acceptable Data.” The criteria for determining “Acceptable Data” is on page 68. If “Acceptable Data” is not presented, moisture loss allowance is not given prior to distribution.

Note: When questions or doubts arise, and it is expedient to continue inspection, try to contact your area Quantity Control Specialist. If this is not possible, it is probably best to select a “reasonable” allowance for moisture loss using your best judgment, resume the inspection and take appropriate action. It is advisable to do follow-up tests of the product to verify that the allowance given is reasonable.

COMMODITIES WITH MOISTURE LOSS ALLOWANCE CONSIDERATION

Adhesives and Sealants (FTC)

1. Pastes
2. Glue
3. Specialty adhesives and sealants, including solder

Air Fresheners and Deodorizers (FTC)

Alcoholic Beverages (UST)

Bath Oil and Bubble Bath (FDA)**Cosmetics (FDA)**

Cosmetics. Defined by Section 501(l) of the Food, Drug, and Cosmetic Act as “(1) articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance; and (2) articles intended for use as a component of any such articles; except that such term shall not include soap.”

Cleaning Compounds (FTC)

1. Liquid
2. Powder
3. Paste or cake
4. Other

Devices (FDA)

Devices. Defined by Section 201(h) of the Food, Drug, and Cosmetic Act as “instruments, apparatus, and contrivances, including their components, parts and accessories, intended (1) for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; or (2) to affect the structure or any function of the body of man or other animals.”

Drugs (FDA)

Drugs. Defined by Section 201(g)(l) of the Food, Drug, and Cosmetic Act as “(a) articles recognized in the official United States Pharmacopoeia, official Homeopathic Pharmacopoeia, or official National Formulary, or any supplement to any of them; and (b) articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; and (c) articles (other than food) intended to affect the structure or any function of the body of man or other animals, and (d) articles intended for use as a component of any articles specified in a clause (a), (b) or (c); but does not include devices or their components, parts, or accessories.”

Food (FDA)

Food. Defined by Section 201(f) of the Food, Drug, and Cosmetic Act as “(1) articles used for food and drink for man or other animals; (2) chewing gum; and (3) articles used for components of any such article.”

Household Supplies (FTC)

1. Lighter fuel, flints, pipe cleaners, etc.
2. Household lubricants
3. Picnic supplies
4. Charcoal briquettes, chips, logs, etc.
5. Dyes and tints
6. Protective fabric sprays
7. Other (e.g., plastic or paper drop cloths)

Laundry Supplies (FTC)

1. Conditioners and softeners, ironing aids, distilled water
2. Sizing and starches
3. Bluing and bleaches
4. Presoaks, enzymes, etc.
5. Other

Meat and Meat Products (USDA)

Mouthwash (FDA)

Poultry and Poultry Products (USDA)

Rubbing Alcohol (FDA)

Shampoo (FDA)

Soaps and Detergents (FTC)

If there is a drug or cosmetic claim such as “removes blemishes,” it is regulated by (FDA).

1. Powder, flakes, chips, etc.
2. Liquid
3. Paste, cake, or tablet
4. Other

Tobacco and Tobacco Products (UST)

Toothpaste (FDA)

Waxes and Polishes (FTC)

1. Powder
2. Liquid
3. Paste and cake
4. Other (e.g., polish impregnated cloths, scratch removers, etc.)

COMMODITIES WITH NO MOISTURE LOSS ALLOWANCE CONSIDERATION

Antifreeze (CA)

Automotive Chemical Products (CA)

Including auto polish, wax and finish conditioner, rubbing compound, tire paint, chrome polish, gasoline additives, etc.

Bottled Gas for Cooking or Heating (CA)

Disinfectants (EPA)

FIFRA Covered Products (EPA)

Products subject to regulation under the Federal Insecticide, Fungicide, and Rodenticide Act, which is now administered by the Environmental Protection Agency. Normally, the label will bear an EPA or USDA number if subject to FIFRA.

Flowers, Flower Seeds, Fertilizer, and Fertilizer Materials, Plants or Shrubs, Garden and Lawn Supplies (CA)

Germ-Killing or Germ-Proofing Products (EPA)

Ink (CA)

Insecticides (EPA)

Including insect repellents in any form, mothballs, etc.

Motor Oil (CA)

Including additives.

Paints and Kindred Products (CA)

Including wallpaper, turpentine, putty, paint removers, glazing compounds, wood fillers, etc.

Pet Care Supplies (CA)

Seeds, Agricultural (USDA)

Sporting Goods (CA)

Including fish baits, gun powder, gun oil, etc.

Toys (CA)

Including play dough, finger paints, etc.

Reference: FTC Correspondence

Food and Drug Administration (FDA) Recommends the Following Moisture Loss Allowances for These Foods

1% Fresh baked breads, buns, rolls, and muffins when tested after the end of the packing day.

Frozen fruits and vegetables when tested seven or more days after the end of the packing day.

3% Bakery products other than fresh breads, buns, rolls, and muffins when tested after the end of the packing day.

Fresh or dried fruits and vegetables, cheese and cheese products, pasta, rice, and coffee beans when tested seven or more days after the end of the packing day.

A moisture loss allowance (MLA) is given to the foods listed above when they are in distribution and is given at the packing location when acceptable data has been provided by the packer. Additionally, if the commodity is in distribution but is inspected prior to the time specified, the packer must present acceptable data documenting moisture loss before any MLA is permitted.

The criteria for determining “Acceptable Data” follows. If “Acceptable Data” is not presented, moisture loss allowance is not given before the specified time or prior to distribution.

Acceptable Data for Moisture Loss Allowance at the Packing Location (FDA)

The data must be computed using the average moisture loss determined on a daily basis in environmental conditions similar to those that exist when the product is being inspected.

At least three sample control lots consisting of at least 48 randomly selected packages must be used to develop the moisture loss data. The three sample control lots must be placed at various locations in the storage site. Each sample must be stored under the same conditions as are typical for the product. Moisture loss data obtained by removing the individual packages from shipping cases and storing them in a laboratory would not be acceptable.

The weight of each package in each of the sample control lots is determined every day for seven days, except that fresh bakery products are weighed hourly. The average moisture loss value must be computed from the three sample control lots with a 95% prediction interval.

Example: An official visits a pet food plant in Los Angeles in the middle of July to conduct a point-of-pack inspection. If the product tested had been packaged five days before the inspection and is found underweight, the moisture loss data must reflect the loss that would occur in July, not January. If the product is typically placed in a sealed case on a pallet and shrink wrapped, the sample lots must be stored under the same conditions.

Food and Drug Administration (FDA) Moisture Loss Allowances (MLA) for Flour and Dry Pet Food

Moisture Loss Allowances (MLA): The National Institute of Standards and Technology in conjunction with members of the National Conference on Weights and Measures and industry have established moisture loss allowances for certain commodities. These moisture loss allowances are given percentages where shortages within these percentages may have been caused by unavoidable moisture lost in good distribution.

As of April 2000, FDA regulated commodities having a moisture loss allowance greater than 0% are:

Flour 3% and Dry Pet Food 3% (pet food packaged in paperboard boxes or kraft paper bags and has a moisture content of 13% or less at the time of pack. Moisture content information is on the ingredient label.)

Moisture content testing may be used to determine if a shortage found to be within the MLA is due to moisture loss.

Inspections in the Packing Plant: There is no MLA when the commodity is tested at the packing plant; however, there may be consideration for moisture loss. See the previous page for parameters for acceptable data moisture loss consideration in the packing plant.

**United States Department of Food and Agriculture (USDA)
Moisture Loss Allowance (MLA) Consideration**

Moisture Loss Allowances (MLA): The National Institute of Standards and Technology in conjunction with members of the National Conference on Weights and Measures and industry have established moisture loss allowances for certain commodities. A moisture loss allowance is a given percentage where shortages within that percentage may have been caused by unavoidable moisture lost in good distribution. Wet tare is used for testing commodities with a MLA greater than 0%.

As of February 1997, USDA regulated commodities having a moisture loss allowance greater than 0% are:

FRESH POULTRY 3%

(whole or cut-up with no further processing or additives and having a temperature above 26°F, this is product that yields or gives when pushed with a person's thumb)

FRANKS AND HOT DOGS 2-1/2%

(made from meat or poultry)

WHEN THERE IS NO FREE-FLOWING LIQUID OR ABSORBENT MATERIAL IN THE PACKAGING, **BACON, FRESH SAUSAGE, AND LUNCHEON MEATS HAVE AN MLA OF 0%.**

Moisture Loss Allowance (MLA): Unless there is an established moisture loss allowance, the moisture loss allowance is 0% for meat and poultry hermetically packaged in a USDA plant, and inspected after entering into distribution. Dry or dried used tare is used for inspection.

If the meat or poultry package allows moisture to evaporate into the atmosphere, a reasonable moisture allowance must be given. USDA has not given any guidance for the value of "reasonable moisture loss."

Inspections in the Packing Plant: There is no MLA for meat or poultry inspected at the packing plant. Category B sampling plans are used for inspection. Dry tare is used for all USDA in-plant inspections.

MOISTURE LOSS

LABORATORY VERIFICATION OF MOISTURE LOSS

Purpose: In instances when little data is available or when legal actions may result or where a weights and measures official does not have high confidence in the amount of moisture allowance to give a product, laboratory verification of the moisture loss should be done. Packages of product should be obtained for further evaluation and if possible the test should be run on more than one lot code. Verification of moisture loss should be done even when the processor/packer provides information.

Methodology: There are two ways products lose moisture, those that lose moisture primarily through evaporation and those that lose moisture through absorption into packaging materials and/or purge. The nature of the moisture loss dictates the number of initial samples needed. You may also need to follow products under more than one set of conditions: "Room Conditions" or "Under Refrigeration" depending on how the product is handled during distribution or retail conditions. Initial data received will determine if more samples are needed. Shortages of storage space and financial restrictions may also limit the number of samples you use to initially determine moisture loss.

- A. For products which lose moisture primarily through evaporation, gross weights can usually be recorded at regular intervals on a laboratory worksheet until the expiration date or typical distribution period has occurred. At the end of the test period, the tare weight can be determined and deducted from each recorded gross weight. Start with at least five samples per each set of laboratory conditions and increase them if data is variable. Use the formula below to determine percent moisture loss for the product.

- B. For packages/products where moisture is lost into the package or packaging material, some packages may be opened, taking care not to lose any of the packaging materials or fluid. The packaging materials, fluid, and the product can be placed in zip-lock storage bag or other re-sealable container. At appropriate time intervals, remove the product from the container, and record the net weight, temperature and date. Carefully return the product to the re-sealable container wherein the packaging materials and fluids have remained. Packages should be kept within the ranges of normal storage conditions during the period of the tests. Start with about 10 samples per each set of laboratory conditions.

Variations can be plotted or changed into a percent loss by the following formula:

$$\frac{\text{Original Net Weight} - \text{Net Weight}}{\text{Original Net Weight}} \times 100 = \text{Percent Moisture Loss}$$

It is recommended that moisture loss worksheets be submitted to your area Quantity Control Specialist so that the information is available to others to assist them in selecting reasonable moisture loss values in future testing. A file will be kept in the Sacramento DMS office.

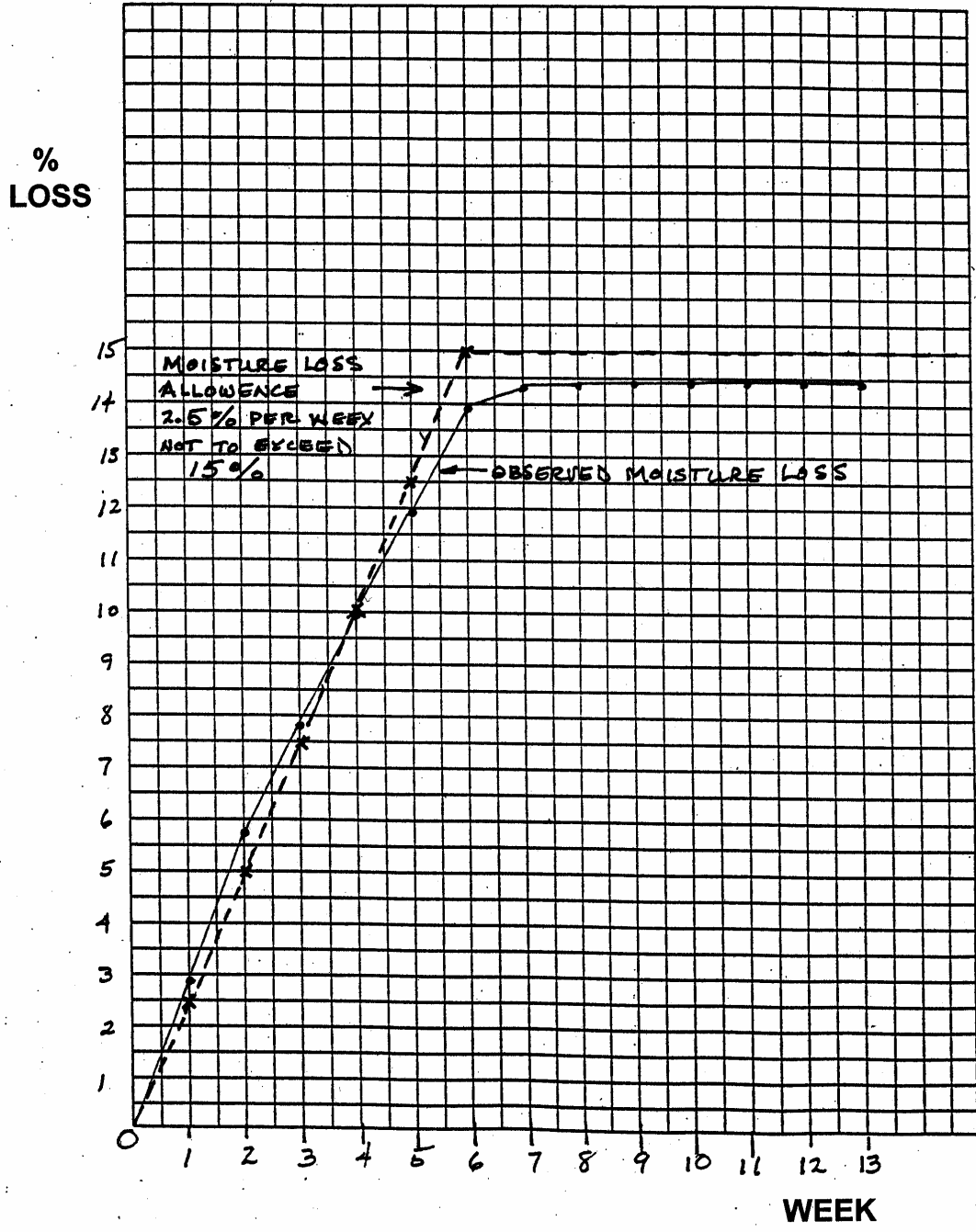
MOISTURE LOSS TEST

COMMODITY Spots Away Detergent with Borax PACKER Jumbo, Ltd. Cheswick, CA

CATEGORY # 14.04 LABELED WEIGHT 4 lb 10 oz PRICE \$ 3.69

I.D. NO.	DATE	GROSS WEIGHT	TARE WT.	NET WEIGHT	CODES	WEIGHT LOSS	% LOSS
17	9/4/96	4.800 lb			8965H5-114785CD		0
	9/11/96	4.658				0.142	2.96
	9/18/96	4.525				0.275	5.73
	9/25/96	4.422				0.378	7.88
	10/2/96	4.321				0.479	9.98
	10/9/96	4.225				0.575	11.98
	10/16/96	4.133				0.667	13.90
	10/23/96	4.114				0.686	14.29
	10/30/96	4.110				0.690	14.38
	11/6/96	4.109				0.691	14.40
	11/13/96	4.108				0.692	14.42
	11/20/96	4.108				0.692	14.42
	11/27/96	4.108	0.18 lb	3.928		0.692	14.42

SPOTS AWAY DETERGENT SAMPLE PACKAGE 17



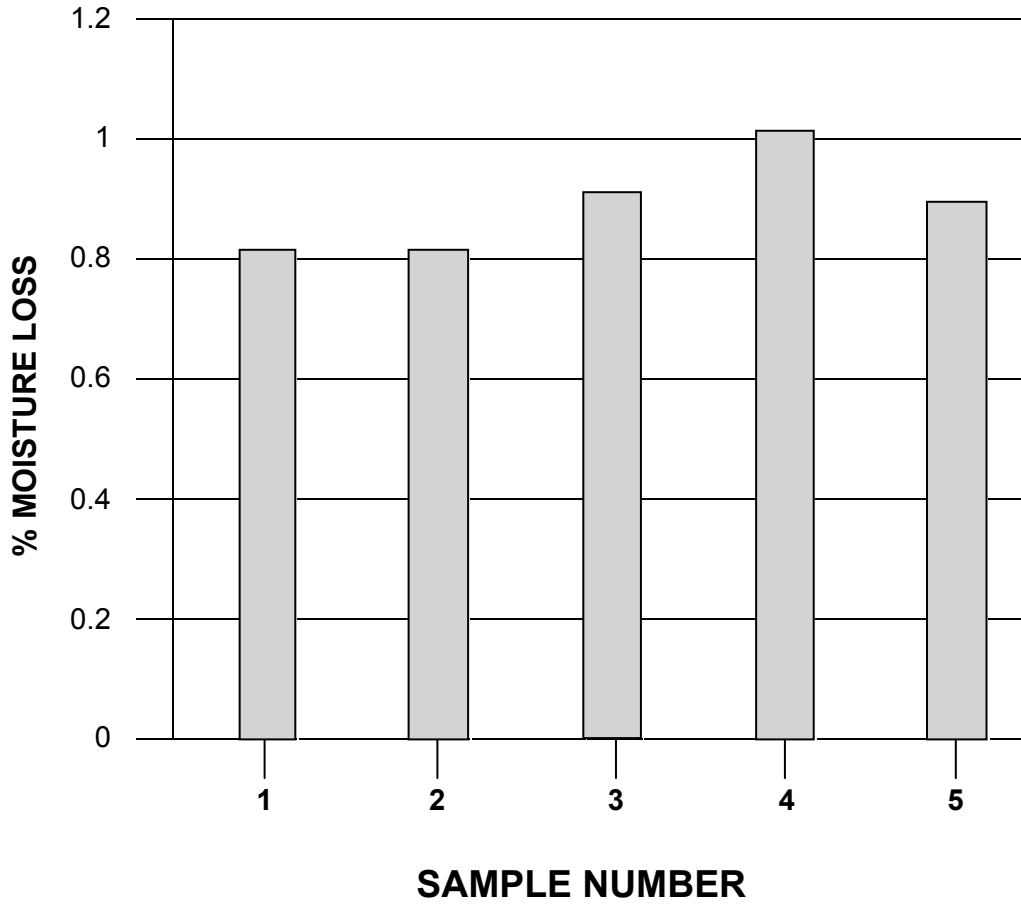
MOISTURE LOSS TEST

COMMODITY White Blossom Tofu PACKER Pacific Rim Imports, Bryson, CA

CATEGORY # 8.40 LABELED WEIGHT 1 lb 454 g PRICE \$ 2.69

I.D. NO.	DATE	GROSS WEIGHT	TARE WT.	NET WEIGHT	CODES	WEIGHT LOSS	% LOSS
1	9-3-96	1.024	0.034	0.990	Sell by 10-14-96		
1	10-15-96	1.024	0.042	0.982		0.008	0.81
2	9-3-96	1.020	0.034	0.986	Same		
2	10-15-96	1.020	0.042	0.978		0.008	0.81
3	9-3-96	1.014	0.036	0.978	Same		
3	10-15-96	1.014	0.045	0.969		0.009	0.92
4	9-3-96	1.023	0.034	0.989	Same		
4	10-15-96	1.023	0.044	0.979		0.010	1.01
5	9-3-96	1.021	0.034	0.987	Same		
5	10-15-96	1.021	0.043	0.978		0.009	0.91

MOISTURE LOSS TEST TOFU



Recommended Moisture Loss Allowance 1%

OFF SALE PROCEDURES

The forms, which currently include an Off Sale Order, are Package Inspection Reports (PIR) and Labeling Violation Reports. The Off Sale Order is incorporated into these forms and only the appropriate box needs to be checked to place the commodity off sale. The form **must** be signed by the person in possession.

CORRECTION

A. A commodity placed off sale may be corrected or disposed of by the person in possession by any of the following:

1. Marking with the correct net contents. Any incorrect statement must be completely covered or removed.
2. Repackaging or reprocessing so that the content statement is correct.
3. Covering the incorrect content statement and donating or giving it away.
4. Destroying or defacing the package so as to render it un-salable.
5. Returning to the distributor or packer.

NOTE: There may be other agency requirements limiting the content labeling and options for correction.

B. If a commodity is not corrected at the time of inspection:

1. A "Hold - Off Sale" card is attached to the lot. Be sure to enter your agency name and address on the address side of the card and your telephone number on the reverse.
2. The lot is clearly marked with "Hold" tape.
3. An instruction letter for the packers, distributors and retailers should be attached to the lot. A Sample Letter is on page 79.

STATE OF CALIFORNIA, DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS

DATE: 12-10-97
OFF SALE ORDER NO. 96-21004

49-002 (REV 1/87)

HOLD - OFF SALE

WARNING: THESE PACKAGES HAVE BEEN ORDERED OFF SALE. DO NOT REMOVE THIS IDENTIFICATION CARD OR IN ANY WAY DISPOSE OF, TRANSPORT OR SELL THIS COMMODITY WITHOUT AUTHORIZATION FROM A WEIGHTS AND MEASURES OFFICIAL. VIOLATION OF THIS ORDER IS A MISDEMEANOR, AND MAY RESULT IN A FINE OF UP TO \$1,000 AND/OR 1 YEAR IN JAIL.

BUSINESS & PROFESSIONS CODE, SECTION 17000

PERSON IN POSSESSION:	BRAND NAME AND COMMODITY	LABELED CONTENTS	LOT CODES OR IDENTIFICATION	NUMBER OF PACKAGES
SUPER DUPEL #8	RAMIREZ GEN TORILLAS	24oz	A-15-11-19 96	186
ADDRESS: 1061 GREEN ST MIDDLEBOROUGH	HOT PEPPER CHIPS	8oz	151577926	340
TOTAL				526

DO NOT DESTROY THIS CARD - TO THE RELEASING AGENCY: INDICATE THE DATE AND FINAL DISPOSITION BELOW AND RETURN THIS CARD TO THE AGENCY ON REVERSE.

ISSUING AGENCY TELEPHONE NUMBER: (212) 498-1004 (NAME AND ADDRESS ON REVERSE)

C. Movement

Commodities being held off sale should not be released for movement until the following information has been obtained. This information should be sent to the receiving county or DMS. A Sample Form is on page 81.

1. Where is it to be shipped?
2. Date of shipment.
3. How is it to be transported?
4. Approximate date of arrival.
5. Commodity identity.
6. Brand.
7. Number of packages/cases.
8. Code marks.
9. Manufacturer or processor.
10. Location where the product was removed from sale.

The authorization for returning commodity should be signed by a responsible person, and this person should have proof of commodity's return available for inspection.

D. Release and Disposition

1. Time enough to notify the receiving county or DMS should be allowed between writing the release and the movement date.
2. Perishable commodities may be released for transport with a telephone call. Telephone the receiving county or DMS with all of the information covered under Section C, Movement.
3. The "Hold - Off Sale" card has been designed as a postcard. It is to be returned to the issuing county (the address is on the reverse). The disposition of the lot is to be noted in the space on the face of the card.
4. **When packages under an Off Sale order have been shipped to another county, the receiving county should check that all packages are present in the shipment. The receiving county should supervise the correction or disposal of the packages, note the disposition in the space on the face of the Hold Card. The card should then be mailed to the county originally issuing the Off Sale Order.**

STATE OF CALIFORNIA

DEPARTMENT OF FOOD AND AGRICULTURE

Division of Measurement Standards
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828-1812
(916) 229-3000

**INSTRUCTIONS FOR CORRECTION OR HANDLING
OF COMMODITIES UNDER HOLD - OFF SALE ORDER**

WARNING:

1. Do Not Sell.
2. Do Not Remove Hold - Off Sale Card.
3. **Do Not** move, transport, commingle, or dispose of any commodities under an Off Sale order without written permission from issuing department.

Contact your local County Department of Weights and Measures:

1. For methods of correcting the violation(s).
2. Before transporting Off Sale commodities to any other location.
3. Before disposal or reprocessing of any Off Sale commodities.
4. If you have any questions regarding these instructions.

Issuing Agency: _____

Address: _____

Telephone No.: _____

NOTICE: Removal of Hold - Off Sale card or selling, transporting or disposing of a commodity under an Off Sale order without permission is a misdemeanor offense, which may result in a fine of up to \$1,000 and/or 1 year in jail.

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STATE OF CALIFORNIA

DEPARTMENT OF FOOD AND AGRICULTURE

Division of Measurement Standards
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828-1812
(916) 229-3000

SHIPMENT INFORMATION, OFF SALE COMMODITY

THIS INFORMATION IS REQUIRED BEFORE THIS COMMODITY
WILL BE RELEASED FOR SHIPMENT FROM THIS LOCATION

1. Brand and Commodity: _____

2. Number of Cases/Packages: _____ Code(s): _____

3. Manufacturer/Processor: _____

4. Person/Business in Possession: _____

5. Date of Shipment: _____

6. Carrier: _____

7. Destination: _____

8. Approximate Date of Arrival: _____

Owner/Agent: _____ Title: _____

Date: _____ Telephone Number: _____

Issuing Agency: _____

Address: _____

Telephone No.: _____

NOTICE: As soon as all the above information is completed, contact the issuing agency for authorization to ship the merchandise from this location.

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**INSTRUCTIONS FOR SAMPLING AND TESTING
PROCEDURES USED TO DETERMINE
THE NET CONTENTS OF PACKAGED COMMODITIES**

HANDBOOK 133

The State of California has adopted, as regulation*, the most current edition of the National Institute of Standards and Technology (NIST) HANDBOOK 133 (HB 133), CHECKING THE NET CONTENTS OF PACKAGED GOODS. As of January 2005, this is the edited Fourth Edition.

* California Business and Professions Code Section 12211.
California Code of Regulations, Title 4, Division 9, Chapter 11, Section 4600.

HB 133 provides procedures for sampling a "lot" to determine compliance with net weight laws and regulations, and specifies test procedures for certain commodities and types of commodities.

The following step-by-step instructions provide for the completion of Package Inspection Report (PIR) forms when conducting an inspection according to the requirements of Handbook 133.

The most recent Draft of Handbook 133 is available from the web site for the National Institute of Standards and Technology.

<http://ts.nist.gov/ts/htdocs/230/235/pubs.htm>

4th Edition of NIST Handbook 133 (Microsoft Word and Adobe Acrobat PDF Formats)

Instructions for Sampling and Testing by:
Karen Langford and Roger Macey
Quantity Control Specialists
Sacramento, CA

SAMPLING AND TESTING PROCEDURE

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SAMPLING AND TESTING PROCEDURES SUMMARY

The step numbers in this summary are the same as the step numbers in the complete text of the Sampling and Testing Instructions.

1. Determine which sampling plan to use, Category A, B, or C.
2. Complete the heading on the correct Package Inspection Report (PIR) form.

Category A Inspections

3. COMMODITY GROUPS: Determine the Commodity Group MLA (Moisture Loss Allowance) or Other. Determine the type of tare to use: Unused or Dried Used Tare (Dry Tare), or Used Tare (Wet Tare).

Category A, Standard Pack

4. BASIC INFORMATION: Use Table 2-1 (page 122) to look up Sample Size, Initial Tare Sample Size, Number Minus Errors Allowed to Exceed the Maximum Allowable Variation (MAV), and Sample Correction Factor.
5. MAXIMUM ALLOWABLE VARIATION (MAV): Determine MAV using Table 2-5, 2-6, 2-7, 2-8, 2-9 or 2-10 (pages 126-133), or the specific commodity (page 97). If commodity is in Group MLA, calculate adjusted MAV.
6. SAMPLE AND INITIAL TARE SAMPLE SELECTION.
7. TARE DETERMINATION: Include more Tare Sample Packages if needed.
8. PACKAGE ERROR DETERMINATION.
9. TOTAL ERROR CALCULATION.
10. UNREASONABLE MINUS ERRORS (UME): Identify by circling.
11. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA: Does the Number of Unreasonable Minus Errors (UME) exceed the Number Allowed?
 - ▶ If yes, REJECT, and order Off Sale (lot fails). Compute Average Error (AE) and skip to Step 15 if AE is minus.
 - ▶ If no, continue inspection.
12. AVERAGE ERROR (AE) COMPUTATION: Computation and compliance.
 - ▶ If AE is zero or plus, ACCEPT (lot passes).
 - ▶ If minus, continue inspection.

Summary, Category A

- 13. CALCULATE SAMPLE ERROR LIMIT (SEL).
- 14. DETERMINE LOT COMPLIANCE, AVERAGE ERROR (AE) IS MINUS.

Group MLA

- ▶ If AE is equal to or less than SEL, ACCEPT (lot passes). $AE \leq SEL$
- ▶ If AE is greater than the SEL + MLA, REJECT and order Off Sale (lot fails).
 $AE > (SEL + MLA)$
- ▶ If AE is greater than SEL, but equal to or less than the SEL + MLA, lot is in the Gray Area, and the status is not determined. $(SEL + MLA) \geq AE > SEL$

Group Other

- ▶ If AE is minus and less than or equal to the SEL, ACCEPT (lot passes). $AE \leq SEL$
- ▶ If AE is greater than the SEL, REJECT and order Off Sale (lot fails). $AE > SEL$

- 15. PERCENT ERROR AND THE TOTAL DOLLAR VALUE OF THE ERROR.

Category A, Random Pack

- 4. BASIC INFORMATION: Use Table 2-1 (page 122) to look up Sample Size, Initial Tare Sample Size, Number Minus Errors Allowed to Exceed the Maximum Allowable Variation (MAV), and Sample Correction Factor.
- 5. SAMPLE AND INITIAL TARE SAMPLE SELECTION.
- 6. TARE DETERMINATION: Include more Tare Sample Packages if needed.
- 7. PACKAGE ERRORS: Determine and record package errors for the sample.
- 8. MAXIMUM ALLOWABLE VARIATION (MAV): Determine MAV for lightest package using Table 2-5, 2-6, 2-7, 2-8, or 2-9 (pages 126-133), or the specific commodity (page 103). If Group MLA, calculate adjusted MAV.
- 9. TOTAL ERROR CALCULATION.
- 10. UNREASONABLE MINUS ERRORS (UME): Identify by circling.

Summary, Category A

11. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA: Does the Number of Unreasonable Minus Errors (UME) exceed the Number Allowed?
 - ▶ If yes, REJECT and order Off Sale (lot fails). Compute Average Error (AE) and skip to Step 15 if AE is minus.
 - ▶ If no, continue inspection.
12. AVERAGE ERROR (AE) COMPUTATION: Computation and compliance.
 - ▶ If AE is zero or plus, ACCEPT (lot passes).
 - ▶ If minus, continue inspection.
13. CALCULATE SAMPLE ERROR LIMIT (SEL).
14. DETERMINE LOT COMPLIANCE, AVERAGE ERROR IS MINUS.

Group MLA

- ▶ If AE is equal to or less than SEL, ACCEPT (lot passes). $AE \leq SEL$
- ▶ If AE is greater than the SEL + MLA, REJECT and order Off Sale (lot fails). $AE > (SEL + MLA)$
- ▶ If AE is greater than SEL, but equal to or less than the SEL + MLA, lot is in the Gray Area and the status is not determined. $(SEL + MLA) \geq AE > SEL$

Group Other

- ▶ If AE is less than or equal to the SEL, ACCEPT (lot passes). $AE \leq SEL$
- ▶ If AE is greater than the SEL, REJECT and order Off Sale (lot fails). $AE > SEL$

15. PERCENT ERROR AND THE TOTAL DOLLAR VALUE OF THE ERROR.

Category B Inspections: USDA Packing Plant Inspections Only.

Category B, Standard Pack

3. BASIC INFORMATION: Use Table 2-2 (page 122) to look up Sample Size, Initial Tare Sample Size, and Number Minus Errors Allowed to Exceed the MAV.
4. MAXIMUM ALLOWABLE VARIATION (MAV): Look up MAV using Table 2-9 (page 133).
5. SAMPLE AND INITIAL TARE SAMPLE SELECTION.
6. TARE DETERMINATION: Include more Tare Sample Packages if needed.
7. PACKAGE ERRORS: Determine and record package errors for the sample.
8. TOTAL ERROR CALCULATION.
9. UNREASONABLE MINUS ERRORS (UME): Identify by circling.
10. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA: Does the Number of Unreasonable Minus Errors (UME) exceed the Number Allowed?
 - ▶ If yes, REJECT and order Off Sale (lot fails). Compute Average Error (AE) and skip to Step 13 if AE is minus.
 - ▶ If no, continue inspection.
11. AVERAGE ERROR (AE) CALCULATION.
12. DETERMINE LOT COMPLIANCE.
 - ▶ If AE is zero or plus, ACCEPT (lot passes).
 - ▶ If AE is minus, REJECT and order Off Sale (lot fails).
13. CALCULATE THE PERCENT ERROR AND THE TOTAL DOLLAR VALUE.

Category B, Random Pack

3. BASIC INFORMATION: Use Table 2-2 (page 122) to look up Sample Size, Initial Tare Sample Size, and Number Minus Errors Allowed to Exceed the MAV.
4. SAMPLE AND INITIAL TARE SAMPLE SELECTION: Table 2-2 (page 122).
5. TARE DETERMINATION: Include more Tare Sample Packages if needed.
6. PACKAGE ERRORS: Determine and record package errors for the sample.

Summary, Category B

7. MAXIMUM ALLOWABLE VARIATION: Look up MAV for lightest package by using Table 2-9 (page 132).
8. TOTAL ERROR CALCULATION.
9. UNREASONABLE MINUS ERRORS (UME): Identify by circling.
10. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA: Does the Number of Unreasonable Minus Errors (UME) exceed the Number Allowed?
 - ▶ If yes, REJECT and order Off Sale (lot fails). Compute Average Error (AE) and skip to Step 13 if AE is minus.
 - ▶ If no, continue inspection.
11. AVERAGE ERROR (AE) CALCULATION.
12. DETERMINE LOT COMPLIANCE.
 - ▶ If AE is zero or plus, ACCEPT (lot passes).
 - ▶ If AE is minus, REJECT and order Off Sale (lot fails).
13. CALCULATE THE PERCENT ERROR AND THE TOTAL DOLLAR VALUE OF THE ERROR.

Category C Inspections: Commodities Labeled With a Count of 50 or Less

3. BASIC INFORMATION: Use Table 2-11 (page 134) to look up Sample Size, Number of Packages Allowed to Contain Fewer Than the Labeled Count.
4. MAXIMUM ALLOWABLE VARIATION (MAV): Use Table 2-7 (page 130) to look up the Maximum Allowable Variation (MAV).
5. SAMPLE SELECTION: Take a random sample from the lot.
6. PACKAGE ERROR DETERMINATION: Count items and determine amount in container.
7. TOTAL ERROR CALCULATION.
8. MINUS ERRORS: Count the number of packages having minus errors.
 - ▶ If the number of packages with minus errors exceeds the number allowed, REJECT and order Off Sale (lot fails). Go to Step 10.
 - ▶ If the number of packages with minus errors is less than or equal to the number allowed, ACCEPT the lot and continue to Step 9.
9. UNREASONABLE MINUS ERRORS (UME): REJECT and order Off Sale any packages with minus errors larger than the MAV.
10. AVERAGE ERROR CALCULATION.
11. IF AVERAGE ERROR IS MINUS, CALCULATE THE PERCENT ERROR AND THE TOTAL DOLLAR VALUE OF THE ERROR.

INSTRUCTIONS, SAMPLING AND TESTING PROCEDURES

STEP 1. CATEGORY AND SAMPLING PLAN DETERMINATION

- ✓ Does this lot consist of packages LABELED with a count of 50 or less? If YES, this is **CATEGORY C**. The sampling plan outlined in Table 2-11 (page 134) is to be used. Category C is only used for this type of lot!
- ✓ Are you in an USDA (United States Department of Agriculture) plant testing meat or poultry? If YES, this is **CATEGORY B** and the plan from Table 2-2 (page 122) is to be used. This category is only for USDA plant inspections!
- ✓ If you are in any other testing location, or if the commodity is labeled with a count greater than 50, it is a **CATEGORY A** inspection. The sampling plan in Table 2-1 (page 122) is used to conduct the inspection.

STEP 2. PACKAGE INSPECTION REPORT (PIR) SELECTION

Select the PIR for the category of inspection. Complete the heading. Fill in the Labeled Content*, Box [1]. (If the package is labeled with both US and SI units, record both values, determine the larger, circle it and use that value in computing the error.) Record the Device Division [2], and Inspection Lot Size [5]. (See Explanation of Terms, Inspection Lot, page 119).

- * The labeled content for a random lot (Random Average) is determined after the sample has been selected.
- ✓ The Device Division is the division or graduation of the scale or other measuring device used for the commodity test.

**CONTINUE TO THE INSTRUCTIONS FOR THE SPECIFIC INSPECTION CATEGORY:
A, PAGE 94; B, PAGE 108; OR C, PAGE 115.**

CATEGORY A

STEP 3. COMMODITY GROUPS

Decide the commodity group, **MLA** or **OTHER**, and which type of tare to use for the inspection.

GROUP MLA (Moisture Loss Allowance) - If you are NOT testing in the packing plant AND the commodity IS:

Flour

Fresh Poultry (Whole or cut-up raw poultry with no further processing or additives and having a temperature above 26°F; this is product that yields or gives when pushed with a person's thumb.)

Franks or Hot Dogs (Made from meat or poultry only.)

Dry Pet Food (Packaged in fiberboard boxes or kraft paper bags and labeled with a moisture content of 13% or less.)

The lot is classed as **MLA**, meaning it does have a Moisture Loss Allowance greater than 0%. For inspection, the tare method is **USED TARE (WET TARE)**.

The MLA for flour, fresh poultry, and dry pet food is **3%**.

The MLA for franks and hot dogs is **2-1/2%**.

Check the box for MLA and record the % (percentage) in the box following the \$ (price) per package or pound of the commodity.

Questions to determine if commodities other than the above are in Group MLA.

1. Is the commodity subject to Federal Agency regulations except for USDA Seed Laws or Environmental Protection Agency (EPA) regulations? If no, skip to **GROUP OTHER** (page 95). If yes, continue to the next question.
2. Is the commodity in distribution or are you testing in a packing plant regulated by the FDA? If no to both parts, skip to **GROUP OTHER** (page 95). If yes to either part of the question, continue to the next question.
3. Is the commodity packaged in a way that allows moisture to evaporate into the atmosphere? If no, skip to **GROUP OTHER** (page 95). If yes, the commodity is classified **GROUP MLA**, has a MLA greater than 0%, and the tare method is **UNUSED OR DRIED USED TARE (DRY TARE)**.

GROUP MLA (Moisture Loss Allowance) - Continued

▶ The Food and Drug Administration (FDA) has recommended the following Moisture Loss Allowances (MLA) for these foods under their jurisdiction.

1% Fresh baked breads, buns, rolls, and muffins when tested after the end of the packing day.

Frozen fruits and vegetables when tested seven or more days after the end of the packing day.

3% Bakery products other than fresh breads, buns, rolls, and muffins when tested after the end of the packing day.

Fresh or dried fruits and vegetables, cheese and cheese products, pasta, rice, and coffee beans when tested seven or more days after the end of the packing day.

A Moisture Loss Allowance (MLA) is given to the foods listed above when they are in distribution and, under certain circumstances, when they are being tested at the packing location. If the commodity is inspected prior to the time specified or at the packing location, the packer must present acceptable data documenting moisture loss before any MLA is permitted.

The criteria used to determine acceptable moisture loss documentation are outlined on page 68 and again on page 117.

▶ For all other MLA commodities, use a reasonable moisture loss allowance. Contact the Regional Quantity Control Specialist for assistance in determining a “reasonable” moisture loss allowance. Some, but not all, laboratory moisture loss verification procedures are outlined on pages 71 through 75.

Check the box for MLA commodities and record the % (percent) moisture allowance given in the box following the \$ (price) per package or pound.

GROUP OTHER - Any commodity that is not contained in MLA. This includes those items with a Moisture Loss Allowance of 0%.

THERE ARE TWO TYPES OF TARE USED FOR GROUP OTHER

1. USED TARE (WET TARE)

a. Commodities inspected at a packing location, other than a USDA plant.

b. Commodities under State regulation only. (Not federally regulated.)

2. UNUSED OR DRIED USED TARE (DRY TARE)

- a. Commodities with an established Moisture Loss Allowance of 0% including, but not limited to, bacon, fresh sausage, and luncheon meats.
- b. Commodities regulated by the Environmental Protection Agency (EPA).
- c. Commodities under the jurisdiction of the USDA Seed Laws.
- d. Commodities packaged in sealed containers where moisture cannot evaporate into the atmosphere, and commodities in containers where if there were to be any moisture purged from, or separated from the commodity, it would still be in the container (plastic vacuum packs, cans, bottles, jars, etc.). If this type of container holds a commodity regulated by the FDA, USDA or BATF, moisture loss is considered and determined to be 0% as any lost or purged moisture is still contained in the package.
- e. Commodities which by their nature do not lose moisture: for example, metal pipe, plastic cups, paper towels, etc.

CATEGORY A, STANDARD PACK COMMODITIES

(For Category A, Random Pack Commodities, see Page 102)

STEP 4. BASIC INFORMATION

Using the Sampling Plan from Table 2-1 (page 122) record on the PIR: the Sample Size [6] Initial Tare Sample Size [7], Number of Minus Errors Allowed to Exceed the MAV (Unreasonable Minus Errors Allowed) [8], and Sample Correction Factor [22].

STEP 5. MAXIMUM ALLOWABLE VARIATION (MAV)

5a. **Except for the items listed below**, use the appropriate Table 2-5, 2-6, 2-7, 2-8 or 2-9 (pages 126-132) to determine the MAV. Table 2-9 is used only for Meat and Poultry Products **packaged in** USDA plants. (USDA packages will be labeled with a USDA Establishment Number.)

Polyethylene Sheeting and Film (Table 2-10)

- Thickness: 4% of the labeled thickness, based on the average of the thickness measurements of a single package.
- Weight: 4% of the labeled weight.

Textiles (Table 2-10)

- Packages with any labeled dimensions less than 24 inches: 6% of the labeled dimension.
- Packages with all labeled dimensions 24 inches or more: 3%.

Mulch and Soil: (Table 2-10) 5% of the labeled volume. If the Sample Size is 12 or less, one package may exceed the MAV. For a sample size of 24, two packages may exceed the MAV. For a sample size of 48, four packages may exceed.

Firewood: Not a consideration for determining firewood compliance, MAVs do not apply.

5b. Record the value of the MAV in decimal form in [3].

5c. If the lot is in Group MLA, the MAV must be adjusted for the Moisture Loss Allowance (MLA).

Calculate the value of the MLA by multiplying the MLA in **decimal form** by the Labeled Contents [1]. Record this value in [4A].

Add the MAV [3] to the MLA [4A]. Record in [4B], "ADJ MAV."

Note: Box [4A] is the same as box [13A] in NIST Handbook 133.

STEP 6. SAMPLE AND INITIAL TARE SAMPLE

Randomly select the sample packages from the inspection lot. Mark or keep the packages in the same order as randomly selected. The first package randomly selected is the first Tare Sample package. The second random sample is the second, etc.

STEP 7. TARE DETERMINATION

If the errors are not determined by weight, go to STEP 8.

- 7a. For each package in the Initial Tare Sample, weigh and record the value of the gross weight in the column under **[A]** and the tare weight in the column under **[B]** .

If the number of packages in the inspection lot is eleven or less, skip to Step 7g. (Both the initial tare sample size and the total tare sample size will be two.)

- 7b. Calculate the net weight for each package by subtracting from the gross **[A]**, the tare **[B]**. Record the net weight in the column under **[C]**. Except for WET TARE commodities containing ice, free-flowing liquids considered tare, or absorbent material; the net weight is not determined by direct weighing.
- 7c. Determine the error for each package in the initial tare sample by subtracting the labeled content **[1]** from the net weight **[C]**. Record the error in the column under **[D]**.
- 7d. Record the Range of Errors (R_C) in box **[9]** (the difference between the largest and smallest). Record the Range of Tare Weights (R_T) in **[10]**.
- 7e. Calculate and record in **[11]**, the ratio of the range of errors, and range of tare weights, R_C/R_T . If the range of tare weights is zero, the ratio will be infinity.
- 7f. Use Ratio (R_C/R_T) column from Table 2-3 (page 125) to determine the total number of tare samples to be opened, record in **[12]**. If the ratio is infinity, the total number tare sample packages will remain the same as the initial tare sample.

For each additional tare sample, weigh and record the gross weight and tare weight.

- 7g. Calculate the average tare weight by adding all the tare weights recorded under **[B]**, and dividing the total by the number of tares weighed.

Record the average tare in **[13]** .

STEP 8. PACKAGE ERRORS

Determine and record the error for each package in the sample.

8a. If errors are not determined by weight.

For each package in the sample, subtract from the measured net contents, the labeled contents. Record this value in the appropriate minus or plus column under **[E]**.

Go to Step 9.

8b. If errors are determined by weight.

Weigh and record the value of the gross weight for each remaining sample package in the column under **[A]**.

Calculate the Nominal Gross Weight **[14]**, which is used to determine package errors, by adding the Average Tare Weight **[13]**, to the Labeled Contents **[1]**.

Determine the error for each sample package, **including the tare sample packages**, by subtracting from the Gross Weight **[A]**, the Nominal Gross Weight **[14]** of each package. Record in the appropriate minus or plus column under **[E]**.

STEP 9. TOTAL ERROR

Calculate and record the Total Error (TE) **[15]**, by algebraically totaling the sample package plus and minus errors.

STEP 10. UNREASONABLE MINUS ERRORS

Identify any Unreasonable Minus Errors (UME); i.e., minus errors that exceed the Maximum Allowable Variation (MAV) or the Adjusted MAV, when applicable.

Circle all minus errors greater than the MAV **[3]**, or the Adjusted MAV **[4B]**, when applicable.

STEP 11. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA

Count the number of UMES circled in Step 10, record in **[16]** and check the appropriate section in **[17]**.

- ▶ If the number of UMES **[16]** is greater than the number allowed **[8]**, the inspection lot is REJECTED and ordered OFF SALE.

Finish the inspection by determining the Average Error as computed in Step 12. If the average error is minus, calculate the percent error and total dollar value, Step 15 (page 101).

Do not complete Steps 13 and 14.

- ▶ If the number of UMES is equal to or less than the number allowed, continue to Step 12.

STEP 12. AVERAGE ERROR

Divide the Total Error [15], by the Sample Size [6].

Record the Average Error in [18].

- ▶ If the Average Error is zero or a plus value, ACCEPT the inspection lot.

Check the appropriate section in [20]. (Note: Box [19] has been omitted.)

Do not complete Steps 13, 14 or 15. The inspection is complete

- ▶ If the Average Error is a minus value, continue to Step 13.

STEP 13. CALCULATE THE SAMPLE ERROR LIMIT (SEL)

13a. Compute the Sample Standard Deviation, and record in [21].

13b. Multiply the Sample Standard Deviation by the Sample Correction Factor [22]. Record this value in [23].

STEP 14. DETERMINE LOT COMPLIANCE WHEN THE AVERAGE ERROR [18] IS MINUS. (If the average error is zero or plus, the lot status has already been determined.)

GROUP MLA

- ▶ If the Average Error [18] (omitting the minus sign) is less than or equal to the SEL [23], the lot is ACCEPTED.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL + MLA ([23] + [4A]), the lot is REJECTED and ordered OFF SALE.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL [23], AND less than or equal to the SEL + MLA ([23] + [4A]), the lot is in the **Gray Area**. This is a no decision area, the lot is neither accepted nor rejected, the status is not determined. Further investigation is necessary to rule out moisture loss as the reason for the shortage.

GROUP OTHER

- ▶ If the Average Error [18] (omitting the minus sign) is less than or equal to the SEL [23], the lot is ACCEPTED.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL [23], the inspection lot is REJECTED and ordered OFF SALE.

STEP 15. PERCENT ERROR AND TOTAL DOLLAR VALUE OF THE ERROR

Complete this step only if the average error is a minus value.

15a. Divide the Average Error **[18]** by the Labeled Contents **[1]**.

Multiply this value (☆) by 100 to determine the Percent Error.

15b. Multiply the value (☆) by the Inspection Lot Size **[5]** and the Price Per Package to determine the Total Dollar Value. Do not round up the final value (i.e., \$0.478 is written as \$0.47).

CATEGORY A, RANDOM PACK COMMODITIES

(For Category A, Standard Pack Commodities see Page 97)

STEP 4. BASIC INFORMATION

Using the Sampling Plan from Table 2-1 (page 122) record on the PIR the Sample Size **[6]**, Initial Tare Sample Size **[7]**, Number of Minus Errors Allowed to Exceed the MAV (Unreasonable Minus Errors Allowed) **[8]**, and Sample Correction Factor **[22]**.

STEP 5. SAMPLE AND INITIAL TARE SAMPLE

- 5a. Randomly select the sample packages from the inspection lot. Mark or keep the packages in the same order as randomly selected. The first package randomly selected is the first Tare Sample package; the second random sample is the second, etc.
- 5b. Record the labeled contents of each sample package in the column under **[1]**. Total the labeled net contents and determine the average, record this value in box **[1]**. Use the letters "RA" to indicate this is the Random Average.

STEP 6. TARE DETERMINATION

If errors are not determined by weight, go to Step 7, page 103.

- 6a. For each package in the Initial Tare Sample, weigh and record the value of the gross weight in the column under **[A]** and the tare weight in the column under **[B]**.

If the number of packages in the inspection lot is eleven or less, skip to Step 6g. (Both the initial tare sample size and the total tare sample size will be two.)

- 6b. Calculate the net weight for each package by subtracting from the gross **[A]**, the tare **[B]**. Record the value in the column under **[C]**. Except for WET TARE commodities containing ice, free flowing liquids considered tare, or absorbent material, the net weight is not determined by direct weighing.
- 6c. Determine the error for each package in the initial tare sample by subtracting the labeled content **[1]** from the net weight **[C]**. Record the error in the column under **[D]**.
- 6d. Record the Range of Errors (R_C) **[9]** (the difference between the largest and smallest), and the Range of Tare Weights (R_T) **[10]**.
- 6e. Calculate, and record in **[11]**, the ratio range of the errors and range of tare weights (R_C/R_T) if the range of tare weights is zero, the ratio will be infinity.
- 6f. Use Ratio (R_C/R_T) column from Table 2-3 (page 123) to determine the total number of tare samples to be opened and record in **[12]**. If the ratio is infinity, the number of tare sample packages will remain the same as the initial tare sample.

For each additional tare sample, weigh and record the gross weight and tare weight.

- 6g. Calculate the average tare weight by adding all the tare weights recorded under **[B]**, and dividing the total by the number of tares weighed.

Record the average tare in **[13]**.

STEP 7. PACKAGE ERRORS

Determine and record the error for each package in the sample.

- 7a. If errors are not determined by weight.

For each package in the sample, subtract from the measured net contents, the labeled contents. Record in the appropriate minus or plus column under **[E]**. Go to Step 8.

- 7b. If errors are determined by weight.

Do not use box **[14]**.

Determine the error for each sample package, **including the tare sample packages**, by subtracting from the Gross Weight **[A]**, the Average Tare Weight **[13]**, and the Labeled Contents **[1]** of each package. Record in the appropriate minus or plus column under **[E]**.

STEP 8. MAXIMUM ALLOWABLE VARIATION (MAV)

- 8a. The MAV must be determined individually for each package in the sample. **Except for the items listed below**, use the appropriate Table, 2-5, 2-6, 2-7, 2-8 or 2-9 (pages 126-132) to determine the MAV. Table 2-9 is used for Meat and Poultry Products **packaged** in USDA plants. (USDA packages will be labeled with a USDA Establishment Number.)

Polyethylene Sheeting and Film (Table 2-10 on page 133)

- Thickness: 4% of the labeled thickness, based on the average of the thickness measurements of a single package.
- Weight: 4% of the labeled weight.

Textiles (Table 2-10 on page 133)

- Packages with any labeled dimensions less than 24 inches: 6% of the labeled dimension.
- Packages with all labeled dimensions 24 inches or more: 3%.

Mulch and Soil: (Table 2-10 on page 133) 5% of the labeled volume. If the Sample Size is 12 or less, one package may exceed the MAV. For a Sample Size of 24, two packages may exceed the MAV. For a Sample Size of 48, four packages may exceed.

Firewood: Not a consideration for determining firewood compliance, MAVs do not apply.

- 8b. Look up the MAV for the package with the smallest labeled contents and record it in the column under **[3]** "MAV from table."
- 8c. If the lot is in Group MLA, the MAV must be adjusted for the Moisture Loss Allowance (MLA).

For the package with the smallest labeled content, calculate the value of the MLA by multiplying the MLA in decimal form by the package's Labeled Content (from the column under **[1]**). Record in the column under box **[4A]**.

Note: Box **[4A]** is the same as box **[13A]** in NIST Handbook 133.

Add the MAV **[3]** to the MLA **[4A]**. Record this value in the column under **[4B]** "ADJ MAV."

- 8d. If all minus package errors are less than the value of this MAV (or adjusted MAV), it is not necessary to continue as there will be no unreasonable minus errors. If any error is greater than the MAV (or adjusted MAV), repeat Steps **8b** and **8c** for each sample package having a minus error.

STEP 9. TOTAL ERROR

Calculate and record the Total Error (TE) **[15]** by algebraically totaling the sample package plus and minus errors.

STEP 10. UNREASONABLE MINUS ERRORS

Identify any Unreasonable Minus Errors (UME); i.e., minus errors that exceed the Maximum Allowable Variation (MAV) or the Adjusted Maximum Allowable Variation when applicable.

Circle all minus errors greater than the MAV, or Adjusted MAV, recorded for each sample package in the applicable column under **[3]** or **[4B]**.

STEP 11. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA

Count the number of UMES circled in Step **10**. Record this number in **[16]** and check the appropriate section of **[17]**.

- ▶ If the number of UMES **[16]** is greater than the number allowed **[8]**, the inspection lot is REJECTED and ordered OFF SALE.

Finish the inspection by determining the Average Error as computed in Step **12**. If the average error is minus, calculate the percent error and total dollar value, Step **15**, page 106.

Do not complete Steps 13 and 14.

- ▶ If number of UMES is equal to or less than the number allowed, continue to Step **12**.

STEP 12. AVERAGE ERROR

Divide the Total Error [15] by the Sample Size [6]. Record this value in [18].

- ▶ If the Average Error is zero or a plus value, ACCEPT the inspection lot. Check the appropriate section in [20]. (Note: Box [19] has been omitted.)

Do not complete Steps 13, 14 or 15. The inspection is complete.

- ▶ If the Average Error is a minus value, continue.

STEP 13. CALCULATE THE SAMPLE ERROR LIMIT (SEL)

13a. Compute the Sample Standard Deviation and record in [21].

13b. Multiply the Sample Standard Deviation by the Sample Correction Factor [22]. Record this value (SEL) in [23].

STEP 14. DETERMINE LOT COMPLIANCE - AVERAGE ERROR [18] IS MINUS

(If the average error is zero or plus, the lot status has already been determined.)

If the commodity is in Group MLA: Calculate and record the value of the MLA for the lot [4A], by multiplying the decimal percentage value of the MLA by the Random Average (Labeled Contents) [1].

GROUP MLA

- ▶ If the Average Error [18] (omitting the minus sign) is less than or equal to the SEL [23], the lot is ACCEPTED.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL + MLA ([23] + [4A]), the lot is REJECTED and ordered OFF SALE.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL [23], AND less than or equal to the SEL + MLA ([23] + [4A]), the lot is in the **Gray Area**. This is a no decision area, the lot is neither accepted nor rejected, and the status is not determined. Further investigation is necessary to rule out moisture loss as the reason for the shortage.

GROUP OTHER

- ▶ If the Average Error [18] (omitting the minus sign) is less than or equal to the SEL [23], the lot is ACCEPTED.
- ▶ If the Average Error [18] (omitting the minus sign) is greater than the SEL [23], the inspection lot is REJECTED and ordered OFF SALE.

STEP 15. PERCENT ERROR AND TOTAL DOLLAR VALUE OF THE ERROR

Complete this step only if the average error is a minus value.

15a. Divide the Average Error **[18]** by the Random Average (Labeled Contents) **[1]**.

Multiply this value (☆) by 100 to determine the Percent Error.

15b. Multiply the value (☆) by the Inspection Lot Size **[5]** the Price per Pound, and the Random Average (Labeled Contents) **[1]** to determine the Total Dollar Value. (If not testing by weight, use the price per unit instead of the price per pound.) Do not round up the final value (i.e., \$0.478 is written as \$0.47).

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CATEGORY B, STANDARD PACK COMMODITIES**USED ONLY WHEN TESTING IN A USDA INSPECTED PACKING PLANT**

(For Category B, Random Pack Commodities, see Page 112)

STEP 3. BASIC INFORMATION

Using the Sampling Plan from Table 2-2 (page 122) look up and record on the (PIR): the Sample Size [6], Initial Tare Sample Size [7], and the Number of Minus Errors Allowed to Exceed the MAV (Unreasonable Errors Allowed) [8].

STEP 4. MAXIMUM ALLOWABLE VARIATION (MAV)

- 4a. Use Table 2-9 (page 132) to look up the MAV.
- 4b. Record the MAV in decimal form in [3] "MAV from table."

STEP 5. SAMPLE AND INITIAL TARE SAMPLE SELECTION

Randomly select the sample packages from the inspection lot. Mark or keep the packages in the same order as randomly selected. The first package randomly selected is the first Tare Sample package. The second random sample is the second, etc.

STEP 6. TARE DETERMINATION Only Unused or Dried Used Tare (Dry Tare) is to be used when conducting tests in USDA plants.

- 6a. For each package in the Initial Tare Sample, weigh and record the value of the gross weight [A] and the tare weight [B].

If the number of packages in the inspection lot is eleven or less, skip to Step 6g. (Both the initial tare sample size and the total tare sample size will be two.)

- 6b. Calculate the net weight by subtracting from the gross [A], the tare [B]. Record in [C]. The net weight is always determined by subtracting the tare from the gross. It is not weighed directly.
- 6c. Determine the error for each package in the initial tare sample by subtracting the labeled content [1] from the net weight [C]. Record in [D].
- 6d. Record the Range of Errors (R_C) [9] (the difference between the largest and smallest), and the Range of Tare Weights (R_T) [10].
- 6e. Calculate and record in [11] the ratio of the range of errors and the range of tare weights (R_C/R_T). If the range of tare weights is zero, the ratio will be infinity.

- 6f. Use Ratio, R_C/R_T , column from Table 2-4 (page 125) to determine the total number of tare samples to be opened, record in [12]. If the ratio is infinity, the number of tare sample packages will remain the same as an initial tare sample.

For each additional tare sample, weigh and record the gross weight and tare weight.

- 6g. Calculate the average tare weight by adding all of the tare weights recorded under [B] and dividing the total by the number of tares weighed.

Record the average tare in [13].

STEP 7. PACKAGE ERRORS

Weigh and record the value of the gross weight for each remaining sample package in the column under [A].

Calculate the Nominal Gross Weight [14] (which is used to determine package errors), by adding the Average Tare Weight [13] to the Labeled Contents [1].

Determine the error for each sample package, **including the tare sample packages**, by subtracting from the Gross Weight [A], the Nominal Gross Weight [14] of each package. Record in the appropriate minus or plus column of Section [E].

STEP 8. TOTAL ERROR

Calculate and record the Total Error (TE) [15] by algebraically totaling the sample package plus and minus errors.

STEP 9. UNREASONABLE MINUS ERRORS

Identify any Unreasonable Minus Errors (UME); i.e., minus errors that exceed the Maximum Allowable Variation (MAV).

Circle all minus errors greater than the MAV [3]. Note box [4] has been omitted.

STEP 10. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA

Count the number of UME's circled in Step 9, record in [16] and check the appropriate section of [17].

- ▶ If the number of UME's [16] is greater than the number allowed [8], the inspection lot is REJECTED and ordered OFF SALE.

Finish the inspection by determining the Average Error as computed in Step 11. If the average error is minus, calculate the Percent Error and Total Dollar Value, Step 13, page 110.

Do not complete Step 12.

STEP 11. AVERAGE ERROR

Divide the Total Error [15] by the Sample Size [6].

Record the average Error in [18].

STEP 12. DETERMINE LOT COMPLIANCE

- ▶ If the Average Error [18] is zero or plus value, ACCEPT the inspection lot. Check the appropriate section of [19].

Do not complete Step 13. The inspection is complete.

- ▶ If the Average Error [18] is minus, the inspection lot is REJECTED and ordered OFF SALE. Continue to Step 13.

STEP 13. PERCENT ERROR AND TOTAL DOLLAR VALUE OF THE ERROR

Complete this step only if the average error is a minus value.

- 13a. Divide the Average Error [18] by the Labeled Contents [1]. Multiply this value (☆) by 100 to determine the Percent Error.
- 13b. Multiply the value (☆) by the Inspection Lot Size [5] and the Price per Package to determine the Total Dollar Value. Do not round up the final value (i.e., \$0.478 is written as \$0.47).

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CATEGORY B, RANDOM PACK COMMODITIES

(For Category B, Standard Pack Commodities, see Page 108)

STEP 3. BASIC INFORMATION

Using the Sampling Plan from Table 2-2, page 122, look up and record on the PIR: the Sample Size [6], Initial Tare Sample Size [7], and the Number of Minus Errors Allowed to Exceed the MAV (Unreasonable Errors Allowed) [8].

STEP 4. SAMPLE AND INITIAL TARE SAMPLE

- 4a. Randomly select the sample packages from the inspection lot. Mark or keep the packages in the same order as randomly selected. The first package randomly selected is the first Tare Sample package. The second random sample is the second Tare Sample package, etc.
- 4b. Record the labeled contents of each sample package in the column under [1]. Total and determine the random average, record in [1]. Use the letters "RA" to indicate this is the random average.

STEP 5. TARE DETERMINATION Only Unused or Dried Used Tare (Dry Tare) is to be used.

- 5a. For each package in the Initial Tare Sample, weigh and record the value of the gross weight [A] and the tare weight [B].

If the number of packages in the inspection lot is eleven or less, skip to Step 5g. (Both the initial tare sample size and the total tare sample size will be two.)

- 5b. Calculate the net weight for each package by subtracting from the gross [A], the tare [B]. Record in [C]. The net weight is always determined by subtracting the tare from the gross. It is not weighed directly.
- 5c. Determine the error for each package in the initial tare sample by subtracting the labeled content [1] from the net weight [C]. Record in [D].
- 5d. Record the Range of Errors (R_C) [9] (the difference between the largest and smallest), and the Range of Tare Weights (R_T) [10].
- 5e. Calculate and record in [11] the ratio of the range of errors and range of tare weights, R_C/R_T . If the range of tare weights is zero, the ratio will be infinity.
- 5f. Use Ratio (R_C/R_T) column from Table 2-4, page 125, to determine the total number of tare samples to be opened. Record in [12]. If the ratio is infinity, the number of tare sample packages will remain the same as the Initial Tare Sample. For each additional tare sample, weigh and record the gross weight and tare weight.
- 5g. Calculate the average tare weight by adding all of the tare weights recorded under [B] and dividing the total by the number of tares weighed.

Record the average tare in [13].

STEP 6. PACKAGE ERRORS Determine and record the error for each package in the sample.

Do not use box [14].

Weigh and record the value of the gross weight for each remaining sample package in the column under [A].

Determine the error for each sample package, **including the tare sample packages**, by subtracting from the Gross Weight [A], the Average Tare Weight [13], and the Labeled Contents [1], of each package. Record in the appropriate minus or plus column of Section [E].

STEP 7. MAXIMUM ALLOWABLE VARIATION (MAV) The MAV must be determined individually for each package in the sample.

- 7a. Using Table 2-9 (page 132) look up the MAV for the package with the smallest labeled contents and record it in the column under [3], "MAV from table."
- 7b. If all minus package errors are less than the value of this MAV, it is not necessary to continue as there will be no unreasonable minus errors. If any error is greater than the MAV, repeat Step 7a for each sample package having a minus error.

STEP 8. TOTAL ERROR

Calculate and record the Total Error (TE) [15], by algebraically totaling the sample package plus and minus errors.

STEP 9. UNREASONABLE MINUS ERRORS

Identify any Unreasonable Minus Errors (UME); i.e., minus errors that exceed the Maximum Allowable Variation (MAV).

Circle all minus errors greater than the MAV recorded for each sample package in the column under [3]. Note Box [4] has been omitted.

STEP 10. DETERMINE LOT COMPLIANCE WITH THE MAV CRITERIA

Count the number of UME's circled according to Step 9, record in [16] and check the appropriate section of [17].

- ▶ If the number of UME's [16] is greater than the number allowed [8], the inspection lot is REJECTED and ordered OFF SALE.

Finish the inspection by determining the "Average Error" as computed in Step 11. If the average error is minus, calculate the percent error and total dollar value, Step 13.

STEP 11. AVERAGE ERROR

Divide the Total Error [15] by the Sample Size [6].

Record the average error in [18].

STEP 12. DETERMINE LOT COMPLIANCE

▶ If the Average Error [18] is zero or plus, the lot is ACCEPTED.

Do not complete Step 14. The inspection is complete.

▶ If the Average Error [18] is minus, the inspection lot is REJECTED and ordered OFF SALE. Check the appropriate box in [19] and continue to Step 13.

STEP 13. PERCENT ERROR AND TOTAL DOLLAR VALUE OF THE ERROR

Complete this step only if the average error is a minus value.

13a. Divide the Average Error [18] by the Random Average (Labeled Contents) [1]. Multiply this value (☆) by 100 to determine the Percent Error.

13b. Multiply the value (☆) by the Inspection Lot Size [5], the Price per Pound, and the Random Average Weight [1] to determine the Total Dollar Value. Do not round up the final value (i.e., \$0.478 is written as \$0.47).

**CATEGORY C: USED ONLY FOR PACKAGES LABELED
WITH A COUNT OF 50 OR LESS**

STEP 3. BASIC INFORMATION

Using the Sampling Plan from Table 2-11 (page 134) look up and record on the Package Inspection Report (PIR), the Sample Size [6] and Number of Packages Allowed to Contain Fewer Than the Labeled Count [8]. **Note: Box [3] has been removed from this Category's form.**

STEP 4. MAXIMUM ALLOWABLE VARIATION (MAV)

Use Table 2-7 (page 130) to look up the MAV. Record in [8A].

STEP 5. SAMPLE SELECTION

Randomly select the Sample Packages from the inspection lot.

STEP 6. PACKAGE ERRORS

Determine and record the error for each package in the sample in the appropriate minus or plus column under [E].

STEP 7. TOTAL ERROR

Calculate and record the Total Error (TE) [15] by totaling the sample package plus and minus errors.

STEP 8. MINUS ERRORS Count the number of packages having minus errors of 1 or more. (Ignore any decimal values, do not round.) Record the number counted in [16].

- ▶ If the total number of packages with minus errors [16] exceeds the Number Allowed [8], the inspection lot is REJECTED and OFF SALE. Go to **STEP 10**.
- ▶ If the total number of packages with minus errors [16] is less than or equal to the number allowed [8], ACCEPT the lot, and continue to **STEP 9**.

STEP 9. UNREASONABLE MINUS ERRORS

Identify and order OFF SALE any packages with minus errors larger than the MAV [8A].

STEP 10. AVERAGE ERROR

Calculate the Average Error [18], by dividing the Total Error [15] by the Sample Size [6].

STEP 11. PERCENT ERROR AND TOTAL DOLLAR VALUE OF THE ERROR

Complete this step only if the average error is a minus value.

- 11a. Divide the Average Error **[18]** by the number of units in the Labeled Contents **[1]**. Multiply this value (☆) by 100 to determine the Percent Error.
- 11b. To determine the Total Dollar Value, multiply the value (☆) by the Inspection Lot Size **[5]**, and the Price Per Package. Do not round up the final value (i.e., \$0.478 is written as \$0.47).

EXPLANATION OF TERMS

Acceptable Data for Moisture Loss Allowance at the Packing Location (FDA):

The data must be computed on a daily basis using the average moisture loss determined in environmental conditions similar to those that exist when the product is being inspected.

At least three sample control lots, consisting of at least 48 randomly selected packages, must be used to develop the moisture loss data. The three sample control lots must be placed at various locations in the storage site. Each sample must be stored under the same conditions as are typical for the product. Moisture loss data obtained by removing the individual packages from shipping cases and storing them in a laboratory would not be acceptable.

The weight of each package in each of the sample control lots is determined every day for seven days, except that fresh bakery products are weighed hourly. The average moisture loss value must be computed from the three sample control lots with a 95% prediction interval.

Example: An official visits a pet food plant in Los Angeles in the middle of July to conduct a point-of-pack inspection. If the product tested had been packaged five days before the inspection and is found underweight, the moisture loss data must reflect the loss that would occur in July, not January. If the product is typically placed in a sealed case on a pallet and shrink wrapped, the sample lots must be stored under the same conditions.

Device Division: The division/graduation of the scale, or other device, used to conduct the test for compliance with net content requirements.

MLA Computations: If the MLA (Moisture Loss Allowance) is stated as a percentage, it must be converted to decimal form to be used in computations.

Example: Calculate the MLA and adjusted MAV (Maximum Allowable Variation). For a lot of All Beef Frankfurters.

Labeled Net Weight: 12 ounces (340 grams)

Moisture Loss Allowance = 2-1/2% (from page 94, Step 3)

MAV: 1 ounce, 0.062 pound, or 28.3 grams (Table 2-9, page 133)

MLA Computations (Continued):

MLA: 12 oz labeled weight = 0.75 lb

2-1/2% MLA ÷ 100 = 0.025

0.75 lb x 0.025 = 0.01875 lb

MAV from Table

0.062 lb

Adjusted MAV: (MLA + MAV) 0.01875 + 0.062 = 0.08075

Inspection Lot: A collection of identically labeled packages (except for quantity for random packages) available for inspection at one time. The packages in the Inspection Lot will pass or fail as a whole based on the results of the tests of a sample of packages drawn from the Inspection Lot. At retail it is not necessary to sort by lot codes, but to enable follow-up, all codes included in the sample are to be recorded on the report.

Nominal Gross Weight: The sum of the labeled weight and the average tare. It is the value that will be compared with the gross weight of a package to determine the package error. For example, when testing a lot of cereal packages with a labeled weight of 15 oz, the average tare is found to be 1.4 oz. Adding these two values results in a nominal gross weight of 16.4 oz. The first sample package of cereal is placed on the scale, and weighs 15.8 oz, gross (including tare). To determine the package error, the nominal gross weight is subtracted from the measured gross weight; 5.8 - 6.4 = - 0.6 oz error.

Random Pack Lot: A collection of packages of a commodity with identical labels, **except** for the net weight. For example, bricks of cheese labeled: Extra Sharp Cheddar, Audrey Cheese Company, Sell by April 1' 96, each having a different labeled net weight ranging from 0.94 lb to 1.64 lb.

Sample Error Limit: A statistical value that allows for the uncertainty between the sample average error and the inspection lot average error. The Sample Error Limit or SEL is determined by multiplying the lot's sample standard deviation by a correction factor that takes into consideration the lot size (see Table 2-1 Sampling Plans for Category A).

Standard Pack Lot: A collection of packages of a commodity with identical labels, all with the same net weight. For example, bricks of cheese labeled: Extra Sharp Cheddar, Audrey Cheese Company, Sell by April 1'96, Net Weight 1 lb, 454 grams.

Standard Deviation of a Sample: The direct measure of variation of the individual package errors from the average of the package errors in the sample. To calculate manually, the following formula is the simplest to use.

$$\sqrt{\frac{\sum x_i^2 - (\sum x_i)^2 / n}{(n - 1)}}$$

- \sum means the sum of
- x_i means the individual package errors
- n means the sample size (number of items in the sample)

Written out, this is the square root of: the sum of the squares of the individual package errors minus, the square of the sum of the individual package errors divided by the number of the items in the sample, divided by the number of items in the sample minus one.

Example: The recorded errors for a 12-item sample are:

x_i	x_i^2
+ 1	1
- 3	9
- 4	16
- 2	4
- 3	9
- 1	1
0	0
+ 2	4
- 2	4
- 3	9
- 1	1
<u>0</u>	<u>0</u>
 $\sum x_i$ -16	 $\sum x_i^2$ 58

$$\sqrt{\frac{\sum x_i^2 - (\sum x_i)^2 / n}{(n - 1)}}$$

Calculate the square root of:

$$\frac{58 - [(-16)^2 / 12]}{(12-1)}$$

$$\frac{58 - (256 / 12)}{11}$$

$$\frac{58 - 21.33}{11}$$

$$\frac{36.67}{11}$$

$$3.33$$

Both the square root and the Standard Deviation are 1.82.

Tare: Unless otherwise provided, tare includes all material, substances, or items not included in the required declaration of identity. Any substances that are absorbed by the packaging material and any ice or ice glaze in the package of a product, except when the product is ice shall be considered tare. Tare also includes glue, labels, ties, prizes, coupons, decorations, etc., which are not an essential part of the product.

Dried Used Tare: Used tare material dried in order to approximate Unused Tare. Nonabsorbent materials are cleaned and wiped dry. Absorbent materials are cleaned and dried of absorbed fats and fluids. Soakers are pressed as dry as possible between toweling, then dried in a microwave oven or on a heating element. For purposes of these sampling and testing procedures, DRIED USED TARE is also known as DRY TARE.

Dry Tare: See UNUSED TARE and DRIED USED TARE.

Unused Tare: New tare material that has never been used in the packaging of a commodity. Also known as DRY TARE.

Used Tare: Used tare material which has not been dried or cleaned. Used tare includes any substances absorbed by the packaging material, free-flowing liquids, and any ice or ice glaze except when the product is ice. Also known as WET TARE.

Wet Tare: See USED TARE

FEDERAL AGENCIES AND REGULATED COMMODITIES

THESE AGENCIES ALLOW FOR MOISTURE LOSS:

FEDERAL FOOD AND DRUG ADMINISTRATION (FDA)

Food and drink for man or animal, chewing gum, and components of same.

Devices intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease in man or animal, or to affect the structure or function.

Drugs intended for the treatment or prevention of disease, or articles intended to affect the structure or function of the body of man or animal.

Cosmetics, fragrances, and cleansing agents (except for medicated soap).

UNITED STATES DEPARTMENT OF FOOD AND AGRICULTURE (USDA)

Meat and poultry, and meat and poultry products

BUREAU OF ALCOHOL, TOBACCO, AND FIREARMS, TREASURY DEPARTMENT (BATF)

FEDERAL TRADE COMMISSION (FTC)

Consumer commodities consumed when used about the person or home.

Adhesives and sealants

Air fresheners

Cleaning and laundry compounds, household supplies

Waxes and polishes

THESE AGENCIES DO NOT ALLOW FOR MOISTURE LOSS:

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Disinfectants, germ-killing, or germ-proofing products

Insecticides, fungicides, and herbicides

UNITED STATES DEPARTMENT OF FOOD AND AGRICULTURE (USDA)

Agricultural Seeds

Table 2-1. Sampling Plans for Category A

1	2	3	4	5	
Inspection Lot Size (N)	Sample Size (n)	Sample Correction Factor	Number of Minus Package Errors Allowed to Exceed the MAV (Also known as Unreasonable Minus Errors - UME's)	Initial Tare Sample Size ^a (n _t)	
1	1	Apply MAV	0	Glass and Aerosol Packages	All Other Packages
2	2	8.984		2	2
3	3	2.484			
4	4	1.591			
5	5	1.241			
6	6	1.050			
7	7	0.925			
8	8	0.836			
9	9	0.769			
10	10	0.715			
11	11	0.672			
12 to 250	12	0.635			
251 to 3,200	24	0.422			
More than 3,200	48	0.291	1		
Sample Error Limit (SEL) = sample standard deviation x sample correction factor (column 3)					

^a Tare Procedures - Obtain the "initial tare sample" from the sample selected from the inspection lot. Keep the packages in the order in which their corresponding random numbers were obtained. The "initial tare sample" packages are the first 2, 3, or 5 packages (as appropriate for the sample size) of the sample. Used dried tare weights are determined by emptying, cleaning, drying (if necessary), and weighing all packaging materials. For Standard Lots, determine the range of tare weights (R_t) and range of net weights (R_c). For Random Lots determine the range of tare weights (R_t) and range of errors (R_c). Compute R_c/R_t and look up this value in Table 2.3 (or 2.4 if Category B). Determine if additional packages must be opened and measured to determine an average tare.

Note: If the Sample Size is 11 or less, both the initial tare sample size and the total tare sample size is 2. There is no need to compute R_c/R_t or to take additional tare samples.

**Table 2-2. Sampling Plans for Category B
Use Only for Testing Meat and Poultry Products in Federally Inspected Plants**

1	2	3	4
Inspection Lot Size (N)	Sample Size (n)	Initial Tare Sample Size ^a (n _t)	Number of minus package errors allowed to exceed the MAVs in Table 2-9. U.S. Department of Agriculture, Meat and Poultry, Groups and Lower Limits for Individual Packages (Also known as Unreasonable Minus Errors-UME's)
250 or less	10	2	0
251 or more	30	5	0

^a See note "a" to Table 2-1 above.

Table 2-3. Category A – Total Number of Packages to be Opened for Tare Determination Numbers Include those Packages Opened for Initial Tare Sample					
Ratio of R_c/R_t	Total Number of Packages in Tare Sample				
Sample Size	12	24		48	
Initial Tare Sample Size	2	2	3	2	3
If R_t equals "zero," use Initial Tare Sample Size. If the ratio is "zero" based on a "zero" R_c open all of the packages in the sample.	2	2	3	2	3
If the ratio is greater than 0 but less than or equal to 0.2	12	24	24	48	48
0.21 to 0.60	12	24	24	48	48
0.61 to 0.70	12	24	24	47	47
0.71 to 0.80	12	23	23	47	47
0.81 to 1.00	12	23	23	46	46
1.01 to 1.10	11	23	23	46	46
1.11 to 1.20	11	23	23	45	45
1.21 to 1.30	11	22	22	45	45
1.31 to 1.50	11	22	22	44	44
1.51 to 1.60	11	22	22	43	43
1.61 to 1.70	11	21	21	42	42
1.71 to 1.80	10	21	21	42	42
1.81 to 1.90	10	21	21	41	41
1.91 to 2.00	10	20	20	41	41
2.01 to 2.10	10	20	20	40	40
2.11 to 2.20	10	20	20	39	39
2.21 to 2.30	10	19	19	39	39
2.31 to 2.40	9	19	19	38	38
2.41 to 2.50	9	19	19	37	37
2.51 to 2.60	9	18	18	37	37
2.61 to 2.70	9	18	18	36	36
2.71 to 2.80	9	18	18	35	35
2.81 to 2.90	9	17	17	34	34
2.91 to 3.00	8	17	17	34	34
3.01 to 3.10	8	17	17	33	33
3.11 to 3.30	8	16	16	32	32
3.31 to 3.40	8	16	16	31	31
3.41 to 3.50	8	15	15	30	30
3.51 to 3.60	7	15	15	30	30
3.61 to 3.70	7	15	15	29	29
3.71 to 3.90	7	14	14	28	28
3.91 to 4.00	7	14	14	27	27
4.01 to 4.10	7	13	13	27	27
4.11 to 4.20	7	13	13	26	26
4.21 to 4.30	6	13	13	25	25
4.31 to 4.40	6	12	12	25	25
4.41 to 4.60	6	12	12	24	24
4.61 to 4.70	6	12	12	23	23
4.71 to 4.80	6	11	11	23	23
4.81 to 4.90	6	11	11	22	22
4.91 to 5.00	5	11	11	22	22

Go to Next Page for Additional Values.

Table 2-3. (Continued)					
Category A – Total Number of Packages to be Opened for Tare Determination					
Numbers Include those Packages Opened for Initial Tare Sample					
Ratio of R_c/R_t	Total Number of Packages in Tare Sample				
Sample Size	12	24		48	
Initial Tare Sample Size	2	2	3	2	3
5.01 to 5.10	5	11	11	21	21
5.11 to 5.20	5	10	10	21	21
5.21 to 5.40	5	10	10	20	20
5.41 to 5.60	5	10	10	19	19
5.61 to 5.70	5	9	9	19	19
5.71 to 5.80	5	9	9	18	18
5.81 to 5.90	4	9	9	18	18
5.91 to 6.10	4	9	9	17	17
6.11 to 6.20	4	8	8	17	17
6.21 to 6.50	4	8	8	16	16
6.51 to 6.70	4	8	8	15	15
6.71 to 6.80	4	7	7	15	15
6.81 to 7.00	4	7	7	14	14
7.01 to 7.20	3	7	7	14	14
7.21 to 7.40	3	7	7	13	13
7.41 to 7.60	3	6	6	13	13
7.61 to 8.00	3	6	6	12	12
8.01 to 8.20	3	6	6	11	11
8.21 to 8.50	3	5	5	11	11
8.51 to 8.80	3	5	5	10	10
8.81 to 9.00	2	5	5	10	10
9.01 to 9.30	2	5	5	9	9
9.31 to 9.70	2	4	4	9	9
9.71 to 10.40	2	4	4	8	8
10.41 to 10.90	2	4	4	7	7
10.91 to 11.30	2	3	3	7	7
11.31 to 12.50	2	3	3	6	6
12.51 to 13.20	2	3	3	5	5
13.21 to 13.90	2	2	3	5	5
13.91 to 16.00	2	2	3	4	4
16.01 to 19.10	2	2	3	3	3
19.11 to 19.20	2	2	3	2	3
Initial Tare Sample Size	2	2	3	2	3

Table 2-4. Category B – Total Number of Packages to be Opened for Tare Determination Numbers Include those Packages Opened for Initial Tare Sample		
Ratio of R_c/R_t	Total Number of Packages in Tare Sample	
Sample Size	10	30
Initial Tare Sample Size	2	5
If R_t equals “zero” range, use Initial Tare Sample Size. If the ratio is “zero” based on a “zero” R_c open all the packages in the sample.	2	5
If the ratio is greater than 0 but less than or equal to 0.2	10	30
0.21 to 0.40	10	29
0.41 to 0.60	10	28
0.61 to 0.80	9	26
0.81 to 1.00	8	24
1.01 to 1.20	8	23
1.21 to 1.40	7	21
1.41 to 1.60	7	19
1.61 to 1.80	6	17
1.81 to 2.00	5	15
2.01 to 2.20	5	14
2.21 to 2.40	5	13
2.41 to 2.60	4	12
2.61 to 2.80	4	11
2.81 to 3.00	4	10
3.01 to 3.20	3	9
3.21 to 3.60	3	8
3.61 to 3.80	3	7
3.81 to 4.40	2	6
If the ratio is greater than 4.40, use the Initial Tare Sample Size	2	5

**Table 2-5. Maximum Allowable Variations (MAVs) for Packages Labeled by Weight^a
(Use Table 2-9 for meat and poultry products subject to USDA requirements)**

SI Units			Inch-Pound Units		
Labeled Weight ^b		MAV	Labeled Weight ^b		MAV
grams (g)		Grams (g)	Pound (lb) or Ounce (oz)	Decimal Pound (lb)	Fractional Ounce (oz)
≤ 36		10% of labeled quantity	≤ 0.08 lb ≤ 1.28 oz		10% of labeled quantity
> 36	54	3.6	> 0.08 lb ≤ 0.12 lb > 1.28 oz ≤ 1.92 oz	0.008	1/8
> 54	81	5.4	> 0.12 lb ≤ 0.18 lb > 1.92 oz ≤ 2.88 oz	0.012	3/16
> 81	117	7.2	> 0.18 lb ≤ 0.26 lb > 2.88 oz ≤ 4.16 oz	0.016	1/4
> 117	≤ 154	9.0	> 0.26 lb ≤ 0.34 lb > 4.16 oz ≤ 5.44 oz	0.020	5/16
> 154	≤ 208	10.8	> 0.34 lb ≤ 0.46 lb > 5.44 oz ≤ 7.36 oz	0.024	3/8
> 208	≤ 263	12.7	> 0.46 lb ≤ 0.58 lb > 7.36 oz ≤ 9.28 oz	0.028	7/16
> 263	≤ 317	14.5	> 0.58 lb ≤ 0.70 lb > 9.28 oz ≤ 11.20 oz	0.032	1/2
> 317	≤ 381	16.3	> 0.70 lb ≤ 0.84 lb > 11.20 oz ≤ 13.44 oz	0.036	9/16
> 381	≤ 426	18.1	> 0.84 lb ≤ 0.94 lb > 13.44 oz ≤ 15.04 oz	0.040	5/8
> 426	≤ 489	19.9	> 0.94 lb ≤ 1.08 lb > 15.04 oz ≤ 17.28 oz	0.044	11/16
> 489	≤ 571	21.7	> 1.08 lb ≤ 1.26 lb	0.048	3/4
> 571	≤ 635	23.5	> 1.26 lb ≤ 1.40 lb	0.052	13/16
> 635	≤ 698	25.4	> 1.40 lb ≤ 1.54 lb	0.056	7/8
> 698	≤ 771	27.2	> 1.54 lb ≤ 1.70 lb	0.060	15/16

^a Applies only to shortages in package weight (that is, the MAV is compared with minus package errors only)

^b > means "greater than"

≤ means "less than or equal to"

See Category A, Step 5a for polyethylene and Table 2-10

**Table 2-5. (continued) Maximum Allowable Variations (MAVs) for Packages Labeled by Weight^a
(Use Table 2-9 for meat and poultry products subject to USDA requirements)**

SI Units		
Labeled Weight		MAV
Gram (g) or Kilogram (kg)		gram (g)
> 771 ≤ 852		29.0
> 852 ≤ 970		31.7
> 970 ≤ 1.12		35.3
> 1.12 ≤ 1.25		39.0
> 1.25 ≤ 1.45		42.6
> 1.45 ≤ 1.76		49.0
> 1.76 ≤ 2.13		54.0
> 2.13 ≤ 2.63		63.0
> 2.63 ≤ 3.08		68.0
> 3.08 ≤ 3.58		77.0
> 3.58 ≤ 4.26		86.0
> 4.26 ≤ 5.30		99.0
> 5.30 ≤ 6.48		113
> 6.48 ≤ 8.02		127
> 8.02 ≤ 10.52		140
> 10.52 ≤ 14.33		167
> 14.33 ≤ 19.23		199
> 19.23 ≤ 24.67		226
> 24.67		2% of labeled quantity

Inch-Pound Units		
Labeled Weight	MAV	
Pound (lb)	Decimal Pound (lb)	Ounce (oz)
> 1.70 lb ≤ 1.88 lb	0.064	1
> 1.88 lb ≤ 2.14 lb	0.070	1 1/8
> 2.14 lb ≤ 2.48 lb	0.078	1 1/4
> 2.48 lb ≤ 2.76 lb	0.086	1 3/8
> 2.76 lb ≤ 3.20 lb	0.094	1 1/2
> 3.20 lb ≤ 3.90 lb	0.11	1 3/4
> 3.90 lb ≤ 4.70 lb	0.12	2
> 4.70 lb ≤ 5.80 lb	0.14	2 1/4
> 5.80 lb ≤ 6.80 lb	0.15	2 1/2
> 6.80 lb ≤ 7.90 lb	0.17	2 3/4
> 7.90 lb ≤ 9.40 lb	0.19	3
> 9.40 lb ≤ 11.70 lb	0.22	3 1/2
> 11.70 lb ≤ 14.30 lb	0.25	4
> 14.30 lb ≤ 17.70 lb	0.28	4 1/2
> 17.70 lb ≤ 23.20 lb	0.31	5
> 23.20 lb ≤ 31.60 lb	0.37	6
> 31.60 lb ≤ 42.40 lb	0.44	7
> 42.40 lb ≤ 54.40 lb	0.50	8
> 54.40 lb	2% of labeled quantity	

**Table 2-6. Maximum Allowable Variations (MAVs)
for Packages Labeled by Liquid or Dry Volume^a**

(Use Table 2-9 for meat and poultry products subject to USDA requirements)

SI Units		Inch-Pound Units			
Labeled Quantity (mL) ^d	Liquid and Dry MAV (mL)	Labeled Quantity ^d (fl oz)	Liquid MAV (fl oz)	Labeled Quantity ^d (cu in)	Dry MAV (cu in)
≤ 3	0.5 ^c	≤ 0.50	0.2 ^b	≤ 0.18	0.03
> 3 ≤ 8	1.0 ^c	> 0.50 ≤ 0.75	0.06	> 0.18 ≤ 0.49	0.06
> 8 ≤ 14	1.5 ^c	> 0.75 ≤ 2.25	0.13	> 0.49 ≤ 0.92	0.09
> 14 ≤ 22	1.7	> 2.25 ≤ 4.25	0.19	> 0.92 ≤ 1.35	0.10
> 22 ≤ 66	3.8	> 4.25 ≤ 5.75	0.25	> 1.35 ≤ 4.06	0.23
> 66 ≤ 125	5.6	> 5.75 ≤ 7.50	0.31	> 4.06 ≤ 7.66	0.34
> 125 ≤ 170	7.3	> 7.50 ≤ 11.75	0.38	> 7.66 ≤ 10.37	0.45
> 170 ≤ 221	9.1	> 11.75 ≤ 17.00	0.50	> 10.37 ≤ 13.53	0.55
> 221 ≤ 347	11.2	> 17.00 ≤ 21.00	0.63	> 13.53 ≤ 21.20	0.68
> 347 ≤ 502	14.7	> 21.00 ≤ 27.00	0.75	> 21.20 ≤ 30.67	0.90
> 502 ≤ 621	18.6	> 27.00 ≤ 31.00	0.88	> 30.67 ≤ 37.89	1.13
> 621 ≤ 798	22.1	> 31.00 ≤ 39.00	1.00	> 37.89 ≤ 48.72	1.35
		> 39.00 ≤ 55.00	1.25	> 48.72 ≤ 55.94	1.58
		> 55.00 ≤ 69.00	1.50	> 55.94 ≤ 70.38	1.80

Liquid Measure Equivalents: 1 pint = 16 fl oz 1 quart = 32 fl oz 1 gallon = 128 fl oz	
--	--

^a Applies to shortages in package volume (that is, minus package errors).

^b It is preferable to convert to SI units and use laboratory glassware.

^c Use laboratory glassware.

^d > means "greater than".

≤ means "less than or equal to".

**Table 2-6. (continued) Maximum Allowable Variations (MAVs)
for Packages Labeled by Liquid or Dry Volume**

SI Units		Inch-Pound			
Labeled Quantity (mL) (L)	Liquid and Dry MAV (mL)	Labeled Quantity (fl oz)	Liquid MAV (fl oz)	Labeled Quantity (cu in)	Dry MAV (cu in)
> 798 ≤ 916 mL	26.0	> 69.00 ≤ 85.00	1.75	> 70.38 ≤ 99.25	2.25
> 916 mL ≤ 1.15 L	29	> 85.00 ≤ 103.00	2.0	> 99.25 ≤ 124.5	2.70
> 1.15 L ≤ 1.62	36	> 103 ≤ 160 (1.25 gal)	2.5	> 124.5 ≤ 153.3	3.1
> 1.62 ≤ 2.04	44	> 160 ≤ 185.6	3.0	> 153.3 ≤ 185.8	3.6
> 2.04 ≤ 2.51	51	> 185.6 ≤ 240	3.5	> 185.8 ≤ 288.7	4.5
> 2.51 ≤ 3.04	59	> 240 ≤ 272	4.0	> 288.7 ≤ 334.9	5.4
> 3.04 ≤ 4.73	73	> 272 ≤ 344	4.5	> 334.9 ≤ 443.1	6.3
> 4.73 ≤ 5.48	88	> 344 ≤ 392	5.0	> 443.1 ≤ 490.8	7.2
> 5.48 ≤ 7.09	103	> 392 ≤ 560	6.0	> 490.8 ≤ 620.8	8.1
> 7.09 ≤ 8.04	118	> 560 ≤ 640 (5 gal)	7.0	> 620.8 ≤ 707.4	9.0
> 8.04 ≤ 10.17	133	> 640 ≤ 800	8.0	> 707.4 ≤ 1010	10.8
> 10.17 ≤ 11.59	147	> 800 ≤ 904	9.0	> 1010 ≤ 1155	12.6
> 11.59 ≤ 16.56	177	> 904	1% of Labeled Quantity	> 1155 ≤ 1443	14.4
> 16.56 ≤ 18.92	207			> 1443 ≤ 1631	16.2
> 18.92 ≤ 23.65	236			> 1631	1% of Labeled Volume
> 23.65 ≤ 26.73	266				
> 26.73	1% of Labeled Quantity				
See Category A, Step 5a. for Exception: Bark Mulch		Dry Measure Equivalent: 1 Dry Pint = 33.6003125 cu in 1 Bushel = 2150.42 cu in 1 Dry Quart = 67.200625 cu in 1 cu ft = 1728 cu in			

**Table 2-7. Maximum Allowable Variations (MAVs) for Packages
Labeled by Count^a**

Labeled Count	MAV
≤ 17 ^b	0
18 – 50 ^b	1
51 – 83	2
84 – 116	3
117 – 150	4
151 – 200	5
201 – 240	6
241 - 290	7
291 - 345	8
346 - 400	9
401 - 465	10
466 - 540	11
541 - 625	12
626 - 725	13
726 - 815	14
816 - 900	15
901 - 990	16
991 - 1075	17
1076 - 1165	18
1166 - 1250	19
1251 - 1333	20
≥ 1334	1.5% of labeled count rounded off to the nearest whole number

^aApplies only to shortages in package count (that is, minus package errors).

^bSee Category C Sampling Plans for use with these package sizes.

Table 2-8. Maximum Allowable Variations (MAVs) for Packages Labeled by Length (Width) or Area^a

SI Units		
Length		Area
Labeled in Meters	MAV in Percent (%) of the Labeled Length	The MAV for packages labeled by area is 3% of the labeled quantity
≤ ^b 1	3	
over 1 to 43	1.5	
over 43 to 87	2	
over 87 to 140	2.5	
over 140 to 301	3	
over 301 to 1005	4	
over 1005	5	

Inch-Pound Units of Measure		
Length		Area
Labeled in Yards	MAV in Percent (%) of the Labeled Length	The MAV for packages labeled by area is 3% of the labeled quantity
≤ ^b 1	3	
over 1 to 48	1.5	
over 48 to 96	2	
over 96 to 154	2.5	
over 154 to 330	3	
over 330 to 1100	4	
over 1100	5	

^a Applies only to shortages in package measure (that is, minus package errors).

^b ≤ means "less than or equal to."

See Category A, Step 5a, or Table 2-10 for exceptions: Textiles, Polyethylene Sheeting.

**Table 2-9. U.S. Department of Agriculture, Meat and Poultry,
Groups and Lower Limits (MAV's) for Individual Packages
Also known as Unreasonable Minus Errors - UME's**

Definition of Group and Labeled Quantity		Lower Limit (MAV) for Individual Weights - Also known as Unreasonable Minus Errors – UME's (Use the limits according to the scale division being used)		
Homogeneous, Fluid when Filled (e.g., baby food or containers of lard)	All Other Products			
Less than 85 g (3 oz)	Less than 85 g (3 oz)	10% of labeled quantity		
85 g to 453 g 3 oz to 16 oz (1 lb)		g	oz	lb
		7.1	0.25 8/32 4/16 2/10 2/8 1/4	0.016
over 453 g over 16 oz (1 lb)	85 g to 198 g 3 oz to 7 oz	14.2	0.50 16/32 8/16 5/10 4/8 2/4	0.031
	over 198 g to 1.36 kg over 7 oz to 48 oz (3 lb)	28.3	1	0.062
	over 1.36 kg to 4.53 kg over 48 oz to 160 oz over 3 lb to 10 lb	42.5	1.50 1-16/32 1-8/16 1-5/10 1-4/8 1-2/4	0.094
	over 4.53 kg over 160 oz (10 lb)	1% of labeled quantity		

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 Less than 50 Items

	Maximum Allowable Variations (MAVs)
Polyethylene Sheeting and Film	<p><u>Thickness</u></p> <p>When the labeled thickness is 25 µm (1 mil or 0.001 in) or less, any individual thickness measurement of polyethylene film may be up to 35 % below the labeled thickness.</p> <p>When the labeled thickness is greater than 25 µm (1 mil or 0.001 in), individual thickness measurements of polyethylene sheeting may be up to 20 % less than the labeled thickness.</p> <p>The average thickness of a single package of polyethylene sheeting may be up to 4 % less than the labeled thickness.</p> <p><u>Weight</u></p> <p>The MAV for individual packages of polyethylene sheeting and film shall be 4 % of the labeled quantity.</p>
Textiles	<p>The MAVs are:</p> <p>For packages labeled with dimensions of 60 cm (24 in) or more:</p> <p>Three percent of the labeled quantity for negative errors and 6 % of the labeled quantity for plus errors.</p> <p>For packages labeled with dimensions less than 60 cm (24 in):</p> <p>6 % of the labeled quantity for negative errors and 12 % for plus errors.</p>
Mulch and Soil Labeled by Volume	<p>The MAVs are:</p> <p>For individual packages: 5 % of the labeled volume.</p> <p>For example: One package may exceed the MAV for every 12 packages in the sample (e.g., when the sample size is 12 or less, 1 package may exceed the MAV and when the sample size is 48 packages, 4 packages may exceed the MAV).</p>
Packaged Firewood and Packages Labeled By Count with Less Than 50 Items	<p>MAVs are not applied to these packages.</p>

Table 2-11. Accuracy Requirements for Packages Labeled by Low Count (50 or Less) and Packages Given Tolerances (Glass and Stemware)			
	1	2	3
Inspection Lot Size	Sample Size	For Packages Labeled by Low Count (50 or Less)	For Packages Given Tolerances (Glasses and Stemware)
		Number of Packages Allowed to Contain Less than the Labeled Count	Number of Package Errors that May Exceed the Allowable Difference
1 – 11	1 – 11	1	0
12 – 250	12	1	0
251 – 3 200	24	2	1
More than 3 200	48	3	2

Table 3-2. Allowable Differences for Pressed and Blown Glass Tumblers and Stemware	
Unit of Measure	
If the capacity in metric units is:	Then the allowable difference is:
200 mL or less	± 10 mL
More than 200 mL	± 5 % of the labeled capacity
If the capacity in inch-pound units is:	Then the allowable difference is:
5 fluid ounces or less	± 1/4 fluid ounce
More than 5 fluid ounces	± 5 % of the labeled capacity

PACKAGE INSPECTION REPORTS, INFORMATION ENTRY

There are three Package Inspection Reports (PIR's), one for each category of sampling plans: A, B, or C. Each is identified with the letter designating the Category in the upper left square and on the lower right corner.

The requirements for completing the basic information (heading, responsible party, inspection location, commodity, lot identification, disposition, and off sale information) are the same for categories A and C. Category B only requires the Packer's information since all "B" inspections are done at the packing plant.

1. The top line contains:
 - a. The Date and Time the inspection begins.
 - b. The complete name of the County conducting the inspection. S.B. could be Santa Barbara, San Benito, or San Bernardino
 - c. Report or Off Sale Number (optional): Used according to county policy. It is the number used by some jurisdictions to identify the inspection or for tracking off sale commodities.
 - d. Commodity Number: The number used by the State of California to designate the specific classification of the commodity under inspection. The Commodity Classifications List begins on page 279. If the commodity is being inspected at the packing location, it is considered to be an audit and the number used is the general classification followed by .50 (e.g., 2.00 is the general classification for Dairy Type Products). The commodity number for an inspection of packages of cottage cheese at the packing plant would be "2.50-Prepackaged Dairy Type Products (Audits)." If this same cottage cheese were to be inspected at the retail market, the classification would be "2.06-Cottage Cheese."
2. The next section contains information about the inspection and commodity. The information is used to identify and locate all parties having some control over the commodity. Always enter the complete name and address of all the parties. If at a retail location, it may be necessary to ask for, or to check, invoices to determine the distributor. Note. Category B forms have only a single line and no check boxes as all "B" inspections are done only at the packing plant.
 - a. Packer is the name and address of the party actually placing the commodity into the package. Usually this is the Statement of Responsibility (i.e., the company name and address printed on the label).

- b. Distributor is the party transferring the commodity from the packer to the sales location. It may be the packer if the lot was a direct shipment to the sales location. The dealer's distribution center or warehouse is considered to be the distributor when the packer ships to that location.
 - c. Dealer is the party selling the commodity. It may be a wholesale or a retail location.
 - d. The check boxes in front of Packer, Distributor, and Dealer are for indicating which one of these parties is responsible for the accuracy of the net contents. Check the box in front of the one that placed the net content statement on the package label.
 - e. The boxes following Packer, Distributor, and Dealer indicate at which location the inspection is taking place. Check the appropriate box.
3. Commodity information:
- a. Brand Name: Trademark or the name the commodity is marketed under. For "Blue Seas Chunk Light Tuna," Blue Seas is the brand name.
 - b. Commodity: Identity of the commodity. In the above example, the commodity is "Chunk Light Tuna."
 - c. Other Identification - Code Symbols:
 - (1) Date: Any and all dates printed on the label. If there is more than one, record all and identify the type. Types may include pack dates, best used by dates, or sell by dates.
 - (2) Other: Any code or identifying marks on the package designating the part of the production or the location that this commodity is from.
 - d. Container Description: A complete explanation of everything considered to be tare for this commodity (i.e., any part of the whole package and commodity not considered to be the net contents). The description should give enough detail so that someone not familiar with the package could recognize the package and determine what was not included.
 - e. \$ (price per) Package (or) Pound: The price for which this commodity is being sold at this location. Check the box to indicate if this is the package price, or the price per pound for random lots.
4. The lower part of the form, following the calculations, contains information about the results of the inspection and the disposition of the commodity.
- a. Remarks: Any other information, not included elsewhere, concerning the commodity or inspection.
 - b. Off Sale Order: If the lot has been rejected as a result of this inspection, it is ordered "Off Sale" by checking this box.

- c. Disposition: Check the box corresponding to the method of disposal or correction for this lot. This date may be different from the inspection date. If the disposition is not determined, a follow-up visit will be necessary.
- d. Packages:
 - (1) Off Sale: The number of packages rejected as a result of this inspection.
 - (2) Accepted: The number of packages accepted by this inspection.
 - (3) Weighed/Measured: The number of packages physically weighed or measured for this inspection. This is the sample size, box **[6]**.
- 5. The last line contains the signature and title of the owner, or agent for the owner, of the lot inspected, and the names of the county sealer and the inspector conducting the inspection.

The signature of the agent or owner certifies that he or she has received a copy of this report and that the inspector has offered to review the data with him or her. It also signifies his or her understanding of the conditions of the Off Sale order.

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PACKAGE INSPECTION REPORT

CATEGORY A	Date 6/10/03	Time 3:05 a.m. p.m.	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 3.01
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS INSPECTED AT

✓ Packer PERRIN BAKERY 1608 S. INDUSTRIAL PARKWAY, ROCKWOOD, OR 86095	Address
Distributor VALENTINO WHOLESALE GROCERY	Address BUTES, CA 95994
Dealer BIG TOP MARKET 141 FIFTH AVE., ELMIRA, CA 93069	Address

Brand Name OLD ERIN	Other Identification / Code Symbols	Date	Other Code
Commodity IRISH SODA BREAD	Container Description CELLO WRAP, OUTER PLASTIC BAG, PLASTIC CLIP	BLUE CLIP	2501-6A

\$ 2.29	Package Pound <input checked="" type="checkbox"/>	Group	MLA <input checked="" type="checkbox"/> 1 %	Other <input type="checkbox"/>	[2] Device Division 1g	[5] Inspection Lot Size 8	[6] Sample Size 8	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (Initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error: Standard: [A] - [14] Random: [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0.01 x Labeled Content	[4B] Adjusted MAV [3] + [4A]
300g 10.4 oz					308.5	Minus (-) Plus (+)	15	3	18
1.	307	8				1.5			
2.	304	9				4.5			
3.	315						6.5		
4.	296					12.5			
5.	298					10.5			
6.	300					8.5			
7.	314						5.5		
8.	306					2.5			
9.									
10.									
11.									
12.									
Total	Total of Tare Weights				Error: Total for Each Column	40	12		

[9] Rc - Range of Errors [D] NA	[10] Rt Range of Tare Weights [B] NA	[11] Ratio of Rc / Rt [9] / [10] NA	[12] Total Number Tare (Table 2 - 3) 2	[13] Average Tare Weight 8.5	[15] Total Error -28	[16] Number of UME's 0	[17] Is [16] greater than [9]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ((15) / [9]) -3.5	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 6.9897	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.836	[23] Sample Error Limit (SEL) [21] x [22] 5.8434	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error 3.5 / 300 = 0.0116 x 100 = 1.16 %			MLA <input checked="" type="checkbox"/> Moisture Loss Allowance is greater than 0% 1.0 % Is 3.5 [18] less than or equal to 5.8434 [23] IF YES, ACCEPT <input checked="" type="checkbox"/> Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT <input type="checkbox"/> Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA. STATUS NOT DETERMINED. <input type="checkbox"/>
☆ x Lot Size [5] x Price Per Package* = Total \$ Value 0.0116 x 8 x 2.29 = \$ 0.21			

REMARKS:

OTHER No Moisture Loss Allowance OR Moisture Loss Allowance equals 0%

Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

Is _____ [18] greater than _____ [23] IF YES, REJECT

<input type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ___/___/___	Packages Off Sale: (rejected) 0
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/> Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/> On ___/___/___ Disposition Not determined <input type="checkbox"/>	Packages Accepted: 8 Packages Status Not Determined: 0 Packages Weighed / Measured: 8

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT	TITLE	SEALER	INSPECTOR
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PACKAGE INSPECTION REPORT

CATEGORY A	Date 6/10/03	Time 9:40 <small>a.m. p.m.</small>	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 4.50
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS				INSPECTED AT	
<input checked="" type="checkbox"/> Packer	BIG TOP MARKET		Address 141 FIFTH AVE., ELMIRA, CA 93069		<input checked="" type="checkbox"/>
Distributor			Address		
Dealer			Address		

Brand Name BIG TOP	Other Identification / Code Symbols	Date 06-11-03	Other Code
Commodity ROUND STEAK	Container Description TRAY, WRAP, SOAKER		

\$ 3.89	<input type="checkbox"/> Package Pound	Group	MLA <input type="checkbox"/> Other <input checked="" type="checkbox"/>	%	[2] Device Division 0.01 LB	[5] Inspection Lot Size 14	[6] Sample Size 12	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error: Initial tare sample [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard [A] - [14] Random [A] - [13] - [1]		[3] MAV from Table	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
						Minus (-)	Plus (+)			
1. 2.41	2.50	0.09	2.41	0		0.01				
2. 2.32	2.36	0.10	2.26	-0.06		0.06				
3. 2.29	2.38	0.13				0.01		0.078		
4. 2.53	2.59	0.08				0.04				
5. 2.46	2.55					0.01				
6. 2.39	2.49						0			
7. 2.34	2.43					0.01				
8. 2.62	2.70					0.02				
9. 2.45	2.52					0.03				
10. 2.37	2.45					0.02				
11. 2.42	2.50					0.02				
12. 2.48	2.56					0.02				
Total 29.08	Total of Tare Weights 0.40				Error: Total for Each Column 0.25	0				

[9] Rc - Range of Errors [D] 0.06	[10] Rt - Range of Tare Weights [B] 0.01	[11] Ratio of Rc / Rt [9] / [10] 6	[12] Total Number Tare (Table 2 - 3) 4	[13] Average Tare Weight 0.10	[15] Total Error -0.25	[16] Number of UME's 0	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error (([15] / [9]) -0.0208	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 0.0162	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.635	[23] Sample Error Limit (SEL) [21] x [22] 0.0102	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error 0.0208 / 2.42 = 0.0085 x 100 = 0.85 % ☆ x Lot Size [5] x Price Per Package* = Total \$ Value 0.0085 x 14 x 3.89 x 2.42 = \$ 1.13 * IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS			MLA <input type="checkbox"/> Moisture Loss Allowance is greater than 0% _____ % Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/> Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT <input type="checkbox"/> Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED.

REMARKS:	OTHER <input checked="" type="checkbox"/> No Moisture Loss Allowance OR <input type="checkbox"/> Moisture Loss Allowance equals 0%
	Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/>
	Is 0.0208 [18] greater than 0.0102 [23] IF YES, REJECT <input checked="" type="checkbox"/>

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/10/03	Packages Off Sale: (rejected) 14
	Corrected and Released <input checked="" type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: 0
	Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/>	Packages Status Not Determined 0
	On _____ / _____ / _____	Packages Weighed / Measured 12
	Disposition Not determined <input type="checkbox"/>	

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.		
OWNER OR AGENT <i>Carl Stobley</i>	TITLE <i>Mgr</i>	INSPECTOR <i>E. Martin</i>

PACKAGE INSPECTION REPORT

CATEGORY A	Date 6/10/03	Time 11:20 <small>a.m. p.m.</small>	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 2.04
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS INSPECTED AT

✓ Packer DOWN EAST CHEESE CO	Address BORTERVILLE, VERMONT 00121
Distributor RACO FOODS	Address 1001A WESTSIDE BLVD, METRO, CA 95001
Dealer BIG TOP MARKET	Address 141 FIFTH AVE, ELMIRA CA 93069

Brand Name YANKEE	Other Identification / Code Symbols 3-12-04	Date 3-12-04	Other Code
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Commodity VERMONT SHARP CHEDDAR	Container Description PLASTIC VACUUM PACK
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\$ 4.29	<input type="checkbox"/> Package Pound	Group	MLA <input type="checkbox"/>	Other <input checked="" type="checkbox"/>	%	[2] Device Division 0.01 LB	[5] Inspection Lot Size 28	[6] Sample Size 12	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error [Initial tare sample] [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[5] Package Error Standard [A] - [14] Random [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
1.60 LB									
1.64	1.70	0.02	1.68	+0.04		0.04			
1.71	1.66	0.02	1.64	-0.07		0.07	0.064		
1.55	1.58					0.01			
1.68	1.73					0.03			
1.48	1.45					0.05	0.056		
1.57	1.63					0.04			
1.55	1.52					0.05			
1.62	1.67					0.03			
1.67	1.71					0.02			
1.59	1.60					0.01			
1.64	1.66					0			
1.61	1.65					0.02			
Total 19.31	Total of Tare Weights		Error: Total for Each Column		0.18	0.19			

[9] Rc - Range of Errors [2] 0.11	[10] Rt Range of Tare Weights [8] 0	[11] Ratio of Rc / Rt [9] / [10] ∞	[12] Total Number Tare [Table 2 - 3] 2	[13] Average Tare Weight 0.02	[15] Total Error +0.01	[16] Number of UME's 1	[17] Is [16] greater than [8]? YES: REJECT <input checked="" type="checkbox"/> NO: Continue <input type="checkbox"/>	[18] Average Error ([15] / [8]) +0.0008	[20] Is [16] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors	[22] Sample Correction Factor (Table 2 - 1, Col. 3)	[23] Sample Error Limit (SEL) [21] x [22]	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
<p>Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error</p> <p>☆ x Lot Size [5] x Price Per Package* = Total \$ Value</p> <p>* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS</p>			<p>MLA <input type="checkbox"/> Moisture Loss Allowance is greater than 0% _____ %</p> <p>Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/></p> <p>Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT <input type="checkbox"/></p> <p>Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED. <input type="checkbox"/></p>

REMARKS:	OTHER <input type="checkbox"/> No Moisture Loss Allowance OR <input checked="" type="checkbox"/> Moisture Loss Allowance equals 0%
	Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/>
	Is _____ [18] greater than _____ [23] IF YES, REJECT <input type="checkbox"/>

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ___/___/___ Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/> Shipped to: Packer <input type="checkbox"/> Distributor <input checked="" type="checkbox"/> On 6/11/03 Disposition Not determined <input type="checkbox"/>	Packages Off Sale: (rejected) 28 Packages Accepted: 0 Packages Status Not Determined 0 Packages Weighted / Measured 12
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OWNER OR AGENT <i>James Carl</i>	TITLE <i>Ali M...</i>	SENDER <i>Sanders</i>	INSPECTOR <i>E. Martin</i>
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49-003 (Rev. 5/03) DEPARTMENT OF FOOD AND AGRICULTURE - DIVISION OF MEASUREMENT STANDARDS A

PACKAGE INSPECTION REPORT

CATEGORY A	Date 6-10-03	Time 9:05 <small>a.m.</small>	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 4.12
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS INSPECTED AT

<input checked="" type="checkbox"/> Packer CRANDALL FARMS P8654C	Address GLOSTER, CA 95665
<input type="checkbox"/> Distributor MRS. HAMILTON'S FINE FOODS	Address 200 PALM AVE. EASTWOOD, CA 93081
<input type="checkbox"/> Dealer BIG TOP MARKET	Address 141 FIFTH AVE., ELMIRA, CA 93069

Brand Name WEST RIDGE FARMS	Other Identification / Code Symbols SELL BY 06-22-03	Date 06-22-03	Other Code
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Commodity WHOLE BODY CHICKEN	Container Description PLASTIC BAG, METAL CLIP, SOAKER
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\$ 1.99	<input checked="" type="checkbox"/> Package Pound	Group 3	MLA <input checked="" type="checkbox"/>	% 3	[2] Device Division 0.002 LB	[5] Inspection Lot Size 31	[6] Sample Size 12	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[5] Package Error Standards [A] - [14] Random [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0.03 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
RA 2.523 LB						Minus (-) Plus (+)		0.07569	
1. 2.54	2.702	0.220	2.482	-0.058		0.042			
2. 2.48	2.574	0.166	2.408	-0.072		0.110			
3. 2.32	2.404	0.182				0.120			
4. 2.45	2.582	0.234				0.072			
5. 2.61	2.766	0.194				0.048			
6. 2.58	2.702	0.172				0.082			
7. 2.36	2.514	0.256				0.050			
8. 2.48	2.568	0.136				0.116			
9. 2.24	2.394	0.224				0.050	0.062	0.067	0.129
10. 2.44	2.568	0.184				0.076			
11. 3.09	3.304	0.272					0.010		
12. 2.69	2.776	0.208				0.118			
Total 30.28	Total of Tare Weights 2.448				Error Total for Each Column 0.884	0.010			

[9] Rc - Range of Errors [D] 0.014	[10] Rt Range of Tare Weights [B] 0.054	[11] Ratio of Rc / Rt [9] / [10] 0.259	[12] Total Number Tare (Table 2 - 3) 12	[13] Average Tare Weight 0.204	[15] Total Error -0.874	[16] Number of UME's 0	[17] Is [16] greater than [9]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ((15) / [9]) -0.0728	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 0.03939	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.635	[23] Sample Error Limit (SEL) [21] x [22] 0.0250	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations) MLA <input checked="" type="checkbox"/> Moisture Loss Allowance is greater than 0% 3.0 %
Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error 0.0728 / 2.523 = 0.0288 x 100 = 2.88 %			Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/>
☆ x Lot Size [5] x Price Per Package* = Total \$ Value 0.0288 x 31 x 1.99 x 2.523 = \$ 4.49			Is 0.0728 [18] greater than _____ [23] + [4A] IF YES, REJECT <input type="checkbox"/>
* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS			AND less than or equal to 0.1006 [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA. STATUS NOT DETERMINED. <input checked="" type="checkbox"/>

REMARKS:

OTHER No Moisture Loss Allowance OR Moisture Loss Allowance equals 0%

Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

Is _____ [18] greater than _____ [23] IF YES, REJECT

<input type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ____/____/____ Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/> Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/> On ____/____/____ Disposition Not determined <input type="checkbox"/>	Packages Off Sale: (rejected) 0 Packages Accepted: 0 Packages Status Not Determined 31 Packages Weighed / Measured 12
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I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT	TITLE	SEALER	INSPECTOR
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PACKAGE INSPECTION REPORT

CATEGORY A	Date 6/13/03	Time 8:10 <small>a.m. p.m.</small>	COUNTY SAN PABLO	Report # or Off Sale Order #	Commodity Number 5.10
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS		INSPECTED AT	
<input checked="" type="checkbox"/> Packer MAYFIELD INDUSTRIES LTD.	Address JIM GREY, NV 88412		
Distributor SOMART DIST.	Address 18642 OLD ROCKVILLE RD, ALGOSO, CA 92216		<input checked="" type="checkbox"/>
Dealer	Address		

Brand Name MAYFIELD	Other Identification / Code Symbols	Date Code 02-864-CDA 1
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Commodity CIDER VINEGAR	Container Description GLASS BOTTLE, METAL SCREEN TOP
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\$ 1.89	<input checked="" type="checkbox"/> Package Pound	Group	MLA <input type="checkbox"/> Other <input checked="" type="checkbox"/> 0	%	[2] Device Division 1/2 (0.5)	[5] Inspection Lot Size 240	[6] Sample Size 12	[7] Tare Sample Size (Initial) NA	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Range/Average Weight (RA) (18 FL OZ) 530 mL	[A] Gross Weight	[B] Tare Weight	[C] Net Weight (A) - (B)	[D] Error (Initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[5] Package Error Standard (A) - [14] Random (A) - [13] - [1]	[3] MAV from Table 2 0.63 fl oz	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
1.						1			
2.						1			
3.						0.5			
4.						1			
5.						1			
6.						0.5			
7.						1.5			
8.						0.5			
9.						0.5			
10.							0		
11.						0.5			
12.						1			
Total	Total of Tare Weights				Error: Total for Each Column	9	0		

[9] Rc - Range of Errors [2]	[10] Rr - Range of Tare Weights [B]	[11] Ratio of Rc / Rr [9] / [10]	[12] Total Number Tare (Table 2 - 3)	[13] Average Tare Weight	[15] Total Error -9	[16] Number of UME's	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ([15] / [8]) -0.75	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 0.3988	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.635	[23] Sample Error Limit (SEL) [21] x [22] 0.2532	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
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MLA Moisture Loss Allowance is greater than 0% _____ %

is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT

is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED.

Average Error [18] / Labeled Content [1] = $\frac{0.0937}{18} \times 100 = 0.52\%$

$\frac{0.0052}{18} \times 240 \times 1.89 = \2.36

* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS

REMARKS:

8 FLUID DR (DRAM) = 1 FLUID OUNCE

MAV = 0.63 fl oz = 5.04 fl dr

[18] AVERAGE ERROR = -0.75 fl dr = 0.0937 fl oz

OTHER No Moisture Loss Allowance OR Moisture Loss Allowance equals 0%

is **0.75** [18] greater than **0.253** [23] IF YES, REJECT

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/23/03	Packages Off Sale: (rejected) 240
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: 0
	Shipped to: Packer <input checked="" type="checkbox"/> Distributor <input type="checkbox"/>	Packages Status Not Determined: 0
	On: 6/23/03	Packages Weighed / Measured: 12
Disposition Not determined <input type="checkbox"/>		

OWNER OR AGENT Abraham Stein	TITLE Director	SEALER [Signature]	INSPECTOR [Signature]
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PACKAGE INSPECTION REPORT

CATEGORY A	Date 6-12-03	Time 10:10 <small>a.m. p.m.</small>	COUNTY MISSION	Report # or Off Sale Order #	Commodity Number 9.02
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS			INSPECTED AT		
✓ Packer OAK CREEK VINEYARD	Address 15 BORDEAUX LANE, ROCKRIDGE, CA 98801				
Distributor PACIFIC SPIRITS	Address 5002 COMMERS LANDING, SOUTH ADELADE, CA 95962				
Dealer VILLA OAK SPIRITS	Address 21 BUENA VISTA, SANTA JULIA, CA 90112 ✓				

Brand Name OAK CREEK	Other Identification / Code Symbols VINTAGE 1995	Date Code 32-BA-612
Commodity CABERNET SAUVIGNON 1999 SILVER METAL GLASS BOTTLE, FOIL COVERED NATURAL CORK		Container Description

\$ 18.99	<input type="checkbox"/> Package Pound	<input checked="" type="checkbox"/> Group	MLA <input type="checkbox"/> Other <input checked="" type="checkbox"/> 1/4 %	[2] Device Division 1 mL	[5] Inspection Lot Size 24	[6] Sample Size 12	[7] Tare Sample Size (Initial) NA	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[C] Error [Initial tare sample] [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[5] Package Error Standard [A] - [14] Random [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0.0025 x Labeled Content	[4B] Adjusted MAV [3] + [4A]	
750 mL						Minus (-)	Plus (+)	22	1.875	23.875
1.						4				
2.						4				
3.						2				
4.							0			
5.						5				
6.						2				
7.						4				
8.						3				
9.						4				
10.							0			
11.						4				
12.						3				
Total	Total of Tare Weights				Error: Total for Each Column	35				

[9] Rc - Range of Errors [D]	[10] Rr - Range of Tare Weights [B]	[11] Ratio of Rc / Rr [9] / [10]	[12] Total Number Tare (Table 2 - 3)	[13] Average Tare Weight	[15] Total Error - 35	[16] Number of UME's 0	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ([15] / [6]) - 2.916	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 1.6213	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.635	[23] Sample Error Limit (SEL) [21] x [22] 1.0295	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error 2.916 / 750 = 0.0038 x 100 = 0.38 %			is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/> is 2.916 [18] greater than 2.904 [23] + [4A] IF YES, REJECT <input checked="" type="checkbox"/> is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED.
☆ x Lot Size [5] x Price Per Package* = Total \$ Value 0.0038 x 24 x 18.99 = \$ 1.77			OTHER <input type="checkbox"/> No Moisture Loss Allowance OR <input type="checkbox"/> Moisture Loss Allowance equals 0% is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/> is _____ [18] greater than _____ [23] IF YES, REJECT <input type="checkbox"/>

REMARKS:
MOISTURE LOSS STADY - NATURAL CORK ABSORBS 1/4 % OF WINE IN BOTTLE AFTER 10 MONTHS

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: _____ / _____ / _____	Packages Off Sale: (rejected) 24
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: 0
	Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/>	Packages Status Not Determined: 0
	On _____ / _____ / _____ Disposition Not determined <input checked="" type="checkbox"/>	Packages Weighed / Measured: 12

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.			
OWNER OR AGENT <i>[Signature]</i>	TITLE <i>[Signature]</i>	SEALER <i>[Signature]</i>	INSPECTOR <i>[Signature]</i>

PACKAGE INSPECTION REPORT

PAGE 1 OF 2

CATEGORY A	Date 6/5/03	Time 10:25 a.m. p.m.	COUNTY CARSON	Report # or Off Sale Order #	Commodity Number 5.03
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS

INSPECTED AT

<input checked="" type="checkbox"/> Packer WING LEE 1818 RAFFLES BLVD, SINGAPORE 11859-001	Address
Distributor (IMPORTER) FONG & SONS 7850 KAHALAKUA BLVD, HONOLULU, HA 99444	Address
Dealer A.L. WONG FOODS 684 GRACE AVE. LOS ROBLES, CA 94480	Address

Brand Name NIGHT FLOWER	Other Identification / Code Symbols	Date	Other Code 6FC 859-0688
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Commodity PEANUT OIL	Container Description PRINTED RECTANGULAR METAL CAN
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\$ 12.99	<input checked="" type="checkbox"/> Package Pound	Group	MLA <input type="checkbox"/> Other <input checked="" type="checkbox"/> 0	%	[2] Device Division 0.002 LB	[5] Inspection Lot Size 870	[6] Sample Size 24	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (Initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard [A] - [14] Random [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
1/2 GAL (1.8L)					4.150	Minus (-) Plus (+)	1.5 fl oz		
3.71 LB							0.0869 LB		
1.	4.112	0.442	3.670	-0.040		0.038			
2.	4.070	0.438	3.632	-0.078		0.080			
3.	4.192	0.438					0.042		
4.	4.108	0.442					0.042		
5.	4.188						0.038		
6.	4.088						0.062		
7.	4.238						0.088		
8.	4.064						0.086		
9.	4.068						0.082		
10.	4.196						0.046		
11.	4.144						0.006		
12.	4.128						0.022		
Total	Total of Tare Weights	1.76			Error: Total for Each Column	0.418	0.214	Total Page 1 = -0.204	

[9] Rc - Range of Errors [D] 0.038	[10] Rr - Range of Tare Weights [B] 0.004	[11] Ratio of Rc / Rr [9] / [10] 9.5	[12] Total Number Tare (Table 2 - 3) 4	[13] Average Tare Weight 0.440	[15] Total Error -0.534	[16] Number of UMEs 0	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ((16) / [8]) -0.0222	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors 0.0487	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.422	[23] Sample Error Limit (SEL) [21] x [22] 0.0205	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
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MLA Moisture Loss Allowance is greater than 0% _____ %

Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT

Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED.

Average Error [18] / Labeled Content [1] = $\frac{0.0222}{3.71} \times 100 = 0.59\%$

$\frac{0.00598}{3.71} \times 100 = 0.16\%$

$\frac{0.00598}{3.71} \times 870 \times 12.99 = \67.62

* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS

REMARKS:
1/2 GAL OIL = 3.71 LB
MAV FROM TABLE = 1.5 fl oz = 0.0869 LB

OTHER No Moisture Loss Allowance OR Moisture Loss Allowance equals 0%

Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

Is **0.0222** [18] greater than **0.0205** [23] IF YES, REJECT

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/10/03	Packages Off Sale: (rejected) 870
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/> Shipped to: Packer <input type="checkbox"/> Distributor <input checked="" type="checkbox"/> On 6/20/03 Disposition Not determined <input type="checkbox"/>	Packages Accepted: 0 Packages Status Not Determined: 0 Packages Weighed / Measured: 24

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA. OWNER OR AGENT AL Wong	TITLE Owner	SEALER Carla Corbetta	INSPECTOR B. Barlow
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49-003 (Rev. 5/03) DEPARTMENT OF FOOD AND AGRICULTURE - DIVISION OF MEASUREMENT STANDARDS A

PACKAGE INSPECTION REPORT

PAGE 2 OF 2

CATEGORY A	Date 6/5/03	Time 10:25 a.m. p.m.	COUNTY CARSON	Report # or Off Sale Order #	Commodity Number 5.03
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS			INSPECTED AT
<input checked="" type="checkbox"/> Packer WING LEE	Address		
Distributor	Address		
Dealer A.L. WONG	Address		<input checked="" type="checkbox"/>

Brand Name NIGHT FLOWER	Other Identification / Code Symbols	Date Code	Other Code 6FC 859-0688
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Commodity PEANUT OIL	Container Description
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\$	<input type="checkbox"/> Package Pound	Group	MLA <input type="checkbox"/>	Other <input type="checkbox"/>	%	[2] Device Division 0.002 LB	[5] Inspection Lot Size 870	[6] Sample Size	[7] Tare Sample Size (Initial)	[8] Unreasonable Minus Errors (UME) Allowed
[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error: Initial tare sample [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard [A] - [14] Random [A] - [13] - [1]	[3] MAV from Table	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]	
3.71 LB					4.150	Minus (-) Plus (+)				
1.	4.112					0.038				
2.	4.070					0.080				
3.	4.088					0.062				
4.	4.094					0.056				
5.	4.178						0.028			
6.	4.154						0.004			
7.	4.134					0.016				
8.	4.166						0.016			
9.	4.064					0.086				
10.	4.108					0.042				
11.	4.158						0.008			
12.	4.144					0.006				
Total	Total of Tare Weights				Error: Total for Each Column	0.386	0.056	Total Package = -0.35		

[9] Rc - Range of Errors [D]	[10] Rr - Range of Tare Weights [B]	[11] Ratio of Rc / Rr [9] / [10]	[12] Total Number Tare (Table 2 - 3)	[13] Average Tare Weight	[15] Total Error	[16] Number of UME's	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input type="checkbox"/>	[18] Average Error ((15) / [9])	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input type="checkbox"/>
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[21] Computed Standard Deviation of Sample Errors	[22] Sample Correction Factor (Table 2 - 1, Col. 3)	[23] Sample Error Limit (SEL) [21] x [22]	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
<p>Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error</p> <p>☆ x Lot Size [5] x Price Per Package* = Total \$ Value</p> <p>* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS</p>			<p>MLA <input type="checkbox"/> Moisture Loss Allowance is greater than 0% _____ %</p> <p>Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/></p> <p>Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT <input type="checkbox"/></p> <p>Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED. <input type="checkbox"/></p>

REMARKS:	OTHER <input type="checkbox"/> No Moisture Loss Allowance OR <input type="checkbox"/> Moisture Loss Allowance equals 0%
	Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT <input type="checkbox"/>
	Is _____ [18] greater than _____ [23] IF YES, REJECT <input type="checkbox"/>

<input type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ____/____/____	Packages Off Sale: (rejected) _____
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/>	Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/>
	On ____/____/____	Packages Status Not Determined _____
	Disposition Not determined <input type="checkbox"/>	Packages Weighed / Measured _____

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OWNER OR AGENT	TITLE	SEALER
		INSPECTOR

PACKAGE INSPECTION REPORT

PAGE 1 OF 2

CATEGORY B	Date 6/11/03	Time 8:20 <small>AM</small>	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 4.50
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INSPECTION LOCATION AND PARTY RESPONSIBLE FOR NET CONTENTS

Packer SCHULTZ SAUSAGE CO. EST 101	Address HCR 56, BRYSON, CA 93001		
Brand Name SCHULTZ	Other Identification / Code Symbols	Date 9/20 '03	Other 03A-119602
Commodity OLD FASHIONED BEEF FRANKS	Container Description PAPERBOARD BOX, PAPER LINER		

\$ 14.99	<input checked="" type="checkbox"/> Package Pound	[2] Device Division 0.002 LB	[5] Inspection Lot Size 4,800	[6] Sample Size 30	[7] Tare Sample Size (Initial) 5	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA) 12 LBS	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (Initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard: [A] - [14] Random: [A] - [13] - [1]		[3] Maximum Allowable Variation (MAV) from table 1% = 0.12
						Minus (-)	Plus (+)	
1.	12.190	0.252	11.938	-0.062	12.252	0.062		
2.	12.290	0.252	12.038	+0.038			0.038	
3.	12.258	0.254	12.004	+0.004			0.006	
4.	12.254	0.252	12.002	+0.002			0.002	
5.	12.300	0.254	12.046	+0.046			0.048	
6.	12.196					0.056		
7.	12.272						0.020	
8.	12.244					0.008		
9.	12.276						0.024	
10.	12.156					0.096		
11.	12.294						0.042	
12.	12.304						0.052	
13.	12.338						0.086	
14.	12.224					0.028		
15.	12.330						0.078	
TOTAL	Total of Tare Weights 1.264				Error: Total for Each Column 0.250	0.396		Total 2.126

Average Error [18] / Labeled Contents [1] = $\frac{0.108}{12} \times 100 = 0.9\%$	[9] Rc - Range of Errors (See [D]) 0.108	[10] Rt - Range of Tare Weights. (See [B]) 0.002	[11] Ratio of Rc / Rt [9] / [10] 54
$\frac{\star}{\text{Lot Size [5]} \times \text{Price Per Package}^*} = \text{Total \$ Value}$	[12] Total Number of Tare: nt (Table 2-4) 5	[13] Average Tare Weight 0.252	[15] Total Error +0.078
* IF PRICED PER POUND: USE PRICE PER POUND x LABELED CONTENTS	[16] Number of Unreasonable Minus Errors (UME's) 1		

REMARKS:	[17] Is [16] greater than [8] ? YES: REJECT <input checked="" type="checkbox"/> NO: Continue <input type="checkbox"/>	[18] Average Error ([15] / [6]) +0.0026	[19] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: REJECT LOT <input type="checkbox"/>
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<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/11/03	Packages Off Sale: (rejected) 4800
	Corrected and Released <input checked="" type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: 0
	Disposition Not determined <input type="checkbox"/>	Packages Weighed / Measured 30

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT <i>James Peterson</i>	SCALE <i>Dant M...</i>	SEALER <i>R. Gordon</i>	INSPECTOR <i>Bob Winner</i>
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9-004 (Rev. 1/03) DEPARTMENT OF FOOD AND AGRICULTURE - DIVISION OF MEASUREMENT STANDARDS **B**

PACKAGE INSPECTION REPORT

PAGE 2 OF 2

CATEGORY B	Date 6/11/03	Time 8:20 a.m.	COUNTY GOLDEN	Report # or Off Sale Order #	Commodity Number 4:50
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INSPECTION LOCATION AND PARTY RESPONSIBLE FOR NET CONTENTS

Packer SCHULTZ	Address				
Brand Name SCHULTZ	Other Identification / Code Symbols	Date 9/20'03	Other 03A-119602		

Commodity OLD FASHIONED BEEF FRANKS	Container Description
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\$	<input type="checkbox"/> Package <input type="checkbox"/> Pound	[2] Device Division	[5] Inspection Lot Size 4,800	[6] Sample Size	[7] Tare Sample Size (Initial)	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA) 12 LBS	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (Initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13] 12.252	[5] Package Error Standard [A] - [14] Random [A] - [13] - [1]		[3] Maximum Allowable Variation (MAV) from table
						Minus (-)	Plus (+)	
1.	12.148					0.104		
2.	12.120					0.132		
3.	12.316						0.064	
4.	12.326						0.074	
5.	12.330						0.078	
6.	12.234					0.018		
7.	12.274						0.022	
8.	12.314						0.062	
9.	12.284						0.032	
10.	12.284						0.032	
11.	12.300						0.048	
12.	12.274						0.022	
13.	12.154					0.098		
14.	12.210					0.042		
15.	12.144					0.108		
TOTAL	Total of Tare Weights				Error: Total for Each Column	0.502	0.434	0.068

Average Error [18] / Labeled Contents [1] = ☆ x 100 = %	[9] Rc - Range of Errors (See [D])	[10] Rt - Range of Tare Weights. (See [B])	[11] Ratio of Rc / Rt [9] / [10]
☆ x Lot Size [5] x Price Per Package* = Total \$ Value	[12] Total Number of Tare: nt (Table 2 - 4)	[13] Average Tare Weight	[15] Total Error
* IF PRICED PER POUND: USE PRICE PER POUND x LABELED CONTENTS			[16] Number of Unreasonable Minus Errors (UME's)

REMARKS:	[17] Is [16] greater than [8] ? YES: REJECT <input type="checkbox"/> NO: Continue <input type="checkbox"/>	[18] Average Error (([15] / [6])	[19] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: REJECT LOT <input type="checkbox"/>
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<input type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ___/___/___	Packages Off Sale: (rejected) _____
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: SEE PAGE 1 _____
Disposition Not determined <input type="checkbox"/>		

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT	TITLE	SEALER	INSPECTOR
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PACKAGE INSPECTION REPORT

PAGE 1 OF 2

CATEGORY B	Date 6/12/03	Time 7:55 a.m.	COUNTY MISSION	Report # or Off Sale Order #	Commodity Number 4.50
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INSPECTION LOCATION AND PARTY RESPONSIBLE FOR NET CONTENTS

Packer CRANDALL FARMS	Address 256 EAST ST GLOSTER, CA 95665	
Brand Name WEST RIDGE FARMS	Other Identification / Code Symbols	Date SELL BY 7-02-03
Commodity WHOLE BODY CHICKEN	Container Description PLASTIC BAG, METAL CLIP, SOAKER	

\$ 0.69	<input type="checkbox"/> Package <input checked="" type="checkbox"/> Pound	[2] Device Division 0.002 LB	[5] Inspection Lot Size 840	[6] Sample Size 30	[7] Tare Sample Size (Initial) 5	[8] Unreasonable Minus Errors (UME) Allowed 0
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[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error (initial tare sample) [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard [A] - [14]		[3] Maximum Allowable Variation (MAV) from table
						Minus (-)	Plus (+)	
1. 2.58	2.684	0.122	2.562	-0.018		0.020		
2. 2.65	2.748	0.126	2.622	-0.028		0.026		
3. 3.10	3.182	0.122	3.060	-0.040		0.042		
4. 2.46	2.610	0.124	2.486	+0.026			0.026	
5. 3.09	3.228	0.126	3.102	+0.012			0.014	
6. 2.86	2.972					0.012		
7. 2.75	2.842					0.032		
8. 3.04	3.170						0.006	
9. 3.15	3.274						0	
10. 2.96	3.074					0.010		
11. 2.74	2.860					0.004		
12. 2.98	3.112						0.008	
13. 2.66	2.772					0.012		
14. 2.34	2.466						0.002	0.062
15. 2.54	2.646					0.018		
TOTAL RA 41.90	Total of Tare Weights 0.620				Error: Total for Each Column	0.176	0.056	0.012

Average Error [18] / Labeled Contents [1] = $\frac{0.0089}{2.81} \times 100 = 0.31\%$	[9] Rc - Range of Errors (See [D]) 0.066	[10] Rt - Range of Tare Weights. (See [B]) 0.004	[11] Ratio of Rc / Rt [9] / [10] 16.5
$\frac{0.0031}{840} \times 0.69 \times 2.81 = \5.15	[12] Total Number of Tare: nt (Table 2-4) 5	[13] Average Tare Weight 0.124	[15] Total Error -0.268
* IF PRICED PER POUND: USE PRICE PER POUND x LABELED CONTENTS	[16] Number of Unreasonable Minus Errors (UME's) 0		

REMARKS:	[17] Is [16] greater than [8] ? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error (([15] / [6]) -0.0089	[19] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: REJECT LOT <input checked="" type="checkbox"/>
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<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/12/03 Corrected and Released <input checked="" type="checkbox"/> Destroyed <input type="checkbox"/> Disposition Not determined <input type="checkbox"/>	Packages Off Sale: (rejected) 840 Packages Accepted: 0 Packages Weighed / Measured 30
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I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT <i>Ann Emery</i>	TITLE <i>Operator</i>	SEALER <i>Alba Foster</i>	INSPECTOR <i>Murray Swadley</i>
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PAGE 2 OF 2

PACKAGE INSPECTION REPORT

CATEGORY B	Date 6-12-01	Time 7:55 am	COUNTY MISSION	Report / OSO #	Insp. Type 2	Est. Type 0110	Commodity No. 4.50
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS INSPECTED AT

<input checked="" type="checkbox"/> Packer CRANDALL FARMS	Address	<input checked="" type="checkbox"/>
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Brand Name WEST RIDGE FARMS	Other Identification - Code Symbols	Date SELL BY 7-02-01	Other
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Commodity WHOLE BODY CHICKEN	Container Description
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\$ 0.39	<input type="checkbox"/> Package Pound <input checked="" type="checkbox"/> 0.001 LB	[2] Unit of Measure 840	[5] Inspection Lot Size 840	[6] Sample Size	[7] Tare Sample Size (init.)	[8] Unreas. Minus Err. (UME) Allowed
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[1] Labeled Cont. or Random Avg. RA 2.81	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[13] Avg. Tare 0.124	[14] Nom. Gross Weight [1] + [13]	[D] Package Error Sld. A - [14] Rdm. A - [13] - [1]	[E] Error - +	[3] MAV from table	[4] MAV in UOM
1.	2.71	2.818				-0.016	16		
2.	2.83	2.942				-0.012	12		
3.	2.79	2.918				+0.004	4		
4.	2.93	3.046				-0.008	8		
5.	3.12	3.226				-0.018	18		
6.	3.04	3.142				-0.022	22		
7.	2.85	2.976				+0.002	2		
8.	2.97	3.080				-0.014	14		
9.	3.14	3.256				-0.008	8		
10.	2.66	2.764				-0.020	20		
11.	2.38	2.488				-0.016	16	0.062	62
12.	2.56	2.690				+0.006	6		
13.	3.01	3.138				+0.004	4		
14.	2.99	3.096				-0.018	18		
15.	2.44	2.552				-0.012	12		
TOTAL 84.32	STANDARD: Range of Net Weights			RANDOM: Range of Errors		164	16		

Avg. Err. [19] / Labeled Cont. [1] = ☆ x 100 = % Err.
 ☆ x Lot Size [5] x Price Per Pkg.* = Total \$ Value

* IF PRICED PER POUND: USE PRICE PER POUND X LABELED CONTENTS

REMARKS:

[9] Std. Range of [C] Rdm. Range of [D]	[10] Range of Tare Wts. Rt (See [B])	[11] Ratio of R _c / R _t [9] / [10]
[12] Total no. of Tare nt (Table 2-4)	[15] Total Error	[16] No. of UME's
[17] Is [16] greater than [9] ?	YES: REJECT <input type="checkbox"/> NO: Continue	
[18] Average Error ([15] / [9])	[19] Avg. Error in Labeled Units ([18] x [2])	[20] Is [19] Zero or Plus? YES: Accept Lot <input type="checkbox"/> NO: Reject Lot <input type="checkbox"/>

THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE.

DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.

DISPOSITION: Date: _____

Corrected and Released Destroyed Not determined

Packages Off Sale: (rejected) _____

Packages Accepted: _____

Packages Weighed / Measured _____

SEE PAGE 1

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OWNER OR AGENT	TITLE	SEALER	INSPECTOR
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PACKAGE INSPECTION REPORT

CATEGORY C	Date 6/7/03	Time 2:10 a.m. p.m.	COUNTY OCEANSIDE	Report # or Off Sale Order #	Commodity Number 17.40
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CHECK PARTY RESPONSIBLE FOR NET CONTENTS		INSPECTED AT	
✓ Packer RL. ROBINS NOVELTIES	Address RANCHO HONDD, CA 90112		
Distributor G & L SPECIALITIES	Address 460 ELLIS DR., SAN GEORGIO, CA 91164		
Dealer HENRIKSON'S	Address 16 GREENTREE MALL, WEST BIRMINGHAM, CA 95122		

Brand Name BELLE NOEL	Other Identification / Code Symbols	Date Code NONE	Other Code NONE
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Commodity GLASS CHRISTMAS TREE ORNAMENTS	Container Description PAPERBOARD BOX, PLASTIC TRAY
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\$ 24.99 Per Package	[2] Device Division	[4] Weight per Unit	[5] Inspection Lot Size 510	[6] Sample Size, Table 5-1 24	[7] Initial Tare Sample Size, Table 5-1 NA	[8] Number Under-count Packages Allowed, Table 5-1 2	[8A] Maximum Allowable Variation (MAV), Table 2-7 1
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[1] Labeled Content 36	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error [Initial tare sample] [C] - [1]	[E] Package Error By Weight [A] - [14] / [4]		[1] Labeled Content	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[E] Package Error By Weight [A] - [14] / [4]			
					Minus (-)	Plus (+)					Minus (-)	Plus (+)		
1.						0	13.					0		
2.						0	14.					0		
3.						0	15.					0		
4.						0	16.					0		
5.						0	17.					0		
6.						0	18.				1	0		
7.						0	19.					0		
8.						0	20.					0		
9.						0	21.					0		
10.						0	22.					1		
11.						0	23.					0		
12.						0	24.					0		
Total of Tare Weights				Error: Total for Each Column		3	Total of Tare Weights				Error: Total for Each Column		1	1

[9] Rc - Range of Errors [D]	[10] Rt - Range of Tare Weights [B]	[11] Ratio Rc / Rt [9] / [10]	[12] Total Number Tare (Table 2-3)	[13] Average Tare Weight	[14] Nominal Gross Weight [1] * [13]	[15] Total Error -3	[16] Number Under-count Packages * 2	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: ACCEPT lot Reject MAV's and Compute [18] <input checked="" type="checkbox"/>	[18] Average Error [15] / [8] -0.125
------------------------------	-------------------------------------	-------------------------------	------------------------------------	--------------------------	--------------------------------------	-------------------------------	--	--	--

Average Error [18] / Labeled Content [1] = $\frac{0.125}{36} \times 100 = 0.34\%$ % Error

* [16] To be considered undercount, the individual package error must be -1 or more. Ignore any decimal values, do not round.

REMARKS:

<input checked="" type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: 6/7/03	Packages Off Sale: (rejected) 1
	Corrected and Released <input type="checkbox"/> Destroyed <input checked="" type="checkbox"/>	Packages Accepted: 509
	Shipped to Packer <input type="checkbox"/> Distributor <input type="checkbox"/>	Packages Weighed / Measured 24
	On ___/___/___ Disposition Not Determined <input type="checkbox"/>	

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT <i>[Signature]</i>	TITLE <i>[Signature]</i>	SEALER <i>[Signature]</i>	INSPECTOR <i>[Signature]</i>
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49-003 (Rev. 7/03) DEPARTMENT OF FOOD AND AGRICULTURE - DIVISION OF MEASUREMENT STANDARDS **C**

PACKAGE INSPECTION REPORT

CATEGORY A	Date 6/22/03	Time 4:10 a.m.	COUNTY KLAMATH	Report # or Off Sale Order #	Commodity Number 12.02
----------------------	------------------------	--------------------------	--------------------------	------------------------------	----------------------------------

CHECK PARTY RESPONSIBLE FOR NET CONTENTS INSPECTED AT

<input checked="" type="checkbox"/> Packer TITAN FOUNDRY	Address 7181 N. MEADOWVIEW RD, PARKFIELD RD, LT 60101
Distributor BC TRADING	Address SMITHVILLE, NV 89402
Dealer HERBERT HARDWARE	Address 800 MAIN ST, WIEST, CA 99116
Brand Name TITAN	Other Identification / Code Symbols NONE
Commodity 8 x 2 1/4 WOODSCREWS	Container Description PAPERBOARD BOX

\$ 6.49	<input checked="" type="checkbox"/> Package Pound	Group MLA <input type="checkbox"/> Other <input checked="" type="checkbox"/>	%	[2] Device Division 0.0102	[5] Inspection Lot Size 102	[6] Sample Size 12	[7] Tare Sample Size (Initial) 2	[8] Unreasonable Minus Errors (UME) Allowed 0
----------------	---	---	---	--------------------------------------	---------------------------------------	------------------------------	--	---

[1] Labeled Content or Random Average Weight (RA)	[A] Gross Weight	[B] Tare Weight	[C] Net Weight [A] - [B]	[D] Error [Initial tare sample] [C] - [1]	[14] Nominal Gross Weight [1] + [13]	[E] Package Error Standard [A] - [14] Random: [A] - [13] - [11]	[3] MAV from Table	[4A] MLA 0 X Labeled Content	[4B] Adjusted MAV [3] + [4A]
96 count 12.48 oz					12.93		3 = 0.39 oz		
1.	12.80	0.45	12.35	-0.13		0.13			
2.	12.93	0.45	12.48	0			0		
3.	12.87					0.06			
4.	13.12						0.19		
5.	12.95						0.02		
6.	13.16						0.23		
7.	12.76					0.17			
8.	12.58					0.35			
9.	12.84					0.09			
10.	12.70					0.23			
11.	12.59					0.34			
12.	12.97						0.04		
Total	Total of Tare Weights				Error: Total for Each Column	1.37	0.48		

[9] R _c - Range of Errors [D] 0.13	[10] R _t - Range of Tare Weights [B] 0	[11] Ratio of R _c / R _t [9] / [10] ∞	[12] Total Number Tare [Table 2 - 3] 2	[13] Average Tare Weight 0.45	[15] Total Error -0.89	[16] Number of UME's 0	[17] Is [16] greater than [8]? YES: REJECT <input type="checkbox"/> NO: Continue <input checked="" type="checkbox"/>	[18] Average Error ([15] / [16]) -0.0741	[20] Is [18] Zero or Plus? YES: ACCEPT LOT <input type="checkbox"/> NO: Go to [21] <input checked="" type="checkbox"/>
---	---	--	--	---	----------------------------------	----------------------------------	--	--	--

[21] Computed Standard Deviation of Sample Errors 0.1842	[22] Sample Correction Factor (Table 2 - 1, Col. 3) 0.635	[23] Sample Error Limit (SEL) [21] x [22] 0.1170	[24] AVERAGE ERROR [18] IS MINUS (Use the absolute value of [18] for these determinations)
--	---	--	--

MLA Moisture Loss Allowance is greater than 0% _____ %

Is _____ [18] less than or equal to _____ [23] IF YES, ACCEPT

Is _____ [18] greater than _____ [23] + [4A] IF YES, REJECT

Is _____ [18] greater than _____ [23] AND less than or equal to _____ [23] + [4A] IF YES, COMMODITY IS IN THE GREY AREA, STATUS NOT DETERMINED.

Average Error [18] / Labeled Content [1] = ☆ x 100 = % Error
0.0741 / 12.48 = 0.0059 x 100 = 0.59 %

☆ x Lot Size [5] x Price Per Package* = Total \$ Value
0.0059 x 102 x 6.49 = \$ 3.93

* IF PRICED PER POUND: USE PRICE PER POUND X RANDOM AVERAGE WEIGHT (RA)

REMARKS:
Pkg 1 contains 95 screws, net 12.35 = 0.13 oz / unit
***2 contains 96 screws, net 12.48 = 0.13 oz / unit**

OTHER No Moisture Loss Allowance OR Moisture Loss Allowance equals 0%

Is **0.0741** [18] less than or equal to **0.117** [23] IF YES, ACCEPT

Is _____ [18] greater than _____ [23] IF YES, REJECT

<input type="checkbox"/> THESE PACKAGES HAVE BEEN ORDERED OFF SALE UNDER PROVISIONS OF DIVISION 5, SECTION 12211 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE. DO NOT MOVE, TRANSPORT, COMMINGLE OR DISPOSE OF WITHOUT WRITTEN AUTHORIZATION.	DISPOSITION: Date: ____/____/____	Packages Off Sale: (rejected) 0
	Corrected and Released <input type="checkbox"/> Destroyed <input type="checkbox"/>	Packages Accepted: 102
	Shipped to: Packer <input type="checkbox"/> Distributor <input type="checkbox"/> On ____/____/____	Packages Status Not Determined: 0
	Disposition Not determined <input type="checkbox"/>	Packages Weighed / Measured: 12

I HAVE RECEIVED A COPY OF THIS REPORT AND HAVE BEEN GIVEN THE OPPORTUNITY TO REVIEW THE DATA.

OWNER OR AGENT	TITLE	SEALER	INSPECTOR
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SAMPLE PACKAGE INSPECTION REPORTS

VARIATIONS AND EXPLANATIONS

GENERAL

The formulas used in the boxed areas of the PIRs have been simplified to calculate the data needed for the majority of the inspections. In some instances, modifications must be made to either the formula or data for specific tests or products.

#1, page 139, Old Erin Irish Soda Bread

Even though the lot is accepted, complete the calculations for % ERROR and TOTAL \$ (DOLLAR) VALUE. In general, complete both these sections for any lot with a minus average error, even if the lot is accepted.

#2, page 140, Big Top Round Steak

The Category is **A**. Even though the commodity is meat, this inspection is not being conducted in a USDA Packing Plant. According to the Retail Exemption in Federal Regulations, a retail establishment packaging meat or poultry for sale at the same retail location is not considered to be a USDA packing plant or under USDA inspection.

The Group is "OTHER." There are two reasons for this:

1. The commodity is not federally regulated.
2. There is no distribution; the packages are for sale at the packing location.

Note: Moisture loss consideration is only given when required by a Federal agency and is only for unavoidable moisture loss occurring in good distribution.

The MAV is from Table 2-5 (page 126) Packages Labeled by Weight. This Table, 2-5, is used, not Table 2-9, because the commodity is not packaged in a USDA Plant. A quick way to determine this is to look for the USDA Establishment number and logo on the package.

#3, page 141, Yankee Vermont Sharp Cheddar Cheese

The Group is OTHER, not MLA. Step 3, question MLA 3, page 94, asks "Is the commodity packaged in a way that allows moisture to evaporate into the atmosphere?" As plastic vacuum pack allows no evaporation, the inspector must continue to group OTHER. Since food is regulated by Federal Food and Drug Administration, moisture loss must be considered. Due to the packaging, the moisture loss is determined to be 0%. (Step 3, GROUP OTHER, 2d, UNUSED OR DRIED USED TARE, page 96.)

#4, page 142, West Ridge Farms Whole Body Chicken

The Category is **A**. Even though the commodity is poultry and it was packaged in a USDA establishment, this inspection is not being conducted in the USDA Packing Plant.

Since this lot was packaged, weighed, and labeled in a USDA establishment, the MAV is from Table 2-9, U.S. Department of Agriculture, Meat and Poultry, Groups and Lower Limits for Individual Packages, page 132. To determine if Table 2-9 should be used, look for a USDA establishment number and logo on the package. Use Table 2-9 if one is present. If there is no establishment number, use Table 2-5.

5, page 143, Mayfield Cider Vinegar

In this example, the labeled content is stated in fluid ounces, but the inspection is being done in terms of fluid drams and the errors will be recorded as fluid drams.

To apply the formulas for boxes **[4]** and **[19]**, the moisture loss allowance and labeled content must be in the same terms (i.e., fluid drams).

The MAV **[4]** must also be in the fluid drams. To convert from fluid ounces to fluid drams, follow the steps outlined below.

The MAV for 18 fluid ounces is 0.63 fl oz (Table 2-6, page 128)

8 fluid drams = 1 fluid ounce

The MAV stated in fluid drams is 5.04 (0.63 fl oz x 8 fl dr/1 fl oz)

To compute the % Error and Total \$ Value the Average Error and the Labeled Content must be in the same terms (e.g., both in fluid ounces or both in fluid drams).

In this example, the Average Error **[18]** is converted to fluid ounces for the calculations.

Divide the average error by the number of fluid drams in a fluid ounce:

$$0.75 \div 8 = 0.09375 \text{ fl oz}$$

#6, page 145, Night Flower Peanut Oil

The tare sample packages are used to establish the weight for 1/2 gallon of oil.

The MAV is from Table 2-6, Packages **Labeled by Liquid or Dry Volume**, page 128. It is converted to pounds using the weight per 1/2 gallon of oil.

1/2 gallon = 64 fluid ounces = 3.71 lb

3.71 lb ÷ 64 fl oz = 0.0579 lb per fluid ounce

MAV = 1.5 fluid ounces (from table)

MAV in terms of weight: 1.5 fl oz x 0.0579 lb per fl oz = 0.086 lb

#7, page 152, Titan #8 x 2-1/4 Wood Screws

The packages in this lot are labeled with count, but since the count is greater than 50, the lot is tested using Category A.

In this example the test is conducted by weight. The tare sample is used to calculate the weight of the "Labeled Content" and the Weight of the "MAV" (Maximum Allowable Variation).

The MAV is from Table 2-7, Packages Labeled by Count, page 130. It is converted to ounces using the calculated weight per unit. (See data recorded in Remarks section.)

Package #1 contains 95 screws and has a net weight of 12.35 oz

Weight of one screw is $12.35 \div 95 = 0.13$ oz

Package #2 contains 96 screws and has a net weight of 12.48 oz

Weight of one screw is $12.48 \div 96 = 0.13$ oz

Labeled content by weight is $96 \times 0.13 = 12.48$ oz

MAV from the table is 3 screws $\times 0.13 = 0.39$ oz

#8, page 147-150, examples of Form B

#9, page 151, example of Form C

Note that a certain number of undercount packages are allowed.

SURVEILLANCE REQUESTS

Surveillance Requests are sent out to alert officials of a problem and to request their assistance.

Usually surveillance requests are the result of a follow-up to a potential problem and indicate that a local or a state agency is considering legal action.

Though there are two forms used for surveillance requests, under-filled packages and price irregularities, any violation that can occur region-wide or statewide is suitable for a surveillance request to enable officials to evaluate the extent of any problem encountered.

When Responding to a Surveillance Request:

Copies of all reports and forms generated from the investigation of the request are to be sent to the requesting agency. A tabulation of hours and costs expended while investigating the request or problem should be kept. If legal action is taken as a result of the request, the prosecuting agency may request that all involved parties send costs for reimbursement.

NOTE: The surveillance tare is to be used **only** to audit the commodity. An actual tare average must be determined to complete the PIR and legally determine the lot status.

If the commodity or violation is not found, return the request to your area Quantity Control Specialist, noting on the margin "**Unable to Locate**".

Instructions for Requests:

Instructions for requests involving under-filled packages and pricing irregularities are on the following pages. For any other type of violation, similar requests have been issued, including those resulting from deceptive package complaints, faulty tare weight procedures, and incorrect price computations in bulk sales.

The following examples and instructions can be used as a guide to help ensure that key information is provided to other investigating officials.

STATE OF CALIFORNIA

DEPARTMENT OF FOOD AND AGRICULTURE

Division of Measurement Standards
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828-1812
(916) 229-3000
FAX (916) 229-3064

SURVEILLANCE REQUEST, QUANTITY CONTROL PACKAGE SHORTAGES

INFORMATION REQUESTED BY: MISSION COUNTY WEIGHTS & MEASURES

BRAND NAME: RAMIREZ

COMMODITY: CORN TORTILLAS

LABELED CONTENTS: 24 oz (1-1/2 LB) 680 g **PRICE:** \$0.49

AVERAGE SHORTAGE: 1.1 oz **% AVERAGE SHORTAGE:** 4.5

CODE/PLANT/ESTABLISHMENT #: A-15 11-19-96

COMMODITY # 3.11: **CATEGORY A** EGA, **MLA 3%**, **OTHER**, **CATEGORY C**

SURVEILLANCE TARE: 0.25 oz

PARTY RESPONSIBLE FOR NET CONTENTS: SINALOA INDUSTRIES, NATIONAL CITY, CA 90585

DISTRIBUTOR (IF DIFFERENT): JUAN CARLOS DIST., CHULA VISTA, CA 90444

LOCATION WHERE COMMODITY CAN BE FOUND: MOST MARKETS, BAKERY, OR MEAT DEPARTMENT

REMARKS: PLEASE CHECK ANY OTHER SIZES AND CODES.
QUESTIONS, CONTACT KAREN LANGFORD, (916) 229-3070

SEND INSPECTION REPORTS AND INVESTIGATION RESULTS TO:
KAREN LANGFORD, DMS
6790 FLORIN PERKINS ROAD, SUITE 100, SACRAMENTO, CA 95828-1812

INCLUDE COSTS

DATE ASSIGNED: 11-21-99

ASSIGNED TO: CLAY ALAMEDA SAN FRANCISCO STANISLAUS
 DELPERDANG AMADOR SAN JOAQUIN TUOLUMNE
 MACEY CALAVERAS SAN MATEO
 McDERMOTT SACRAMENTO SANTA CLARA

SHORT QUANTITY SURVEILLANCE REQUESTS:

To request a surveillance when package shortages have been found:

1. First check at least two more retail establishments and, if possible, at the distribution or packaging level.
2. Verify that the shortages are not caused by excessive shelf life or poor distribution. Old or poorly kept merchandise should be corrected immediately at the location where found.
3. Notify the area Quantity Control Specialist for the county, or DMS, with the following information:

- * Brand Name * Commodity * Marked Contents * Average Shortage
- * Unit Price * Code Number and Plant Number * Category Number
- * Surveillance Tare * Packer Name and Address * Distribution Locations
- * Retail Locations where they may be found
- * Remarks; e.g., Control Weight, MLA or EGA percentage, special test methods, etc.

4. The Specialist will contact another county to determine if the shortage exists in a larger area.
5. If the shortage is found in more than one area, the Specialist will contact DMS and the other Specialists to send out a statewide surveillance.

To maintain effective and efficient communication between agencies, please report legal actions involving the Quantity Control Program to your area Quantity Control Specialist. See page 59, Legal Action Report, for reporting procedure.

NOTE: The surveillance tare is to be used only to audit the commodity. An actual tare average must be determined to complete the PIR and legally determine the lot status.

STATE OF CALIFORNIA

DEPARTMENT OF FOOD AND AGRICULTURE

Division of Measurement Standards
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828-1812
(916) 229-3000
FAX (916) 229-3064

SURVEILLANCE REQUEST, QUANTITY CONTROL PRICE VERIFICATION

DATE REQUESTED: 9/2/03

INFORMATION REQUESTED BY: GOLDEN COUNTY WEIGHTS & MEASURES

PLEASE CONDUCT PRICE VERIFICATION INSPECTIONS AT:

ULTRA SAVE DISCOUNT EMPORIUM

NOTE: ENSURE THAT SALES REGISTERS ARE NOT IN TRAINING MODE.

REMARKS: ERRORS HAVE BEEN FOUND THROUGHOUT THE STORE. PLEASE CHECK A SAMPLE OF ITEMS FROM ALL DEPARTMENTS.

SEND INSPECTION REPORTS AND INVESTIGATION RESULTS TO:

DENNIS GORMAN, DMS SACRAMENTO
6790 FLORIN PERKINS ROAD, SUITE 100, SACRAMENTO, CA 95828-1812

INCLUDE INVESTIGATIVE COSTS

ASSIGNED TO:	<input checked="" type="checkbox"/> DELPERDANG	<input checked="" type="checkbox"/> ALAMEDA	<input type="checkbox"/> NEVADA
	<input checked="" type="checkbox"/> DeCONTRERAS	<input type="checkbox"/> AMADOR	<input type="checkbox"/> SACRAMENTO
	<input checked="" type="checkbox"/> ESTABROOKS	<input type="checkbox"/> CALAVERAS	<input type="checkbox"/> SAN JOAQUIN
	<input checked="" type="checkbox"/> LANGFORD	<input type="checkbox"/> CONTRA COSTA	<input checked="" type="checkbox"/> SAN MATEO
	<input checked="" type="checkbox"/> THESKEN	<input type="checkbox"/> EL DORADO/ALPINE	<input type="checkbox"/> PLACER

To Request Surveillance When Pricing Irregularities Have Been Found:

1. Check at least two more branches of the business
2. Notify the area Quantity Control Specialist for the county, or DMS, with at least the following information:
 - Business name
 - Type or types of items with pricing problems; i.e., all departments, sale or non-sale items, end-cap display, secondary checkstand display, etc.
 - Special instructions
3. The Specialist will contact another county to determine if the pricing irregularities exist in a larger area.
4. If the problem is found in more than one area, the Specialist will contact DMS and the other Specialists to send out a statewide surveillance.

To maintain effective and efficient communication between agencies, please report legal actions involving the Quantity Control Program to your area Quantity Control Specialist. See page 59, Legal Action Report, for reporting procedure.

SURVEYS, STATEWIDE

These types of surveys are made periodically and are used to establish statewide compliance levels for establishments and for various categories of commodities in commerce. Commodities are tested or sampled at retail as well as at the point-of-pack and distribution.

Priorities have been established according to the impact of overcharges or shortages on the overall economy of the state, the dollar value of the particular commodity or types of commodities, and the frequency of turnover or sale.

Types of surveys are:

- Meat Counter Survey - Packed on premises meat counters, including delicatessens.
- Scanner Survey - Establishments using a mechanical device or entry of a code to determine the prices to be charged.
- Test Purchase Survey - Establishments selling commodities by weight or measure determined at the time of sale.

Commodity Surveys

- 2.00 Dairy Type Products
- 3.00 Bakery Goods
- 7.00 Produce
- 4.00 Meat, Fish, Poultry
- 12.00 Hardware, Building Materials
- 6.00 Milling Products
- 11.00 Garden, Farm, Pet Supplies
- 9.00 Beverages
- 17.00 Miscellaneous
- 8.00 Other Foods
- 14.00 Maintenance Supplies
- 10.00 Pharmacy Products
- 13.00 Paint and Allied Products
- 5.00 Cooking Oils, Salad Dressings, Condiments
- 1.00 Confections, Flavorings, Seasonings
- 15.00 Paper, Plastic Products
- 16.00 Textile Products

Inspections are made by the area Quantity Control Specialists or County Inspectors.

The sample for Meat Counter Surveys and Scanner Surveys consists of 5% ± 0.5% of the reported number of establishments in the State. The locations to be inspected are selected at random by area Quantity Control Specialists.

A baseline Test Purchase Survey is made periodically. Twelve hundred items weighed or measured and priced at the time of sale are purchased at 400 establishments selected randomly statewide. Purchases are categorized as: (1) Meat, Poultry, or Seafood; (2) Fresh Produce; (3) Specialty Foods (delicatessen, health foods, gourmet foods, candy, ice cream and yogurt, coffee, tea, spices, salad bars, and other specialties; and (4) Miscellaneous (crafts, hardware, pet supply, feed and grain, yardage and fabric, garden and landscape, bait and tackle, bath and beauty, tobacco, etc.

For Commodity Surveys, the sample consists of at least 300 items overall including a minimum of 30 items from each subcategory.

To obtain an equal distribution of samples from all areas of the State, the counties are divided in four groups roughly equal in population. One-fourth of the total sample is selected from each group of counties.

To ensure statistical validity, the selection of the number of and the type of samples to be selected from each county is determined randomly in advance of the survey. The determination of the number and location of the establishments to be visited to purchase the samples is made by the individual county using the criteria that no more than 3 items from the same subcategory and not more than 15 items overall selected from the same establishment.

COUNTY SURVEYS, GENERAL

The policies and procedures listed below are those guiding Quantity Control Program surveys by State personnel.

A. Goals

The goals of county surveys are to identify training needs, to establish compliance levels for the sampled commodities, and to make recommendations to the county sealer/director for improving program effectiveness.

B. Samples

Prior to the start of the survey, sample locations will be randomly drawn from county files. Whenever possible the area Quantity Control Specialist will draw the sample.

C. Initial Coordination

Before starting the survey, the area specialist will discuss its operation with the county sealer/director or other designated representative. At this time, the following points should be covered:

1. Commodities to be inspected.
2. Manner of performing the inspection: The DMS Quantity Control Program Manual or the National Institute of Standards and Technology Handbook 133 will be used as applicable.
3. County involvement: Normally, county officials are encouraged to perform the inspection since an effective survey considers both commodity condition as well as procedures. All county officials who may work in the Quantity Control Program should participate in the survey, one at a time, if scheduling permits. For a more complete evaluation, county equipment should be utilized whenever possible.
4. Time schedule.
5. Sample composition will not be disclosed prior to actual inspection except when necessary to set up appointments.
6. Appropriate enforcement action will be taken. If a State specialist is working alone, off sale tags and Notices of Violation (NOVs) will be used as appropriate. If the county official is performing the test, an agreement to policy concerning enforcement action will govern.

When an "off sale" order is issued, an NOV will also be issued and a copy attached to the Package Inspection Report (PIR) or when overcharging

D. Follow-up on Discrepancies

Normally, the county will follow-up on off-sale items or overcharges found during the survey. If the necessary equipment is not available, the county may contact DMS for assistance.

E. Training

Whenever appropriate, the survey will be utilized for training as well as evaluation. At the conclusion of the survey, participating and other interested county officials will continue to receive training by the DMS Quantity Control Specialist in correct and efficient performance of the inspection procedures for the commodities surveyed. This training will emphasize those points necessary to strengthen the county program.

F. Reports

The area specialist will give the county sealer/director an oral report of the inspections performed before leaving the county at the conclusion of the survey. Copies of Inspection Reports will also be provided at the same time. Any serious conditions requiring attention will be reported to the sealer/director immediately.

A draft survey summary and recommendations will be prepared by the area Quantity Control Specialist and program supervisor and will be discussed with the county sealer/director as soon as possible. The final survey summary and recommendations will be issued only to the sealer/director or other designated representative.

G. Follow-up

Surveys may be supplemented by additional mini-surveys as necessary. Such mini-surveys will be considered a natural follow-up in problem areas found in the scheduled survey procedure.

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DEPARTMENT OF FOOD & AGRICULTURE
 DIVISION OF MEASUREMENT STANDARDS
 MEAT COUNTER SURVEY REPORT

Business Name: Super Duper Mkt #1 County: Mission
 Address: 3111 Ridgeway
Eastwood, CA 90949
 Date: 10-18-96
 This report is to be used only for items weighed, labeled, and sold at this location.

KEY #	LABELED NAME	CODE	DAYS LEFT ON CODE	PRICE PER POUND	PRICE PER ITEM	All recordings stated in 0.01 pound unit of measure		ERROR		TARE WEIGHT
						GROSS WEIGHT	LABELED WEIGHT	MEASURED NET WEIGHT	+	
1	Beef Cass Roe Roast	09		2.19	5.52	263	252	252	-	11
1	Lamb Small loin Chops	04	6	4.99	6.69	134	134	132	2	2
2	Butt Roast	20	2	1.78	6.51	370	366	361	5	9
3	Whole Chicken - Cut Up	28	10	1.19	5.03	440	423	412	11	28
3	BBQ Turkey Breast	74K		3.98	5.69	146	148	142	6	4
4	King Crab Sections	19	1	14.99	8.39	75	56	60	4	15
5	Beef Kidney	20	2	0.58	0.86	154	149	151	2	3
5	Old Fashioned Franks	433		2.58	3.43	137	133	135	2	2
6	Monterey Jack Cheese	15	-3	2.59	2.43	96	94	96	2	0
7	Potato Salad	109K		1.59	1.46	99	92	94	2	5

KEY NUMBERS
 1. BEEF/VEAL/LAMB
 2. PORK
 3. POULTRY
 4. SEAFOOD
 5. VARIETY/SPECIALTY
 6. NON MEATS (SALADS, CHEESE, ETC.)
 ORIGINAL STATE BUSINESS COPY 1: BUSINESS COUNT 2:
J. Stead / E. Reel
 WEIGHTS AND MEASURES OFFICIAL

COUNTY PREPACKAGED MEAT SURVEYS

- A. Prior to the Meat Counter Survey, the area Quantity Control Specialists will meet with the county sealer/director or their designated representative to discuss survey policies and to randomly select the survey sample.
- B. The sample will consist of at least 225 packages from at least 15 different locations.
- C. The percent error for each package will be determined by opening the packages and dividing the difference between the labeled weight and the true net weight by the labeled weight. The calculations will be performed by the computer.
- D. The mean percent error for the surveyed county will be compared to the statewide value.
- E. At the completion of the survey analysis, the area Quantity Control Specialists will review the data with the county sealer/director or designated representative to determine program needs and follow-up plans.
- F. A written report will be drafted and discussed with the county sealer/director prior to issuing a final report of survey conditions.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
TEST PURCHASE/SALE REPORT
49-090 (Rev. 8/01)

COUNTY: MISSION

BUSINESS NAME: SUPER SUPER #8
ADDRESS: 1061 GREEN ST
MIDDLEBOROUGH, CA 90811

DATE: 6-28-01
TIME IN: 9:35 AM
TIME OUT: 9:50 AM
TIME WEIGHED: 10:00 AM

PRICES: POSTED/ADVERTISED QUOTED # 3

COMMODITY (PURCHASED/SALE)	A SALES/ UNIT PRICE	B GROSS WEIGHT	C NET WEIGHT RECEIVED/ SOLD	D CORRECT PRICE EXTENSION (A X C)	E PRICE CHARGED/ PAYMENT RECEIVED	F ERROR PRICE (E - D)		G % OVER CHARGE/ UNDER PAYMENT (F/D) X 100	H COMPUTED WEIGHT EXTENSION (E/A)	I WEIGHT ERROR	
						OVER CHARGE/ PAYMENT (+)	UNDER CHARGE/ PAYMENT (-)			TEST PURCHASE (C-H)	TEST SALE (H-C)
1. <u>BASIC FETTERMAN</u>	<u>3.50/LB</u>	<u>0.94</u>	<u>0.88</u>	<u>3.08</u>	<u>3.29</u>	<u>0.21</u>	<u>-</u>	<u>6.8</u>	<u>0.94</u>	<u>-0.06</u>	
2. <u>PALE NUTS</u>	<u>16.00/LB</u>	<u>0.09</u>	<u>0.08</u>	<u>1.28</u>	<u>1.28</u>	<u>-</u>	<u>-</u>				
3. <u>TURKISH COITS</u>	<u>3.69/LB</u>	<u>0.57</u>	<u>0.55</u>	<u>2.03</u>	<u>2.10</u>	<u>0.07</u>		<u>3.4</u>	<u>0.57</u>	<u>-0.02</u>	
4.											
5.											
6.											
7.											
8.											
9.											
10.											
TOTALS				<u>6.39</u>	<u>6.67</u>	<u>0.28</u>		<u>3.9</u>	<u>% OVERCHARGE/UNDERPAYMENT</u>		

SCALE USED FOR TEST WEIGHING: _____
 SERIAL #: 21063
 OWNED BY: County
 SCALE USED BY SELLER/PURCHASER: _____
 TYPE: GLD SEALED? ?
 OTHER INFO: DEF ZERO 10.03

DESCRIPTION OF SELLER/PURCHASER: MALE FEMALE
 RACE: C AGE: 30-35 HEIGHT: 5'10"
 WEIGHT: 150 HAIR: BRN EYES: BRN
 OTHER CHARACTERISTICS: SHOULDER LENGTH HAIR
GOOD EAR RING - LEFT EAR

COMMODITY DISPOSITION: RETURNED DESTROYED
 HELD AS EVIDENCE. I.D. # 04-8178-96
 WHERE HELD: MISSION CO. WM
 SHIPPED/DONATED TO: _____
 RECEIVED BY: _____

SECTIONS VIOLATED: 12023.3, 12024.2a, 12024.2b
 12512 OTHER BAP 12107, CC 2.20 UR 4.1

LEGAL ACTION: HEARING NOTICE OF VIOLATION (NOV)
 CRIMINAL CITATION/COMPLAINT CIVIL COMPLAINT
 CIVIL PENALTY (NOTICE OF PROPOSED ACTION, NOPA)

REMARKS: _____
 INVESTIGATOR: Shiward
 BUYER/SELLER: EPD

COUNTY TEST PURCHASE SURVEYS

- A. Prior to a Test Purchase Survey, the area Quantity Control Specialists will meet with the county sealer/director or their designated representative to discuss survey policies and to randomly select the survey sample.
- B. The sample will be based upon the following tables. (The number of individual items purchased at each location may vary. More than one type of item may be selected at the same establishment. Not more than three items from the same category are selected from the same establishment.)

1. For counties with population up to 100,000, the minimum sample shall be:

	<u>Locations</u>	<u>Purchases</u>
Meat, Poultry and Fish	10	30
Specialty Foods	15	45
Produce	15	45
Miscellaneous	10	30

2. For counties with population greater than 100,000 but less than 400,000, the minimum sample shall be:

	<u>Locations</u>	<u>Purchases</u>
Meat, Poultry and Fish	15	45
Specialty Foods	20	60
Produce	20	60
Miscellaneous	15	45

3. For counties with population of more than 400,000, the size of the sample shall be at least:

	<u>Locations</u>	<u>Purchases</u>
Meat, Poultry and Fish	20	60
Specialty Foods	30	90
Produce	30	90
Miscellaneous	20	60

C. Use of Form 49-030

Form 49-030 will be used to record data during the survey. The four areas to be tested; meat, specialty foods, produce, and miscellaneous will be entered separately into a computer program.

D. Reference Factors

1. Counties are grouped for comparison by population and by regional associations.
2. Results averaged for the three counties with the worst compliance are used to estimate program benefit.
3. A measure of the variance is supplied to help judge the reliability of estimates.

E. Calculation of Errors

The amount of overcharge or undercharge is divided by the correct price extension to determine the percent error for each transaction. From these values, a mean percent error for each category surveyed is calculated.

F. Calculation of Benefits

1. Total annual sales are estimated by multiplying statewide sales estimates by the county portion of statewide population.
2. County sales estimates are multiplied by the difference between the county mean percent error and the mean percent error for the three worst counties combined.

G. Completing Test Purchase Survey

At the completion of the Test Purchase Survey analysis, the area Quantity Control Specialist will review the data with the county sealer/director or designated representative to determine program needs and follow-up plans.

TEST PURCHASE

A. Equipment

1. Test Purchase Report, Form 49-030. (If a test sale, page 174.1, is being made at the same location, use a separate form to record the test sale information. Do not combine test purchases and test sales on the same report form.)
2. Scale, calibrated linear measure, or other calibrated measures.
3. Calibrated weights as necessary (any scale used to weigh purchases must be verified with known test weights).
4. Small notebook (optional).
5. Ice and ice chest if perishable items are to be tested.

B. Special Notes

1. This procedure may be used for all commodities weighed or measured at the time of sale. Example: Coffee, candy, health foods, nails, produce, seed, meat, cheese, deli salads, ice cream, feed, yardage goods, rope, wire, tobacco, etc.
2. At least 25% of the available outlets should be sampled each year. All outlets should be sampled within a four-year period. New outlets should be sampled soon after starting business.
3. All net weights are the actual net weights received excluding all wrappings: ice, water, and free-flowing liquids considered to be tare.

There is no moisture allowance for commodities weighed or measured at the time of sale.

C. Procedure

1. The buyer must not be known to the establishment as a weights and measures official. He or she should approach the counter or displays in a casual and natural manner. (A notebook may be used. It is common for customers to use a shopping list.)
2. Examine the products on display and select items to be purchased. The value of any item purchased should not be less than \$1.00. Try to order irregular amounts: for example, four pork chops rather than 2 lbs.; a pound of ground beef, plus a little more after it is placed on the scale.
3. When shopping to investigate a complaint or to follow-up on a prior violation, be sure to purchase the items in question. These items should be evaluated separately from the rest of the sample.
4. Casually look at the weighing or measuring device to see if there are any obvious violations present (e.g., scale off zero, scale located on the back counter so that the readout is not readily visible, no seal, etc.). Try not to be obvious in looking at the scale and do not observe the actual weighing.

STATE OF CALIFORNIA
 DEPARTMENT OF FOOD AND AGRICULTURE
 DIVISION OF MEASUREMENT STANDARDS
TEST PURCHASE/SALE REPORT
 49-030 (Rev. 6/01)

BUSINESS NAME: Super Super Mkt #1 DATE: 4-18-01
 ADDRESS: 106 West St TIME IN: 10:20 AM
 COUNTY: MISSION METRO, CA TIME OUT: 10:55 AM
 PRICES: POSTED/ADVERTISED QUOTED TIME WEIGHED: 11:05 AM

COMMODITY (PURCHASER/SELLER)	A SALES/ UNIT PRICE	B GROSS WEIGHT	C NET WEIGHT RECEIVED/ SOLD	D CORRECT PRICE EXTENSION (A X C)	E PRICE PAYMENT RECEIVED	F ERROR PRICE (E - D)		G % OVER CHARGE/ UNDER PAYMENT (F/D) X 100	H COMPUTED WEIGHT EXTENSION (E/A)	I WEIGHT ERROR	
						OVER CHARGE/ PAYMENT (+)	UNDER CHARGE/ PAYMENT (-)			TEST PURCHASE (C - H)	TEST SALE (H - C)
1. SLICED Roast Beef	5.99 / LB	0.77	0.76	4.55	4.66	0.11		2.4	0.78	-0.02	
2. CHEDDAR Cheese	2.99 / LB	0.66	0.65	1.94	2.57	0.63		32.5	0.86	-0.21	
3. SALAD BAR	2.59 / LB	1.14	1.03	2.67	2.95	0.28		10.5	1.14	-0.11	
4. Bulk Candy	1.89 / LB	0.89	0.84	1.59	1.54	0.05			0.82	+0.02	
5. COFFEE BEANS	2.49 / LB										
6.	(9.96 / LB)	0.53	0.51	5.08	5.02	0.06			0.50	+0.01	
7. TANGILOS	0.49 / LB	1.39	1.39	0.96	0.68	0.28			0.98	+0.41	
8. Asparagus	0.99 / LB	2.09	2.09	2.07	2.07	-					
9.											
10.											
TOTALS		18.86	19.49	1.02	0.39	3.3	% OVERCHARGE/UNDERPAYMENT				

SCALE USED FOR TEST WEIGHING: _____
 SERIAL #: 149655
 OWNED BY: County
 SCALE USED BY SELLER/PURCHASER: _____
 TYPE: ELECT SEALED? 99
 OTHER INFO: DEU SCALE ON
Face Counter

DESCRIPTION OF SELLER/PURCHASER: MALE FEMALE
 RACE: Bel AGE: 45.50 HEIGHT: 5'10"
 WEIGHT: 185 LB HAIR: Brown EYES: Blue
 OTHER CHARACTERISTICS: Chesterland Bk, F, C, 30-35 Yrs, 5'17", 140 LB, Brown Hair, Green Eyes

COMMODITY DISPOSITION: RETURNED DESTROYED
 HELD AS EVIDENCE. I.D. # 04-8166-01
 WHERE HELD: MISSION Co. W.M., 100 SUDBURY
METRO
 SHIPPED/DONATED TO: _____
 RECEIVED BY: _____

SECTIONS VIOLATED: 12023 *3 12024.2a 12024.2b #1 12512 OTHER 34P12107, CCR 1/10 & ULR 3.3 LEGAL ACTION: HEARING NOTICE OF VIOLATION (NOV) CRIMINAL CITATION/COMPLAINT CIVIL COMPLAINT CIVIL PENALTY (NOTICE OF PROPOSED ACTION, NOPA)

REMARKS: #2 CHARGED AT 3.99 / LB INSTEAD OF ADVERTISED 2.99 / LB
 #7 CHARGED AT 4.99 / LB INSTEAD OF RATED 6.99 / LB
 INVESTIGATOR: [Signature]
 BUYER/SELLER: [Signature]

5. It is important to note the posted price per unit and the sales price of each item. If it is not clear, ask the clerk after the sale is complete. After leaving the store, immediately record all information.
6. If using the disclosure method, there should be a buyer and investigator. After taking possession of the items, the buyer should signal the investigator. The investigator will identify himself/herself and check weigh the items in the presence of the clerk. If the store scale is used, it must be tested for accuracy first. The correct price for the amount delivered is determined for each item. It is not necessary to pay for the items as they can be returned to the display after weighing.
7. If using the delayed weighing procedure, purchase the items and take them to the investigator. Weigh each item and compute the correct price for the weight received. Check weighing should be done as soon as possible following the purchase.
8. Fill out the forms completely, including the seller's description, type of device, etc. Send a copy to your area DMS office.

D. General Information for the Shopper

1. The most important factor in being a successful shopper is naturalness - even if you are "acting." Try to conform with the type of store or neighborhood. In general, if you are in an apartment area make smaller purchases than if in suburban areas where quantities may be larger. Do not develop a buying pattern. Do not get carried away and buy too much: for example, a dozen steaks or five rib roasts.
2. Try to select meat that normally is not cut up or trimmed. If asked about cutting, trimming or tenderizing, say "No thank you, I prefer it this way," or whatever would be natural for you.
3. If meats, poultry, or fish are displayed in boats, cartons, or paper wrappings, try to select at least one of these items. Avoid buying ground meat, but if necessary ask for about a pound or two pounds and then have them add a "little more." You may also buy a dollar amount such as \$3.00 worth of ground beef.
4. Never stand in front of the scale or appear to be too concerned about the weighing process.
5. When shopping with another person (inspector or shopper), determine your roles before entering the market - who will make the buy, etc.
6. Provide all information needed to complete the form.
7. Anything you say or do could be repeated in court.

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
TEST PURCHASE/SALE REPORT
49-000 (Rev. 8/01)

BUSINESS NAME: COUNTRY HOME CRAFTS
ADDRESS: 591 N. FAIRWAY DR # 105
VALONA CA 94412

DATE: 3-4-01
TIME IN: 10:45 AM
TIME OUT: 11:20 AM
TIME WEIGHED: 11:25 AM

COUNTY: MISSION

PRICES: POSTED/ADVERTISED QUOTED

WEIGHT ERROR

COMMODITY (PURCHASED/SALE)	A SALES/ UNIT PRICE	B GROSS WEIGHT	C NET WEIGHT (RECEIVED SOLD)	D CORRECT PRICE EXTENSION (A X C)	E PRICE CHARGED PAYMENT RECEIVED	F ERROR PRICE (E - D)		G % OVER CHARGE/ UNDER PAYMENT (F/D) X 100	H COMPUTED WEIGHT EXTENSION (E/A)	I WEIGHT ERROR	
						OVER CHARGE/ PAYMENT (+)	UNDER CHARGE/ PAYMENT (-)			TEST PURCHASE (C-H)	TEST SALE (H-C)
1. <u>WOODLAND</u>	<u>\$3.98/lb</u>										
2. <u>POTPOURRI</u>	<u>BY PWT</u>										
3.	<u>\$0.237/lb</u>		<u>29.75 lb</u>	<u>7.05</u>	<u>7.96</u>	<u>0.91</u>		<u>12.9</u>	<u>33.6 lb</u>	<u>-3.85 lb</u>	
4.											
5. <u>LAMP CHAIN</u>	<u>\$4.29/lb</u>										
6. <u>GOLD</u>	<u>\$6.119/lb</u>		<u>104.2 lb</u>	<u>12.40</u>	<u>11.94</u>	<u>0.46</u>			<u>100.3 lb</u>	<u>+3.9 lb</u>	
7.											
8. <u>DECORATOR MARBLES</u>	<u>\$1.89/lb</u>										
9. <u>ASSORTES</u>	<u>\$7.56/lb</u>		<u>0.34 lb</u>	<u>2.30</u>	<u>2.60</u>	<u>0.30</u>		<u>13.0</u>	<u>0.34 lb</u>	<u>-0.04 lb</u>	
10.											
TOTALS				<u>21.75</u>	<u>22.50</u>	<u>0.75</u>		<u>3.4</u>	<u>% OVERCHARGE/UNDERPAYMENT</u>		

SCALE USED FOR TEST WEIGHING:

DESCRIPTION OF SELLER/PURCHASER: MALE FEMALE

COMMODITY DISPOSITION: RETURNED DESTROYED

SERIAL #: 21603

RACE: C AGE: 60-68 HEIGHT: 5'3"

HELD AS EVIDENCE: ID # 96-124003

OWNED BY: STATE

WEIGHT: 145 HAIR: GRAY EYES: BROWN

WHERE HELD: MISSION COUNTY WEIGHERS & MEASURES

SCALE USED BY SELLER/PURCHASER:

OTHER CHARACTERISTICS: GLASSES

SHIPPED/DONATED TO:

TYPE: ELECT SEALED/YES

OTHER INFO: Customer Display

RECEIVED BY:

Covered By: Merchandise

SECTIONS VIOLATED:

12023

12024.2a

12024.2b

HEARING

ORIGINAL CITATION/COMPLAINT

CIVIL COMPLAINT

12512

OTHER

NOTICE OF VIOLATION (NOV)

CIVIL PENALTY (NOTICE OF PROPOSED ACTION, NOPA)

REMARKS: 1 Dry Plat = 33.6 lb

INVESTIGATOR: [Signature]
BUYER/SELLER: [Signature]

E. Notes for the Completion of Test Purchase Form and Verification of Weight Received and Correct Price

The prices may be Posted/Advertised or Quoted by the clerk. If there is a difference, the lowest is used to compute the correct price and weight extensions.

The Sales/Unit Price (A) is usually the price per pound or fraction of the pound. If the price is computed from a price per fraction of a pound, the price per pound must be calculated and used in formulas. If not testing by weight, the price per unit must be stated in the same unit as amount received in order for the formulas to compute correctly.

Record the Gross Weight (B) and the Net Weight (C). The net weight may be determined by direct weighing.

G. Enforcement Action, See Citation Procedure Manual

STATE OF CALIFORNIA
DEPARTMENT OF FOOD AND AGRICULTURE
DIVISION OF MEASUREMENT STANDARDS
TEST PURCHASE/SALE REPORT
491030 (Rev. 9/01)

COUNTY: GOLDEN

BUSINESS NAME: 40/40 Recycle Center
ADDRESS: 451 Pioneer Ave.
Mosher, CA

DATE: 11/01/01
TIME IN: 2:40 PM
TIME OUT: 3:00 PM
TIME WEIGHED: 1:50 PM

PRICES: POSTER/DVERTISED QUOTED

COMMODITY (PURCHASE/SALE)	A SALES/ UNIT PRICE	B GROSS WEIGHT	C NET WEIGHT/ RECEIVED/ SOLD	D CORRECT PRICE EXTENSION (A X C)	E PRICE CHARGED/ PAYMENT RECEIVED	F ERROR PRICE (E - D)		G % OVER CHARGE/ PAYMENT (F/D) X 100	H COMPUTED WEIGHT EXTENSION (E / A)	I WEIGHT ERROR	
						OVER CHARGE/ PAYMENT (+)	UNDER CHARGE/ PAYMENT (-)			TEST PURCHASE (C-H)	TEST SALE (H-C)
1. Aluminum Cans	0.85 /lb	6.55 lb	6.3 lb	5.35	4.54	0.81	15.1	5.34			-0.96
2. Brown Glass Bottles	0.51 /lb	12.1 lb	12.0 lb	0.61	0.60	0.01	1.6	11.76			-0.23
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											
TOTALS			5.96	5.14	0.82	13.7	% OVERCHARGE/UNDERPAYMENT				

SCALE USED FOR TEST WEIGHING:
SERIAL # AD 43-21,52425
OWNED BY: STATE

DESCRIPTION OF SELLER/PURCHASER: MALE FEMALE
RACE: C AGE: 45-50 HEIGHT: 5'6"
WEIGHT: 135 lb HAIR: Brown/Gray EYES: Brown
OTHER CHARACTERISTICS: Glasses, Beards,
None Tag, TAMES

SCALE USED BY SELLER/PURCHASER:
TYPE: GUCKET SEALED? Yes
OTHER INFO: Not Visible From
Customer Position

SECTION VIOLATED: 12023 12024.2a 12024.2b
 12512 OTHER

LEGAL ACTION: HEARING CRIMINAL CITATION/COMPLAINT CIVIL COMPLAINT
 NOTICE OF VIOLATION (NOV) CIVIL PENALTY (NOTICE OF PROPOSED ACTION, NOPA)

REMARKS:

INVESTIGATOR: [Signature]
BUYER/SELLER: [Signature]

TEST SALE

A. Equipment

1. Test Purchase/Sale Report, Form 49-030. (If a test purchase, page 169, is being made at the same location, use a separate form to record the test purchase information. Do not combine test sales and test purchases on the same report form.)
2. Scale, if the sale is to be by weight.
3. Calibrated weights as necessary (any scale used to weigh sale items must be verified with known test weights).
4. Small notebook (optional).

B. Special Notes

1. This procedure may be used for commodities having a California Redemption Value (CRV) which are weighed or counted at the time of purchase by a recycle outlet. For example aluminum cans, glass or plastic bottles, etc.
2. At least 25% of the available outlets should be sampled each year. All outlets should be sampled within a four-year period. New outlets should be sampled soon after starting business.

C. Procedure

1. Before going to the purchase location:
 - a. If the cans or bottles are to be sold by weight, determine and record the gross and net weight of the cans or bottles.
 - b. If the sale is not to be by weight, count and record the number of containers.
2. The seller must not be known to the establishment as a weights and measures official. He or she should approach the purchase location in a casual and natural manner.
3. Casually look at the weighing or measuring device to see if there are any obvious violations present (e.g., scale off zero, scale located on the back counter so that the readout is not readily visible, no seal, etc.). Try not to be obvious in looking at the scale.
4. It is important to note the posted price per unit and the sales price of each type of container sold. If it is not clear, ask the attendant after the sale is complete. After leaving the location, immediately record all information.
5. If using the disclosure method, there should be a seller and investigator. After the purchaser has weighed or counted the containers, the seller should signal the investigator. The investigator will identify himself/herself and check weigh or count the containers in the presence of the attendant. If the location's scale is used, it must be tested for accuracy first. The correct price for the amount purchased is determined for each type of container.

6. If using the non-disclosure procedure, get a receipt for the containers and leave the purchase location. Compute and record the value of any over or underpayment.
7. Fill out the form completely, including the seller's description, type of device, etc. Send a copy to your area DMS office.

D. General Information for the Seller

1. The most important factor in being a successful seller is naturalness - even if you are "acting." Try to conform to the type of location or neighborhood.
2. Never stand in front of the scale or appear to be too concerned about the weighing or counting process.
3. When selling containers with another person (inspector or seller), determine your roles before entering the location - who will make the sale, etc.
4. Provide all information needed to complete the form.
5. Anything you say or do could be repeated in court.

E. Notes for the Completion of Test Purchase/Sale Form and Verification of Weight Received and Correct Price

The prices paid by the location may be Posted/Advertised or Quoted by the attendant. If there is a difference, the highest price is used to compute the correct price and weight extensions.

The Sales/Unit Price (A) is usually the price per pound or fraction of the pound. If the price is computed from a price per fraction of a pound, the price per pound must be calculated and used in formulas. If not testing by weight, the price per unit must be stated in the same unit as amount received in order for the formulas to compute correctly.

Record the Gross Weight (B) and the Net Weight (C). The net weight may be determined by direct weighing.

F. Enforcement Action, See Citation Procedure Manual

**METHOD OF SALE
AND
QUANTITY STATEMENTS**

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QUANTITY DECLARATIONS

APPROPRIATE STATEMENTS

In general, unless there exists an established and customary accepted trade practice with respect to the terms of sale for a commodity: (CCR 6.4, and 7.3)

- A. A solid, semi-solid, viscous, or mixture of solid and liquid shall be sold by weight.

The net content statement may stand alone, or may include, either spelled out or properly abbreviated, the words "NET WEIGHT." Food products may also use the word "NET."

- B. A liquid shall be sold by fluid measure.

If the net content statement could be confused with weight, it shall state, spelled out or abbreviated, the words "FLUID OUNCES."

- C. A dry commodity shall be sold by dry measure or in some cases by count.

If the content statement could be confused with liquid measure, it must state, for example: "DRY PINT" or "DRY QUART."

- D. Count is only acceptable for items for which count alone is a fully informative statement of net quantity to the consumer. It would not be acceptable for commodities which may be sold in a variety of sizes and weights (e.g., cookies, rolls, napkins, etc.). (CCR 6.4.1)

- E. However the net contents are stated, the statement and method of sale must be fully informative and permit value comparison between similar commodities. For example, if all brands of a certain commodity have the net contents stated by net weight, a new brand of the same commodity marketed by dry measure would not be acceptable as there is no basis for value comparison. (B&P Code 12601)

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GENERALLY ACCEPTED QUANTITY DECLARATIONS

FOOD AND DRUG ADMINISTRATION (FDA)

The following list shows types of statements generally made. FDA accepts these as complying with requirements pending further data showing that some other form of statement is more informative to consumers and will more accurately express the quantity of contents.

NOTE: Not all acceptable declarations are appropriate for retail sales.

<u>Product</u>	<u>Acceptable, Common, or Usual Declaration</u>
Apples, Fresh	Dry Measure or Net Weight. In addition, may also show minimum size, range in size, and/or count
Anchovies (in Salt)	Weight of Fish
Apricots, Canned	Net Weight
Artichokes, Canned	Drained Weight
Asparagus, Fresh	Net Weight
Crabmeat, Canned (Dry)	Net Weight
Crackers	Net Weight
Cranberries	Dry Measure (Cranberry Barrel). Also, Net Weight
Dates	Net Weight
Doughnuts	Net Weight and Count
Fish, Canned	Net Weight
Fish, Fresh	Net Weight
Fish, Frozen	Net Weight
Fish, Salted or Smoked	Net Weight and Count
Fruits, Canned	Net Weight
Fruits, Fresh	Dry Measure or Net Weight. Also, Min. Size and/or Count
Fruit Juices	Net Volume
Grains, Sacked	Net Weight

<u>Product</u>	<u>Acceptable, Common, or Usual Declaration</u>
Grapefruit, Fresh	Dry Measure, Size and Count. Also, Net Weight
Grapes, Fresh	Net Weight and Dry Measure
Greens, Fresh	Dry Measure and Net Weight. No marking
Herring Roe	Net Weight
Herring Spiced	Drained Weight Herring. Total Weight Contents
Honey, Comb	Net Weight
Honey, Strained	Net Weight
Jelly	Net Weight
Lemons, Fresh	Count and Average Diameter. Also, Dry Measure
Lettuce	Dozen Count and Dry Measure
Lobster, Canned (Dry)	Net Weight
Mayonnaise	Volume
Meats	Net Weight
Milk, Sweetened Condensed	Net Weight
Milk, Evaporated	Volume and Net Weight
Molasses	Net Weight and/or Volume
Mushrooms, Canned	Drained Weight
Mushrooms, Fresh, Dry, Dehydrated	Net Weight
Mustard, Prepared	Net Weight
Oil, Salad, Olive	Volume
Olives, Green (in Brine)	Drained Weight
Olives, Ripe	Drained Weight
Oranges	Dry Measure and Count. Also, Net Weight and Size
Oysters, Fresh	Volume

<u>Product</u>	<u>Acceptable, Common, or Usual Declaration</u>
Oysters, Canned	Total Weight
Peaches, Canned	Net Weight
Peaches, Fresh	Dry Measure, Min. Diameter. Also, Net Weight and Count
Peanut Butter	Net Weight
Pears, Canned	Net Weight
Pears, Fresh	Count. Also, Dry Measure or Net Weight
Pickles	Volume
Pineapple, Fresh	Count
Plums, Prunes, Fresh	Net Weight or Dry Measure. Count and Size denoted by rows in top layer
Potatoes, Fresh	Net Weight or Dry Measure
Rabbits, Dressed	Net Weight
Rolls	Net Weight and Count
Relish	Net Weight
Rock Lobster, Canned (Dry)	Net Weight
Roe, Herring	Net Weight
Salad Dressing	Volume
Salmon, Canned	Net Weight
Sardines, Canned	Net Weight
Sauces, Hot, Tabasco, A-I, Etc.	Volume
Sauerkraut, Canned	Net Weight
Sauerkraut (Unprocessed in Glass)	Volume
Shrimp, Canned (Wet)	Drained Weight
Shrimp, Canned (Dry)	Net Weight

<u>Product</u>	<u>Acceptable, Common, or Usual Declaration</u>
Syrup	Volume. Also, Volume and Net Weight
Soups, Canned (Liquid)	Net Volume
Soups, Canned (Condensed and Semi-condensed)	Net Weight
Spaghetti Sauce	Net Weight
Tea	Net Weight
Tea Bags	Net Weight and Count
Tomatoes, Canned	Net Weight
Tomatoes, Fresh	Net Weight or Dry Measure. Size denoted by rows in top layer
Tomato Sauce	Net Weight
Tuna Fish, Canned	Net Weight
Vegetables, Canned	Net Weight
Vegetables, Fresh	Dry Measure or Net Weight. Also, Count

This compilation may be revised from time-to-time as may be required by changes in consumer understanding, administrative opinion, or court decisions. If the necessity for corrections, additions, or deletions becomes apparent to the field, FDA requests to be notified promptly so that provision can be made for inclusion in the next revision.

Reference: FDA "Quantity of Contents Compendium."

NOTE: Many fruits and vegetables also are subject to packaging and labeling requirements administered by the California Department of Food and Agriculture, Division of Inspection Services. Some of the common declarations above may not be allowed in California.

CALIFORNIA WEIGHTS AND MEASURES LABEL REQUIREMENTS

This is a brief summary of major regulations adopted by the State of California, pursuant to the Fair Packaging and Labeling Act, for packages in general.

For complete requirements, consult the California Code of Regulations Title 4.

NOTE: Other agencies may have different or additional labeling requirements (e.g., ingredient or nutritional labeling).

Packages and their labels should enable consumers to obtain accurate information as to the quantity of the contents and should facilitate value comparisons.

The **three basic requirements** are:

1. A declaration of **identity** that is the common or usual name of the commodity.
2. A declaration of **responsibility** that includes the **name, address, and zip code** of the manufacturer, packer, or distributor. A street address is required if the name is not listed in a current directory. The connection of a distributor must be shown (e.g., "packed for, distributed by"). This statement is not required to be on the principal display panel.
3. A declaration of the **quantity** of the commodity in the lower 30% of the principal display panel area, in a size depending upon the area of the principal display panel.

UNITS OF WEIGHT OR MEASURE: Consumer packages are **required** to have both SI (metric) and inch-pound units.

Exceptions: The following may, but are not required to, have both units: labels printed before February 14, 1994, random weight packages, foods packed at retail, camera film, audio and video recording media. There may be different requirements for the following federally regulated commodities: meat, poultry, alcoholic beverages, drugs, cosmetics, insecticides, fungicides, rodenticides, and tobacco products. Contact the appropriate agency for specific requirements.

SI units may appear first. A converted value must not overstate the net contents.

RULE OF 1000 FOR SI UNITS: Numerical values should be between 1 and 1000 (e.g., 500 g not 0.5 kg; 1.96 kg not 1960 g; 750 ml not 0.75 l; 750 mm or 75 cm not 0.75 meters).

PRINCIPAL DISPLAY PANEL AREA DETERMINATION

This area, not the area of the label, determines the minimum height requirement of the declaration of quantity.

1. A rectangular package where an entire side is the principal display panel - height times width.
2. A cylindrical or nearly cylindrical container - 40% of the product of the height times the circumference.
3. Other shaped containers - 40% of the entire square area of the container.
4. Obvious principal display panels - the actual square area of the panel.

Determination does not include tops, bottoms or flanges of cans, or shoulders, necks of bottles or jars.

NUMBERS AND LETTERS IN THE DECLARATION OF QUANTITY

Square Area of Panel	Minimum Height (For Printer)	Minimum Height (Blown or Molded)
32 cm² (5 in ²) or less	1.6 mm (1/16 in)	3.2 mm (1/8 in)
Over 32 cm² (5 in ²) to 161 cm² (25 in ²)	3.2 mm (1/8 in)	4.8 mm (3/16 in)
Over 161 cm² (25 in ²) to 645 cm² (100 in ²)	4.8 mm (3/16 in)	6.4 mm (1/4 in)
Over 645 cm² (100 in ²) to 2581 cm² (400 in ²)	6.4 mm (1/4 in)	7.9 mm (5/16 in)
Over 281 CM² (400 in ²)	12.7 mm (1/2 in)	14.3 mm (9/16 in)

PROPORTION: Letters of a declaration of quantity must not be more than 3 times as high as they are wide. Except for blown or molded declarations, the style of type or lettering shall be bold, clear, and conspicuous against its background.

A FREE AREA equal to at least the height of the lettering is required above and below the quantity declaration. At each end, the free area must be equal to twice the width of the capital “N” of the style and size of type used.

DECIMAL FRACTIONS may be carried to three places. SI unit declarations may contain only decimal fractions. Decimal fractions are permitted in inch-pound declarations.

COMMON FRACTION use is restricted to inch-pound units and is normally limited to halves, quarters, eighths, sixteenths, and thirty-seconds to the lowest term. Each number of a fraction in a declaration of quantity must be at least 1/2 the minimum height.

ABBREVIATIONS: **Inch-pound** - avdp, lb, oz, gal, qt, pt, yd, ft, in, sq, and cu
SI units - kg, g, mg, L or l, mL or ml, m, cm, mm, m², dm², cm², m³, dm³, and cm³
 Both systems may use - wt, fl, liq, dr, dia, pc, ea, and ct
 Periods and plural forms are not recommended for inch-pound units and are prohibited for metric.

WEIGHT DECLARATIONS: The words “net mass” or “net weight” are optional.

Less than 1 kilogram - must be stated in grams, decimals of a gram or milligrams.

1 kilogram or more - kilograms and decimals of a kilogram up to three places.

Less than 1 pound - must be stated as ounces or fraction of ounces.

1 pound or more - in pounds, with remainder in fractions of pounds, or ounces and fractions of ounces.

FLUID DECLARATIONS: The words “net” or “net contents” are optional. “Fluid” is required with ounces (e.g., 12 fl oz) unless the meaning is obvious by association (e.g., 1 pint 4 ounces).

Less than 1 liter - must be stated in milliliters.

1 liter or more - liters and decimal fractions of a liter up to three places.

Less than 1 pint - fluid ounces and fractions of an ounce.

1 pint to less than 1 gallon - largest whole unit (quarts or pints as appropriate), with remainder in ounces, fractions of a pint or a quart. (2 quarts may be stated as 1/2 gallon.)

1 gallon or more - gallons and fractions of a gallon.

SUPPLEMENTARY DECLARATIONS: Non-required quantity declarations are not permitted on the principal display panel.

QUALIFYING STATEMENTS: Quantity declarations containing qualifying words are not permitted. Words such as “minimum”, “approximately”, “when packed”, or any words that tend to exaggerate are considered qualifying words.

MULTI-UNIT, COMBINATION OR VARIETY PACKAGES: Consult the California Code of Regulations, Title 4, for specific requirements.

NONCONSUMER PACKAGES

NONCONSUMER PACKAGE shall mean any package other than a consumer package, and particularly a package intended solely for industrial or institutional use or for wholesale distribution.

BASIC REQUIREMENTS: A declaration of identity of the commodity, the name, address, and zip code of the packer, and a declaration of quantity shall be prominently and conspicuously displayed on the outside of the package.

DECLARATION OF QUANTITY shall be in the largest whole unit. SI and inch-pound units may be used, individually or together.

EXEMPTIONS FROM LABELING REQUIREMENTS

BULK FOODS REPACKED AND SOLD BY RETAILER - FOOD AND DRUG ADMINISTRATION (FDA) RETAIL FOOD LABELING EXEMPTIONS

Federal Food and Drug regulations specify that foods received by retailers in bulk quantities which are repackaged by the retailer and displayed for sale on the premises are exempt from:

1. Net content statements, if it is clearly evident that they are to be weighed, measured, or counted, either within view of the customer or in compliance with the customer's order. [21 CFR § 1.24(a)(I)]
2. Identity statements, if a placard, counter card, or the master container bears the identity statement. [21 CFR § 101.100(b)(3)]
3. Responsibility statements. [21 CFR § 101.100(b)(I)]

COMMODITIES PACKED AND SOLD ON THE SAME PREMISES

A package sold on the same premises where it was packed does not have to have a declaration of responsibility: i.e., name and address of the manufacturer, packer, or distributor. [CCR § 5] It still must have the declarations of Quantity and Identity. [CCR §§ 3, 4, 6, 7]

RANDOM WEIGHT PACKAGES
LABEL REQUIREMENTS AND EXEMPTIONS

REQUIREMENTS

Random Weight Packages, are packages from a lot having identical labels EXCEPT for the net weight. An example would be packages of bricks of cheese labeled: Extra Sharp Cheddar, Audry Cheese Company, Sell by April 25 '01, each package having a different net weight ranging from 0.94 to 1.64 lb.

As of January 1, 2000 a random weight package **must bear** a label conspicuously declaring:

- (1) the net weight,
- (2) unit price, and
- (3) the total price.

[CCR 6.16]

EXEMPTIONS

- 1. If the random weight package is packaged for sale at another location, the unit price and total price may be omitted **providing they are on the package at the time of sale.** [CCR § 6.16]
- 2. Random weight packages are not required to be labeled with the net weight if they are “sold intact and intended to be weighed or measured at the time of sale.” For this exemption, no quantities can be represented on the package prior to being weighed or measured at the time of sale. [CCR § 11.26]
- 3. A random weight package, having a conspicuous label stating:

- net weight
- price per pound
- total sales price

is exempt from the requirements for:

- SI (Metric) quantity labeling
- type size
- placement in the lower 30% of the principal display panel
- free area

[CCR § 11.1]

SPECIFIC COMMODITY REQUIREMENTS

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ANIMAL BEDDING, SHAVINGS

Consumer packages of animal bedding, except for bales of straw, must be labeled with all information required by the Fair Packaging and Labeling Act.

The quantity is to be stated in terms of the largest whole unit of dry volume in both inch-pound and SI (metric) units.

Inch-pound units to be used are the cubic inch, cubic foot, or cubic yard

SI units are the cubic meter, liter, or milliliter

If the package contains compressed material, the label must include the quantity in the compressed state and **the usable quantity that can be recovered.**

TEST PROCEDURE: Animal Bedding, page 235

AUTOMOBILE AND APPLIANCE PARTS

When sold over the counter, parts are not subject to packaging and labeling requirements.

The basic requirement for packaged items is count. If count alone is not fully informative, it must be combined with the weight, measure, or size of the item.

TEST PROCEDURES: Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, and Handbook 133, page 54, 4.3

BANDAGES, ELASTIC OR GAUZE

Roll type elastic or gauze bandages are bidimensional commodities. The content declaration shall include width and length, and in some cases, the area (CCR § 6.9).

Both width and length are measured without tension or stretching, and to be correct each dimension must meet the content statement independently of the other. Qualified statements such as “stretched” are not acceptable (CCR § 6.14).

A supplemental quantity statement is allowed, but it may not appear on the principal display panel (CCR § 6.12).

TEST PROCEDURE: Bidimensional Flat or Roll Commodities, page 241

BERRIES, FRESH

California regulations permit the following methods of sale for fresh berries:

1. By the basket in prescribed standard sizes, with equivalent weights.
2. By net weight in containers, with the net weight determined at the time of sale.
3. By net weight from bulk, no basket or container, with the net weight determined at the time of sale.
4. By standard or random pack containers, fully labeled including net weight.

METHOD OF SALE EXAMPLES:

<u>Retail Method Sale</u>	<u>Consumer Labeling Required</u>	<u>Flat Quantity Labeling Required</u>
Baskets in Standard Volume Sizes (must also meet weight equivalency)	None, CCR 4500 specifically exempts Berries in Standard Volume Sizes from labeling	12 dry pint baskets (weight statement would be permitted in addition)
Baskets, to be weighed at time of sale	None, CCR 1(d)	12 baskets, or 12 random weight baskets, net wt x lbs x oz
Bulk sales, no containers	None, not a package	Net weight x lbs x oz
Standard or random pack containers	All labeling requirements (CCR 3, 5, and 6)	12 - x oz baskets, net weight x lbs x oz.

NOTE: All nonconsumer flats must meet the requirements of CCR 4, 5, and 6 or 7. Flats for retail sale must meet all consumer package labeling requirements.

TEST PROCEDURE: Net Weight, Handbook 133, page 10.

BUILDING BLOCKS, CONCRETE MASONRY

BUILDING BLOCKS:

The size designation used for the width, height, and length of structural concrete masonry is a nominal dimension, which is 3/8 inch less than the actual dimension.

This is in accord with the established product standard and trade custom that concrete masonry is sold according to the "Modular Masonry Unit;" that is a masonry unit whose actual dimensions are one mortar joint less than the modular dimension; e.g., the building block commonly referred to as 8 x 8 x 16 is according to standard actually, 7-5/8" x 7-5/8" x 15-5/8". The modular dimension is based on a given module, usually 8' in the case of concrete block masonry.

For inspection, the error should be determined from the minimum size for the particular standard dimension (nominal dimension) in question. This will be the nominal size minus 3/8 inch.

The industry tolerance of $\pm 1/8$ inch from the actual size (minimum size) could be considered the industry MAV. It has no legal status in determining compliance. To be acceptable, a lot must meet the requirements of the current sampling and testing regulations.

TEST PROCEDURE: Direct Measure

BULK SALES

CANDY, HEALTH FOODS, ETC.

When individually packaged or wrapped items are sold by weight from bulk displays, they must be sold by net weight **not** including the packages or wrapping, and the sales price must be a true extension of the advertised or posted price per pound. (B&P Code §§ 12023 and 12024.2)

TEST PROCEDURE: Net Weight, Handbook 133, page 10

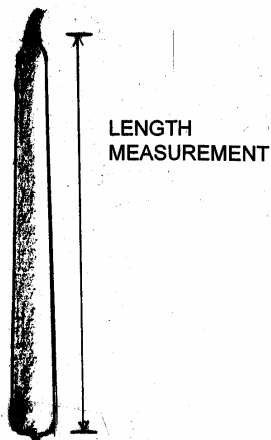
CANDLES

Tapered candles, either hand dipped or molded, and irregularly shaped candles are not required to be labeled with a diameter measurement. Requirements for content labeling are count and length, or count and height.

Decorative candles and uniformly shaped candles (e.g., plumbers, utility, emergency, and similar) are labeled with the length, diameter, and count.

The length of a candle is determined by measuring from the bottom of the wax to the top or shoulder of the wax exclusive of the wick. The small protrusion surrounding the wick at either end is not to be included unless it is determined to be a configuration of the candle.

TEST PROCEDURES: Direct Measure
Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.3



CHEESE, WAX COATING

FOOD AND DRUG ADMINISTRATION (FDA) RESPONSE

Wax coating on cheese (wholesale or retail) is tare - not to be included in net weight.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Washington DC 20204

MAR 20 1984

Carroll S. Brickenkamp, Ph.D.
Manager, Research and Development
Office of Weights and Measures
National Bureau of Standards
U.S. Department of Commerce
Washington, DC 20234

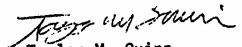
Dear Dr. Brickenkamp:

This is in response to your February 28 letter that requested our opinion on whether the wax coating on certain kinds of cheese should be considered part of the tare or part of the net weight. You pointed out that although the wax is not consumed, it may be an integral part of the manufacture of the cheese. Also, you stated that cheese is sold wholesale by a weight that includes the wax.

We are of the opinion that 21 CFR 101.105(g) requires that wax coatings on cheese always be considered part of the tare. This section states that the declaration of quantity of contents shall accurately reveal the quantity of food in the package exclusive of wrappers and other material packed therewith. Even when the wax is an integral part of the manufacture of the cheese, the wax itself is not derived from the curd of any type of milk. As a result, it would be inappropriate to consider the wax to be part of the food known as cheese. Also, most consumers would consider such wax inedible and would discard it. Under these circumstances, we believe that consumers would be misled by declarations of net weight including the wax coating. Further, you should be aware that our position on these wax coatings applies to wholesale as well as retail cheese packages. Both types of packages could be considered misbranded if the net weight declaration included the wax coating.

If we can be of further assistance, please let us know.

Sincerely yours,


Taylor M. Quinn
Associate Director for
Compliance
Bureau of Foods

FIRE STARTERS/FIRE STICKS

Only count is required as a quantity statement for **uniformly shaped fire starters and fire sticks** (CCR § 6.4). If more than one unit is to be used, the label should also state the number to be used, or indicate the number of starts. For example:

10 pieces, use 2 to light a fire

16 starters, lights 8 fires

TEST PROCEDURES: Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.3

Fire sticks, fat wood, pitch pine, or other small pieces of wood of varying thickness or sizes are to be labeled by cubic measure (CCR § 4531).

TEST PROCEDURE: Direct Measure

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FIREWOOD/WOOD FOR FUEL PURPOSES

Firewood/wood for fuel purposes, includes kindling, logs, boards, timbers, mill wood, pellets, pressed logs, chips, chunks, and any other type of wood or wood product used or intended to be used for campfires, or for heating in fireplaces or stoves, or for cooking.

A. Method of Sale

1. Wood, except for manufactured wood products:
 - a. When in quantities of 1/8 cord (16 cubic feet) or more, must be sold by the cord, fraction of the cord, or percentage of the cord.
 - b. When there is less than 1/8 cord, must be sold by the cubic foot or fraction of the cubic foot. Fraction of the ft³ includes cubic inches, in³.
2. Manufactured wood products: Wood for fuel purposes which has been processed and is no longer in the form of logs, boards, timbers, rounds, or split wood pieces.
 - a. Compressed products with any dimension greater than 6 inches are sold by net weight and count (e.g., pressed logs, etc.).
 - b. Compressed products with no dimension greater than 6 inches are sold by net weight (e.g., pellets, etc.).
 - c. Non-compressed products having no dimension greater than 6 inches are sold by the cubic foot or fraction of the cubic foot (including in³) (e.g., smoking chips, chunks and chips of wood used for flavoring).
3. Firewood **cannot** be sold or advertised using the terms face cord, truck load, rick, rack, unit, tier, bundle, or any other term not specified in CCR § 4531, Method of Sale. [CCR § 4530(f)]

B. Packaged

If the firewood is packaged prior to sale, each package must be labeled in full accord with the Fair Packaging and Labeling Act (B&P Code Chapter 6) and regulations including the statements of quantity, responsibility, and identity. Packaged includes boxes and containers, shrink-wrapped pallets, bags, bundles, shrink-wrapped pieces, tied pieces, racks, bins, or any other type of container holding a pre-measured amount. (CCR § 2.1)

C. Unpackaged

A sales invoice or delivery ticket must be given to the buyer whenever non-packaged wood is sold. The invoice or ticket must state the name and address of the seller, the date purchased, the quantity, and price of the quantity purchased. (CCR § 4532)

D. Identity

The required statement of identity may be simply firewood or split wood. The name of the species, group of origin (oak, pine, etc.), or type (hardwood or softwood) does not have to be stated. However, if there is a representation of the species, group or type, either written or oral, it must be in accord with CCR § 4534.

1. If a common name is stated, all of the wood must be of that species (e.g., White Oak, Jeffery Pine, Grand Fir, etc.).
2. If a group is stated, all of the wood must be of that group of origin (e.g., oak, pine, fir, etc.).
3. If hardwood or soft wood is stated, all wood must be the stated type **and** the common name (species) or group(s) of origin for any wood present must be stated.

If the identity is represented as both “hardwood” and “softwood” (or if the represented species and/or groups of origin include both hardwoods and softwoods), the percentage of hardwood and the percentage of softwood must be stated as well as the common name(s), or groups of origin.

E. Kindling

If kindling is included in the represented quantity and constitutes 10 percent or more of the quantity, the percentage must be stated. (CCR § 4533)

TEST PROCEDURE: Volumetric Test Procedure for Firewood: Bulk, page 245
Packaged, page 251

HARDWOOD/SOFTWOOD IDENTITY

California regulations differentiate between hardwoods and softwoods. The classification of common species is made by using a combination of trade custom, BTU heating values, and opinions from the California State Department of Forestry, California Energy Commission, US Forest Service, and University of California Agricultural Engineering Department. A good reference is the California Woodheat Handbook, 1982, publication number p500-82-047, by the California Energy Commission and the California Department of Forestry.

The table on the following page is only a guideline. In the event a legal determination is needed, as in a prosecution involving a misrepresentation of a softwood as a hardwood, an expert identification can be obtained from the US Department of Forestry, the California Department of Forestry, an industry forester, a college or university instructor, or other forest products expert.

**FOR USE AS A GUIDELINE ONLY - IN CASE OF VIOLATION, EXPERT
OPINION NEEDED FOR IDENTITY AND CLASSIFICATION**

COMMON WOODS RANKED ACCORDING TO BTU VALUE PER CORD

	(BTU millions)	(avg. rounded)
SOFTWOODS		
Cottonwood	15.8 - 16.8	16
Western Red Cedar	15.4 - 17.4	16
Aspen	17.0 - 18.0	18
Black Willow	17.5 - 18.6	18
Red Alder	18.4 - 19.5	19
Sugar Pine	17.3 - 19.6	18
Incense Cedar	17.8 - 20.1	19
Grand Fir	17.8 - 20.1	19
Coast Redwood	17.8 - 20.1	19
Red Fir	18.3 - 20.6	19
White Fir	18.8 - 21.1	20
Jeffery Pine	19.3 - 21.7	20
Ponderosa Pine	19.3 - 21.7	20
Sitka Spruce	19.3 - 21.7	20
Lodgepole Pine	19.7 - 22.3	21
<hr/>		
COULD BE CONSIDERED SOFT OR HARDWOOD, USUALLY SOFTWOOD		
Big Leaf Maple	21.4 - 22.7	22
Sycamore	21.9 - 23.3	23
Port Orford Cedar	20.7 - 23.4	22
<hr/>		
HARDWOODS		
Almond	22.3 - 23.7	23
Cherry	22.3 - 23.7	23
Elm	22.3 - 23.7	23
Magnolia	22.3 - 23.7	23
Western Hemlock	21.6 - 24.4	23
Chinquapin	23.2 - 24.7	24
Ash	24.5 - 26.0	25
Black Walnut	24.5 - 26.0	25
California Laurel	24.6 - 26.1	25
Western Juniper	23.4 - 26.4	25
Douglas Fir	23.5 - 26.5	25
Black Oak	25.8 - 27.4	27
Birch	25.9 - 27.5	27
Tan Oak	25.9 - 27.5	27
White Oak	26.4 - 28.0	27
Beech	28.6 - 30.4	30
Dogwood	28.6 - 30.4	30
Madrone	29.1 - 30.9	30
Black Locust	29.5 - 31.4	30
Eucalyptus	32.5 - 34.5	34
Live Oak	34.4 - 36.6	36

FLOWERS, DECORATIVE AND EDIBLE

DECORATIVE FLOWERS - either natural or artificial are sold individually by count, in bunches with the count stated or by the bunch without a count.

EDIBLE FLOWERS - packaged or un-packaged, are sold by count. Net weight is not required but may be included in the quantity statement.

TEST PROCEDURES: Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.3

GLUE STICKS

Packaged hot-melt glue sticks must be labeled with:

1. Count.
2. Actual diameter (not the gun size the stick fits).
3. Length.

TEST PROCEDURES: Direct Measure
Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.3

ICE CREAM, FROZEN YOGURT AND SIMILAR PRODUCTS

Ice cream and frozen yogurt may be sold by weight or measure.

1. When sold by weight, it must be net weight, excluding the carton or any wrapping. There is no specific weight relationship to volume due to variations in the specific gravity of differing types and flavors.
2. When sold by volume, the product must meet or exceed the stated volume regardless of any check weights.
3. When **not** packaged in advance of sale, it may be sold by a size designation such as “small,” “medium,” or “large.” However, if the size refers to a weight or measure (e.g., small = 8 oz or small - 1/2 pint), then the weight or measure must be correct and accurate.

TEST PROCEDURES: Net Weight, Handbook 133, page 10
Displacement, Handbook 133, page 41, 3.12

INSULATION

1. Loose-fill insulation is labeled and sold on the basis of coverage in square feet, the recommended thickness, the R value (insulation resistance), and net weight.
2. Batt and blanket insulation is labeled with the total square feet in the package, length, width, R value, and thickness. (NIST Handbook 130)

TEST PROCEDURES: Net Weight, Handbook 133, page 10
Direct Measure

LAVA ROCKS, BRIQUETTES

1. Natural, irregularly shaped lava rocks for the barbecue are required to state the coverage and the net weight. Any spacing instructions may appear on other than the principal display panel.
2. Manufactured briquettes shall be labeled with the count and coverage. Spacing instructions may appear on other than the principal display panel.
3. Coverage is checked by placing the product end-to-end.

TEST PROCEDURES: Net Weight, Handbook 133, page 10
Direct Measure
Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.4
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.3

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MEAT, POULTRY, FISH, SEAFOOD

1. Sale by Net Weight

With only the exceptions stated below (4), all meat, poultry, and fish must be advertised and sold by net weight. (B&P Code §12024.5)

- A. The net weight must be determined at the time of sale or the package must be marked with the net weight.
- B. It is illegal to sell or advertise by the serving, piece, box, or case without stating the net weight.

2. Door-to-Door Sales

The box or package must be marked with the actual selling price per pound as well as having all other required labeling. It is a violation to mark the box with a high price per pound then reduce the price without remarking the box with the true sales price. (B&P Code § 12024.55)

3. In Combination With Other Foods

Under federal policy, packages of meat and poultry may be sold in combination with other items (e.g., packages of gravy, sauce, or seasoning) providing the labeling clearly indicates that the purchaser is paying for both the meat or poultry and the other item. The net weight statement must show the total net weight of all the edible components and may state the individual net weights. Individual net weights are not required,

For consistency, similar packages put up by local markets should be accepted. (USDA, FSIS, Policy Memo 099, B&P Code §12613)

A nominal amount of garnish (parsley, etc.) may be negligible in weight. If the amount of garnish is large enough to increase the net weight, it should be treated as tare unless it is specifically stated in the identity.

4. Exceptions and Exemptions

A. Ready-to-Eat Foods (B&P Code § 12024.5)

The requirement that meat, poultry, or fish must be sold by weight does **not** apply to ready-to-eat foods that are:

- (1) sold for consumption on premises or
- (2) one of three or more different items (excluding condiments) comprising a ready-to-eat take out meal or
- (3) un-packaged ready-to-eat meat, poultry, or seafood which has been cooked or heated on the same premises as sold or
- (4) sandwiches made and sold on the same premises.

B. Small Packages

Packages of meat and meat products weighing less than one-half ounce do not require a quantity statement. (USDA/FSIS)

C. Fish, Seafood

The requirement that fish must be sold by net weight applies only to “fin fish and crustaceans, when sold for human consumption, and when not alive.” (B&P Code § 12024.5 and CCR § 4501)

- (1) **Live crustaceans:** lobster, crab, crayfish, etc., **and live fish having fins** may be sold by count, weight, or measure. Sale by weight is not required.
- (2) **Mollusks with shells**, abalone, oysters, clams, mussels, etc., and **other mollusks such as octopus, cuttlefish, and squid** are not covered by the sections requiring “sale by weight” for “fin fish and crustaceans.”

The following methods of sale for mollusks is recognized and recommended by the Food and Drug Administration and the National Conference on Weights and Measures:

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.

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.

Fresh Oysters, Clams, Mussels, or Other Mollusks Removed From the Shell - and placed in a container shall be sold by fluid volume. A maximum of 15 percent free liquid by weight is permitted.

Processed Clams, Mussels, Oysters, or Other Mollusks, on the Half Shell - (fresh or frozen) shall be sold by net weight excluding the net 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.

Canned (Heat-Processed) Mussels, Clams, Oysters, or Other Mollusks - shall be sold by net weight. A maximum of 41 percent free liquid by weight is permitted for canned oysters. (NIST Handbook 130)

There is no recommended method of sale for raw mollusks without shells: i.e., squid octopus, cuttlefish, sea cucumber, etc.

PADDED MAILING ENVELOPES

Padded mailing envelopes are required to be labeled with the usable dimensions of the envelope, which is the inside width and length when closed according to instructions.

So called "Nominal Dimensions" that are larger than the usable dimensions are not allowed.

TEST PROCEDURE: Direct Measure

PICKLES

Whole pickles from bulk or transparent packages of one or two pickles may be sold by count.

All other pickles (whole, sliced, diced, relish, etc.) are sold according to liquid measure. (NIST Handbook 130)

TEST PROCEDURES: Headspace (Titled "Mayonnaise"), Handbook 133, page 29, 3.5
Depth Gauge (Titled "Other"), Handbook 133, page 28, 3.4

POPSICLES, FROZEN NOVELTIES

Packages of popsicles and other frozen novelties such as ice cream sandwiches, juice bars, ice cream bars, ice cream cones, and frozen yogurt, are labeled by fluid measure. The fluid measure includes edible coatings, cookies, crackers, etc., but does not include sticks or other inedible parts.

When sold individually, a package containing one popsicle or other frozen novelty must have all labeling as required by the Fair Packaging and Labeling Act.

The required labeling for a multiunit package containing individual packages of individual popsicles or other frozen novelties varies according to the intended method of sale and the labeling of the individual packages.

1. Except as noted below*, when the individual packages are fully labeled for sale as individual packages, but are intended to be sold as part of the multiunit package, the outside of the multiunit package must be labeled with:
 - a. the number of individual units
 - b. the quantity of each individual unit
 - c. the total quantity of the entire package

Example: 10 ICE CREAM SANDWICHES
EACH 4 FL OZ (118 ml), TOTAL 1.25 QUART (1.18 L)

* NOTE: If the number of individual units and the labeling of each individual unit can be seen through the multiunit package, the multiunit package does not have to state the number and net quantity of the individual units.

2. When the individual packages are not labeled for sale as individual packages (or are unlabeled) **and** are not intended for individual sale, the multiunit package is only required to be labeled with the total quantity. Other information such as the number and quantity of individual units may be included, but is not required.

Example: ICE CREAM SANDWICHES, 1.25 QUART (1.18 L)

TEST PROCEDURE: Displacement (Titled "Ice Cream Novelties"), Handbook 133, page 41, 3.12

POTPOURRI

Potpourri sold from bulk, may be sold by net weight or by dry measure.

With the following exception, prepackaged potpourri must be labeled with the net weight.

If prepackaged in non-refillable decorative containers (e.g., decorative sachets, potpourri-stuffed animals, hearts, etc.), no declaration of weight or volume is required.

TEST PROCEDURES: Dry Measure
Net Weight

POULTRY, SALES PRACTICES

Poultry includes all fowl: chicken, turkey, goose, duck, squab, quail, game hen, etc.

1. With the exception of unpackaged ready-to-eat poultry, all poultry must be sold and advertised by net weight, and the sales price must be a true extension of the price per pound.
2. Poultry may be sold as a random weight lot (each package having a different net weight) or as a standard lot (all packages labeled with the same net weight) as appropriate.
3. To be eligible for the exemptions for random weight packages (see page 186), poultry, just as any other random pack commodity, must have the net weight, price per pound, and total sales price on the package.

All required information must be on the same label. CCR § 2.5 defines a label as affixed to, applied to, blown into, formed, molded into, embossed on, or appearing upon or adjacent to a package. If there is more than one label, all required information must appear on each label. (CCR §§ 2.7, 3.1 and 6.3)

4. When using a random weight label for poultry sold at varying prices according to other “special” conditions, the package is to be labeled with the highest price per pound, and the labeled sales price computed from that price.

PRODUCE IN CONTAINERS

Individual “open” containers of one quart or less of produce, or cellophane wrappers containing fresh fruit or fresh vegetables are exempt from the requirement for a declaration of identity. Except for berries in standard containers (page 191), **they are still required to have declarations of responsibility and quantity.**

The quantity statement must be in terms of net weight with the following exceptions:

1. If there is a size standard so that there is no variation in weight for individual items, count alone is acceptable.*
2. If the item is normally sold according to “the bunch”, count alone is acceptable.*

An open container is defined by the Federal Food and Drug Administration as a container of rigid or semi-rigid construction not closed by a lid, wrapper, or any other material except an uncolored transparent wrapper that does not obscure the contents.

* If the package contains six or less and the items are fully visible, the package does not need a statement of count. (CCR § 11.27)

RAWHIDE PET PRODUCTS

On December 10, 1985, Los Angeles County Officials, DMS representatives, and pet supply industry representatives met and agreed to the following guidelines.

Rawhide bones and similar items made from continuous sheets of hide rolled or formed into bone shapes or sticks, shall be labeled with length **and** count. The count statement may be omitted if there are six or less units in a package and the units are clearly visible through the packaging materials.

Rawhide chew sticks, which are generally much more uniform in size and manufactured from reconstituted particles of hide, shall be labeled with the net weight and count. The count statement may be omitted if there are six or less units in the package and all units are clearly visible to the customer through the packaging material.

Rawhide chips and pieces shall be sold by net weight.

CCR §§ 6.4, 6.4.1 and 11.27.

(DMS Memorandum dated January 2, 1986, Resolution of Labeling Violations for Rawhide Pet Products)

SEEDS INTENDED FOR PLANTING
PACKAGED IN ADVANCE OF SALE

Small packages (weighing less than 225 grams or 8 ounces) must be labeled according to the Fair Packaging and Labeling Act requirements with these exceptions:

1. The quantity statement is to be in the upper 30% of the principal display panel.
2. The terms of the quantity statement are as follows:
 - a. **Count** for seed tapes, preplanters and for coated, encapsulated, and pelletized seed.
 - b. The largest whole SI (metric) unit for other types of seeds in packages weighing up to 7 grams.
 - c. Both grams and ounces for other types of seeds in packages with weights from 7 grams up to but not including 225 grams or 8 ounces.

Larger packages are also labeled according to the Fair Packaging and Labeling Act requirements. The method of stating the quantity is based on trade practice. Generally, this is weight for common seeds and count for coated, encapsulated, pelletized, or hybrid seeds.

TEST PROCEDURES: Net Weight, Handbook 133, page 10
Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.3
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.2

SHOE POLISH AND WAX

Liquid shoe polish or wax is labeled in terms of liquid measure.

Paste or cream polish or wax is labeled by net weight.

(CCR § 6.4)

TEST PROCEDURES: Net Weight, Handbook 133, page 10
Direct Measure, Handbook 133, page 28, 3.3
Gravimetric, Handbook 133, page 24
Depth Gauge (Titled "Other"), Handbook 133, page 28, 3.4
Headspace (Titled "Mayonnaise"), Handbook 133, page 29, 3.5

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TEXTILES-ORNAMENTATION

DIMENSIONS OF IRREGULAR SHAPES

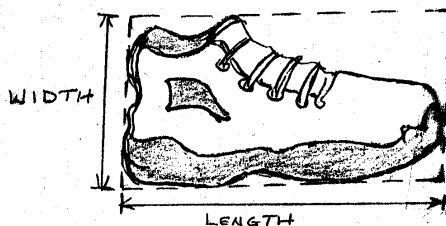
A. Ornamentation

The width or length of ornamentation such as fringe, scallops, decorative hems, bindings, etc., is included in the required length and width quantity declarations. The ornamentation is part of the usable length and width of the item. (The consumer does not want to purchase a bedspread only to find the fringe drags on the floor.)

For value comparison, a separate declaration stating the width or length of ornamentation is permitted (but not required) in conjunction with the required quantity statement.

B. Irregular Shapes

The length and width dimensions for irregularly shaped textiles (usually novelty or whimsically shaped mats and rugs) are the dimensions of a rectangle that would tightly enclose the item.



TEST PROCEDURES: Textiles, page 269
Bidimensional Irregular Commodities
Weight, page 239
Template, page 240

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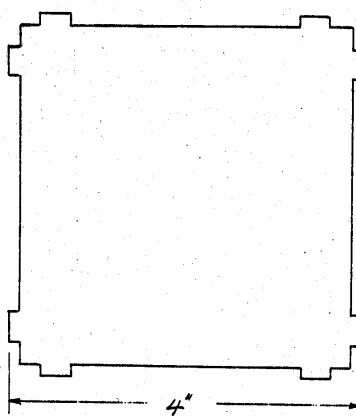
TILE, CERAMIC

Containers of tile must state the count, width, length (if different from width), and the thickness.

The quantity statement must also state the total area covered with the minimum possible spacing or with a stated grout width.

“Nominal tile sizes” (trade designation or whole number rounding of metric sizes) may be included on the carton as a shape or size identification so long as this does not mislead or confuse a buyer. Prevention of such confusion will normally require a size statement in addition to the “nominal” designation and total coverage. The product must meet all quantity statements (thickness, length, width and area).

Tile With Spacing Lugs

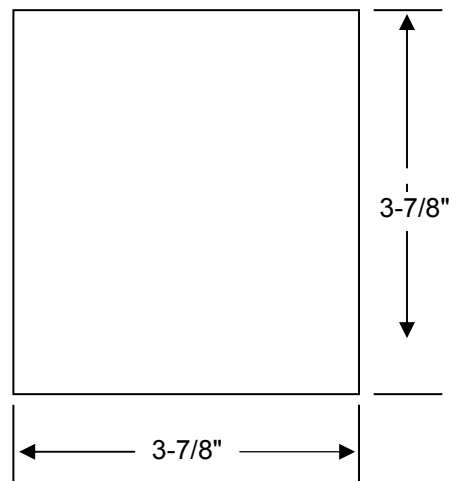


Nominal Size - 4 inches by 4 inches (includes lugs)

Actual Size - 4 inches by 4 inches

Total coverage need not specify grout width if it is no wider than that determined by the lugs.

Square or Rectangular Tile

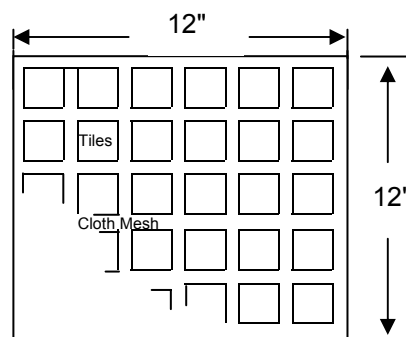


Nominal Size - 4 inches by 4 inches

Actual Size - 3-7/8 inches by 3-7/8 inches

Total coverage must specify any grout widths necessary or must state the area without spacing.

Tiles Attached to Cloth Mesh



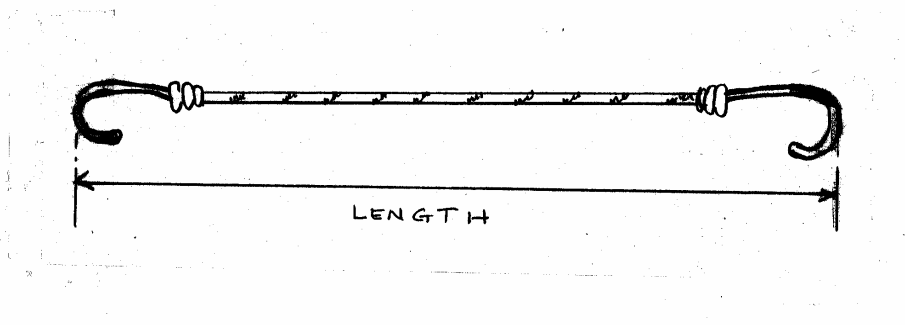
Total coverage includes a grout spacing along the outer edge. In this case, the grout space is defined by the tile spacing on the mesh and need not be additionally specified.

TEST PROCEDURE: Direct Measure

TIE CORDS, ELASTIC (BUNGEE™) CORDS

Length is measured by laying out the cord in a straight line without tension. Length includes the hooks or fasteners on the ends.

Packages must be labeled with the length and count. (Count may be omitted if the package contains six or less and the individual cords are fully visible.)



TORTILLAS

The quantity statement for tortillas may be stated in one of two ways:

1. Net Weight.
2. Net Weight **and** Count.

Count alone is not fully informative and is not an acceptable quantity statement.

(CCR § 6.4 and 6.4.1)

TEST PROCEDURES: Net Weight, Handbook 133, page 14
Packages Labeled by Count of 51 or more, Handbook 133, page 54, 4.3
Packages Labeled by Count of 50 or less, Handbook 133, page 54, 4.2

WHOLESALE (NONCONSUMER) LABEL REQUIREMENTS

A nonconsumer (or wholesale) package must have the identity, responsibility, and quantity declarations on the outside of the package. (CCR §§ 4, 5 and 7)

Either the SI (metric) or the inch-pound system, or both, may be used for the quantity declaration. (Federal law may restrict the use of only the SI system for some commodities.) (CCR § 7.1)

Unless the nonconsumer package is for sale to retail consumers, it does not have to conform to consumer package requirements for the location, free area, parallel placement, letter size, and proportion of the net quantity statement.

All required package information shall be “definitely and clearly stated thereon in the English language.” (CCR § 9.1)

WHOLESALE PACKAGES SOLD AT RETAIL

If a nonconsumer or wholesale package is for sale at a retail outlet for consumption or use by individuals, it is considered to be a consumer package and must meet all consumer package labeling requirements. (CCR § 2.2)

WIPING CLOTHS, RAGS

When sold by count, the label shall state the number of units and the width and length of each unit.

When sold by weight, the labeled weight shall be the net weight regardless of any industry or trade practice.

(B&P Code § 12023 and 12603; CCR § 6.4.1 and 7.3)

WOOD, HARDWOOD

At **retail**, hardwood lumber may be sold according to nominal dimensions provided that either the table of “Minimum Surfaced Sizes for Kiln Dried Hardwood Lumber” or the actual dimensions are prominently displayed. The term “Nominal” or “Nom” is used in conjunction with any representation of a nominal dimension.

The use of nominal dimensions does not apply to flooring, molding, or preformed products.

MINIMUM SURFACED SIZES FOR COMMON STOCK WIDTHS OF KILN DRIED HARDWOOD LUMBER		
SI UNITS FOR THICKNESS AND WIDTH	THICKNESS AND WIDTH IN INCHES	
MINIMUM SIZES IN MILLIMETERS	NOMINAL SIZES	MINIMUM SIZES IN INCHES
38 x 89	2 x 4	1-1/2 x 3-1/2
38 x 140	2 x 6	1-1/2 x 5-1/2
38 x 184	2 x 8	1-1/2 x 7-1/4
38 x 235	2 x 10	1-1/2 x 9-1/4
38 x 286	2 x 12	1-1/2 x 11-1/4
19 x 19	1 x 1	3/4 x 3/4
19 x 38	1 x 2	3/4 x 1-1/2
19 x 63	1 x 3	3/4 x 2-1/2
19 x 89	1 x 4	3/4 x 3-1/2
19 x 140	1 x 6	3/4 x 5-1/2
19 x 184	1 x 8	3/4 x 7-1/4
19 x 235	1 x 10	3/4 x 9-1/4
19 x 286	1 x 12	3/4 x 11-1/4

Additional stock sizes are 1-1/4 inch (1 in surfaced) and 1-1/2 in (3/16 surfaced).

Quantity representations are to be one of the following:

- a. Linear measure when surfaced width and thickness are stated.
- b. Count when length, surfaced width, and thickness are stated.
- c. Surface measure (square feet) when thickness is stated.

(National Institute of Standards and Technology Handbook 130)

Wholesale hardwood is generally sold by net board footage.

A board foot is one foot long, one foot wide, and one inch thick or its equivalent.

See Hardwood Test Procedure, page 261, to calculate board feet.

WOOD, SOFTWOOD

Softwood lumber is sold according to nominal or designated sizes representing a standard width and thickness. The nominal size is greater than the actual width and thickness.

The actual thickness, for **dressed softwood boards, dimension lumber, and timbers** must equal or exceed the minimum size for the nominal size as stated in the table on the following page.

If the actual dimension of the lumber does not meet the minimum size, it cannot be sold according to nominal dimensions. It must be advertised, invoiced, and sold using only the actual dimension. (DMS Notice, QC-96-1)

The actual thickness for **rough softwood boards, dimension lumber, and timbers** must be 1/8 inch or greater than the corresponding minimum dressed thickness listed in the table.

EXAMPLE: A lot of 8-foot long rough, dry cedar lumber is advertised 4" x 6" x 8'.

Using the current Sampling and Testing Plan, the length of the pieces of lumber must average 8 feet with no more than the number allowed exceeding the Maximum Allowable Variation. **Nominal dimensions are not used for the length.**

Using the table, the minimum thickness for dressed, dry 4-inch dimension lumber is 3-1/2 inch, and for 6 inch is 5-1/2 inch. Since the lumber is rough, 1/8 is added to these minimums. The measurements used for testing for compliance are 3-5/8 x 5-5/8.

DEFINITIONS:

Dry Lumber - Having maximum moisture content of 19% or less.

Green lumber - Having a moisture content greater than 19%.

Dressed Lumber - Has been surfaced to attain smoothness on one or more sides or edge.

Rough Lumber - Has not been dressed (surfaced) but has been sawed, edged and trimmed to the extent of showing saw or manufacturing marks.

Boards - Less than nominal 2-inch thick and of nominal 2-inch or greater in width.

Dimension - From nominal 2-inch thick up to but not including nominal 5-inch thick wood with nominal 2-inch or greater width.

Timbers - Nominal 5-inch or greater in the smallest dimension.

(NIST Handbook 130 and VPS 20-94)

TEST PROCEDURE: Direct Measure

NOMINAL AND MINIMUM-DRESSED SIZES OF SOFTWOOD BOARDS, DIMENSION, AND TIMBERS										
ITEM	THICKNESS					FACE WIDTHS				
	NOMINAL INCH	MINIMUM DRESSED				NOMINAL INCH	MINIMUM DRESSED			
		DRY		GREEN			DRY		GREEN	
		INCH	mm	INCH	mm		INCH	mm	INCH	mm
Boards						2	1-1/2	38	1-9/16	40
						3	2-1/2	64	2-9/16	65
						4	3-1/2	89	3-9/16	90
						5	4-1/2	114	4-5/8	117
	1	3/4	19	25/32	2	6	5-1/2	140	5-5/8	143
	1-1/4	1	25	1-1/32	26	7	6-1/2	165	6-5/8	168
	1-1/2	1-1/4	32	1-9/32	33	8	7-1/4	184	7-1/2	190
						9	8-1/4	210	8-1/2	216
						10	9-1/4	235	9-1/2	241
						11	10-1/4	260	10-1/2	267
						12	11-1/4	286	11-1/2	292
						14	13-1/4	337	13-1/2	343
						16	15-1/4	387	15-1/2	394
Dimension						2	1	38	1-9/16	40
						3	2-1/2	64	2-9/16	65
	2	1-1/2	38	1-9/16	40	4	3-1/2	89	3-9/16	90
	2-1/2	2	51	2-1/16	52	5	4-1/2	114	4-5/8	117
	3	2-1/2	64	2-9/16	65	6	5-1/2	140	5-5/8	143
	3-1/2	3	76	3-1/16	78	8	7-1/4	184	7-1/2	190
	4	3-1/2	89	3-9/16	90	10	9-1/4	235	9-1/2	241
	4-1/2	4	102	4-1/16	103	12	11-1/4	286	11-1/2	292
						14	13-1/4	337	13-1/2	343
					16	15-1/4	387	15-1/2	394	
Timbers	5 & THICKER	1/2 OFF	13 OFF	1/2 OFF	13 OFF	5 & WIDER	1/2 OFF	13 OFF	1/2 OFF	13 OFF

- See NIST, Voluntary Product Standard PS 20-94, American Softwood Lumber Standard for nominal and minimum sizes of finish, flooring, ceiling, partition, stepping, siding, shiplap, centermatch, dressed and matched, and worked lumber (factory flooring, heavy roofing, decking, and sheet piling).

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**TEST
PROCEDURES**

SAFETY WARNING

CHEMICALS

1. Prior training is mandatory before testing of chemicals. The inspector must have a thorough knowledge of safety and test procedures.
2. Before testing any chemical, read and thoroughly understand all safety warnings on the label.
3. If you are unsure, call a qualified official with the proper authority to give guidance before you begin testing.

MATERIAL SAFETY DATA SHEETS (MSDS)

MSDS are provided by the manufacturer of a product to identify the product's basic characteristics and hazardous information. MSDS typically provide information pertaining to the characteristics of a product such as hazardous ingredients, physical data, fire and explosion hazard information, fire hazard information, reactivity data, spill or leak procedures, special protection information, special precautions, toxicological information, and other relevant information. MSDS can be obtained from the manufacturer of the product. As new information is discovered concerning the properties of a product and the effects of various levels of exposure to it, MSDS can change. It is recommended that updated versions of the MSDS be obtained periodically to ensure that information is current. For further information on MSDS, contact your local OSHA office.

GENERAL TEST PROCEDURES

PACKAGES LABELED BY:

Page and/or
Section Number

WEIGHT

Drained Weight	HB 133, pg. 20, 2.5
Net Weight, Tare Procedure (Net Weight = Gross Weight - Tare Weight)	HB 133, pg. 14

LIQUID VOLUME

Capacity Measure	HB 133, pg. 30, 3.6
Depth Gage (Titled "Other")	HB 133, pg. 28, 3.4
Direct Measure	HB 133, pg. 28, 3.3
Displacement (Titled "Solids or Semisolids")	HB 133, pg. 41, 3.12
Gravimetric, Weight of Known Volume	HB 133, pg. 24
Headspace (Titled "Mayonnaise")	HB 133, pg. 29, 3.5
Pycnometer, Density Cup (Titled "Very Viscous Materials")	HB 133, pg. 37, 3.9

LINEAR OR SQUARE (AREA MEASURE)

Bidimensional Flat or Roll Commodities	QC Manual, 241
Bidimensional Irregular Commodities, Weight	QC Manual, 239
Bidimensional Irregular Commodities, Template	QC Manual, 240
Gravimetric	HB 133, pg. 62, 4.8

COUNT

Labeled 51 or More Units per Package, Weight	HB 133, pg. 54, 4.3
Labeled 50 or Fewer Units per Package	HB 133, pg. 53, 4.2

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COMMODITY - TEST PROCEDURE INDEX

<u>Product</u>	<u>Procedure(s)</u>	<u>Page and/or Section Number</u>
Aluminum Foil	Bidimensional, Flat, Roll	QC Manual, 241
Animal Bedding	Animal Bedding	QC Manual, 235
Aerosol Commodities	Aerosol Packages	HB 133, pg. 13
Asphalt Patching Compound	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise")	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5
Baler Twine	Procedure for Length	HB 133, pg. 64, 4.9
Bandages, Elastic, Roll Type	Bidimensional, Flat, Roll	QC Manual, 241
Beer	Beer	QC Manual, 237
Blankets	Textiles	QC Manual, 269 HB133, pg. 62, 4.8
Borax	Borax	HB 133, pg. 19, 2.4
Bungee™ Cords	Direct Measure	QC Manual, 217
Butter	Net Weight	HB 133, pg. 14
Candles	Candles	QC Manual, 193
Carbonated Beverages, Nonalcoholic (inc. water)	Gravimetric Carbonated Beverages	HB 133, pg. 25, 3.2 QC Manual, 243
Caulking	Measure	HB 133, pg. 37, 3.9 QC Manual, 244
Chitterlings	Drained Weight, Frozen Foods	HB 133, pg. 21, 2.6
Coffee, Canned	Canned Coffee	HB 133, pg. 14
Compressed Gas, Cylinders	Compressed Gas	HB 133, pg. 46, 3.14
Cottage Cheese	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Net Weight	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 14
Crabmeat, Frozen	Drained Weight, Frozen Foods	HB 133, pg. 21, 2.6

<u>Product</u>	<u>Procedure(s)</u>	<u>Page and/or Section Number</u>
Detergents & Soaps, Liquid	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25
Fertilizer	Net Weight	HB 133, pg. 14
Firewood	Firewood Bulk Firewood, Containers	QC Manual, 245 QC Manual, 251
Frozen Fish & Seafood Shrimp, Frozen Block Crab, Frozen Canned	Glazed Raw Seafood & Fish Drained Weight, Frozen Food Drained Weight, Frozen Food	HB 133, pg. 22, 2.7 HB 133, pg. 21, 2.6 HB 133, pg. 21, 2.6
Frozen Foods	Drained Weight of	HB 133, pg. 21, 2.6
Frozen Beverages (juice, etc.)	Ice Cream Novelties Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise")	HB 133, pg. 41, 3.12 HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5
Gift Wrapping	Bidimensional, Flat, Roll	QC Manual, 241
Ice Cream	Displacement (Solids or Semisolid)	HB 133, pg. 42, 3.12
Ice Cream, Hand Pack	Net Weight Ice Cream Novelties	HB 133, pg. 14 HB 133, pg. 41, 3.12
Ice Cream Bars, Sandwiches	Ice Cream Novelties	HB 133, pg. 41, 3.12
Landscape Materials Bark, Mulch, Gravel, Rock, Etc.	Mulch and Soil	HB 133, pg. 40, 3.11
Lotions, Liquid	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25
Liquids, Thick	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25

<u>Product</u>	<u>Procedure(s)</u>	<u>Page and/or Section Number</u>
Liquor, Hard	Liquor	QC Manual, 255
Lumber, Board Foot	Lumber, Hardwood	QC Manual, 261
Margarine	Net Weight	HB 133, pg. 14
Mayonnaise	Headspace (Titled "Mayonnaise")	HB 133, pg. 29, 3.5
Milk	Gravimetric	HB 133, pg. 25, 3.2
Mulch	Mulch and Soil	HB 133, pg. 40, 3.11
Multi-Unit Packages	Multi-Unit	QC Manual, 262
Oil, Edible or Lubricating	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25, 3.2
Olives, Black or Cooked	Drained Weight	HB 133, pg. 20, 2.5
Oysters, Fresh	Fresh Oysters, Volume	HB 133, pg. 45, 3.13
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Paper, Sanitary Products	Sanitary Paper Products	HB 133, pg. 57, 4.5
Paste	Volume, Very Viscous Materials	HB 133, pg. 37, 3.9
Patching Compounds	Volume, Very Viscous Materials	HB 133, pg. 37, 3.9
Peat Moss	Dry Measure, Peat Moss	HB 133, pg. 38, 3.10
Pet Foods, Dry	Flour & Dry Pet Foods	HB 133, pg. 14

<u>Product</u>	<u>Procedure(s)</u>	<u>Page and/or Section Number</u>
Petroleum Products	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25
Plastic, other than polyethylene	Bidimensional Commodities Flat or Roll Gravimetric	QC Manual, 241 HB 133, pg. 62, 4.8
Plywood, Particle Board	Plywood	QC Manual, 263
Polyethylene Sheeting Bags, Tubing, etc.	Polyethylene Polyethylene	HB 133, pg. 59, 4.7 QC Manual, 265
Popsicles	Ice Cream Novelties	HB 133, pg. 41, 3.12
Pots, Cooking	Goods Labeled by Capacity	HB 133, pg. 30, 3.6
Potting Soil	Dry Measure, Peat Moss Animal Bedding, etc.	HB 133, pg. 40, 3.11 QC Manual, 235
Roof Patch, Cement	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise")	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5
Salad Dressing	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise")	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5
Shavings	Animal Bedding, etc.	QC Manual, 235
Shampoo, Conditioners	Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25
Shoelaces	Shoelaces	QC Manual, 267
Shrimp, IQF, (Individually Quick Frozen)	Glazed Raw Seafood & Fish	HB 133, pg. 22
Shrimp, Frozen Block	Drained Weight, Frozen Food	HB 133, pg. 21, 2.6

<u>Product</u>	<u>Procedure(s)</u>	<u>Page and/or Section Number</u>
Sleeping Bags	Textiles	QC Manual, 269
Soup	Net Weight Gravimetric Depth Gauge (Titled "Other") Headspace (Titled "Mayonnaise")	HB 133, pg. 14 HB 133, pg. 25 HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5
Syrup	Depth Gauge (Title "Other") Headspace (Titled "Mayonnaise") Gravimetric	HB 133, pg. 28, 3.4 HB 133, pg. 29, 3.5 HB 133, pg. 25
Textiles	Textiles	QC Manual, 269
Tile, Ceramic	Direct Measure	QC Manual, 215
Tubing, Flexible	Tubing	QC Manual, 271
Turkey, Whole Frozen	Turkey	QC Manual, 273
Tofu	Drained Weight	HB 133, pg. 20, 2.5
Toothpaste	Net Weight	HB 133, pg. 14
Yogurt	Net Weight Headspace (Titled "Mayonnaise")	HB 133, pg. 14 HB 133, pg. 29, 3.5
Wine	Wine	QC Manual, 275

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ANIMAL BEDDING, SHAVINGS,

AND GARDEN AMENDMENTS

Do **not** use this procedure when testing **Peat Moss, Soil** or **Mulch** (including all above ground dressings for decoration or moisture, weed, erosion, and temperature control).

Instead, use: Peat Moss, Method of Test, Handbook 133, page 38, Section 3.10, or Mulch or Soil, Method of Test, Handbook 133, page 40, Section 3.11.

NOTE: Peat Moss procedure, Handbook 133, may also be used for testing potting soil and garden amendments.

A. Equipment

1. Calibrated dry measure, or combination of measures, equal to the labeled contents. If possible, use no more than two measures to equal the labeled contents.

NOTE: The same measure may be used more than once.

2. Calibrated linear measure.
3. Straight edge(s).
4. Tarp or plastic sheet.
5. Bubble level.
6. Calculator (optional).

B. Procedure

1. Select sample packages. Each sample package must be opened and measured. There is no tare sample.
2. Cover a level area with the tarp and set up measure(s).
3. Open each sample package in turn and gently pour the contents into the measure. If the material is compacted or clumped, separate or sift it by hand as it is poured.
4. If the material overfills the measure(s), use a straight edge with a zigzag motion to level the top surface even with the top edge of the measure, allowing the overage to spill onto the tarp. Place the material from the tarp into a calibrated smaller measure and determine the value of the overage (i.e., plus error).

5. If the material from the package does not completely fill the measure (or the last measure, if more than one is being used), either one of two methods may be used to determine the shortage.
 - a. Using a straight edge, level the material in the measure taking care not to compact it. Measure from the top edge of the measure down to the level of the material in at least three different locations. Use the average of these three measurements to calculate the volume of the shortage.
 - b. If the material is uniform from package to package, use a small calibrated measure equal in volume to the unit of measure. Fill the small measure with previously measured material or material from another package from the lot. Add this to the measure holding the test material. Repeat until the measure containing the test material is completely full, keeping count of the number of small measures added. This number is the value of the shortage in units of measure.

Dry Measure Equivalents

- 1 dry pint = 1/2 dry quart / 33.6 cubic inches
- 1 dry quart = 2 dry pints / 67.2006 cubic inches
- 1 peck (pk.) = 8 dry quarts / 16 dry pints / 537.605 cubic inches
- 1 bushel (bu.) = 4 pecks / 32 dry quarts / 2,150.42 cubic inches / 1.2445 cubic ft.
- 1 cubic foot = 1728 cubic inches

BEER

VOLUMETRIC TEST PROCEDURE

A. Equipment

1. Calibrated glass graduates "To Contain" (See Special Note 2).
2. Thermometer -20°F to 120°F.
3. Defoaming agent; Hexanol, Octanol (Capryl Alcohol), or commercial anti-foam product.
4. Calculator (optional).

B. Special Notes

1. Beer has a reference temperature of 39.1°F.
2. "To Deliver" graduates may be used if a correction factor is known for the difference between "To Deliver" and "To Contain" graduates.
3. Add defoaming agent to can or bottle as the need arises.
4. Gravimetric testing of beer may be performed by using the procedure for establishing a weight per liquid volume.

C. Procedure

1. Select "To Contain" graduate for the volume of beer under test.
2. Wet graduate with beer and give a 10-second drain. This compensates for the retention in the bottle or can.
3. Pour a sample into wetted graduate giving the sample a 1 minute drain, record volume to be corrected (V_o). When testing cans, a hole should be made to allow for complete drainage.
4. Insert the thermometer in graduate until reading stabilizes, then read temperature.
5. Temperature correction factors for malt beverages can normally be disregarded if testing is performed between 35°F and 45°F.

6. Formula:

$$\text{Error} = V_o [0.0000625 (39.1 - T_o) + 1] - V_L$$

V_o = Observed volume

T_o = Actual temperature of beer in degrees Fahrenheit

V_L = Labeled volume

0.0000625 = Coefficient of expansion per degree Fahrenheit

D. Examples

1. Example 1:

(a) Observed volume is 11.75 fl oz

(b) Observed temperature is 76°F

(c) Labeled volume is 12 fl oz

(d) Utilizing the formula:

$$V_o = 11.75 \text{ fl oz}$$

$$T_o = 76^\circ\text{F}$$

$$V_L = 12 \text{ fl oz}$$

$$\text{Error} = 11.75 \text{ fl oz} [0.0000625 (39.1 - 76) + 1] - 12 \text{ fl oz} = -0.27 \text{ fl oz}$$

2. Example 2:

(a) Observed volume is 12.25 fl oz

(b) Observed temperature is 60°F

(c) Labeled volume is 12 fl oz

(d) Utilizing the formula:

$$V_o = 12.25 \text{ fl oz}$$

$$T_o = 60^\circ\text{F}$$

$$V_L = 12 \text{ fl oz}$$

$$\text{Error} = 12.25 \text{ fl oz} [0.0000625 (39.1 - 60) + 1] - 12 \text{ fl oz} = +0.23 \text{ fl oz}$$

BIDIMENSIONAL IRREGULAR COMMODITIES**WEIGHT METHOD****A. Equipment**

1. Paper of uniform thickness at least as large in area as the specimen to be measured.
2. An instrument for cutting the paper.
3. Balance accurate to 0.01 gram and weights when required.
4. Rule or tape graduated in millimeters.

B. Procedure

1. The piece of paper shall be placed flat on a smooth surface. The specimen shall be placed flat on the paper and the area of the specimen traced on the paper. The paper shall be cut to the shape of the specimen, weighed, and the weight recorded to the nearest 0.1 gram as W_1 . A rectangle consisting of more than half of the total area of the weighed paper shall be cut from the weighed paper. The paper rectangle shall be weighed and the weight recorded as W_2 . The dimensions of the paper rectangle shall be measured to the nearest millimeter by means of the graduated rule or tape, the area calculated by multiplying the width by the length and the value recorded to the nearest square centimeter as A .
2. Calculation. The area of the specimen shall be calculated as follows:

$$\text{Area, Square Centimeters} = \frac{W_1 \times A}{W_2}$$

W_1 = Weight of the specimen-shaped paper, grams

W_2 = Weight of the paper rectangle, grams

A = Area of the paper rectangle, square centimeters

3. The area of the rectangle should be recorded to the nearest square centimeter.

C. Reference: Federal Test Method Standard Number 311.

BIDIMENSIONAL IRREGULAR COMMODITIES

TEMPLATE METHOD

A. Equipment

A transparent, flexible template graduated in square centimeters. The template shall be large enough to cover the specimen completely.

B. Procedure

The specimen shall be placed on a smooth surface. The template shall be placed smoothly over the specimen. The area shall be determined by counting the number of square centimeters covering the surface of the specimen. Parts of the squares of the template not completely covered by the specimen shall be estimated and the value recorded to the nearest 0.5 square centimeters.

C. Reference: Federal Test Method Standard Number 311.

BIDIMENSIONAL FLAT OR ROLL COMMODITIES

A. Equipment

1. Calibrated linear measure.
2. Calculator (optional).

B. This procedure may be used to verify the width and length of most regularly shaped flat or roll type bidimensional commodity, e.g., tarps, tape, ribbon, bandages, food wrap, gift wrap, etc.

NOTE: There are specific test procedures for the following commodities: **Hardwood Lumber**, page 261; **Paper Towels, Tissue, Napkins, etc.** Handbook 133, page 57, 4.5; **Paper Plates**, Handbook 133, page, 57, 4.5; **Polyethylene Sheeting**, Handbook 133, page 59, 4.7; **Polyethylene Bags, Tubing, Other Plastics**, page 265; **Plywood**, page 263; and **Textiles**, page 269.

C. Procedure

1. Remove commodity from package, place on smooth surface.
2. Smooth out creases or wrinkles and secure in place. Do not apply any tension.
3. To determine the width:
 - a. For commodities labeled 10 feet or less in length, take three measurements across the width at locations approximately $1/4$, $1/2$, and $3/4$ along the length of the commodity and compute the average width.
 - b. For commodities labeled greater than 10 feet in length, take one additional width measurement, up to a maximum of 10 measurements, per every additional 10 feet, or portion thereof. The measurements should be evenly spaced at approximately equal intervals along the length. Width measurements should not be made across the ends of the commodity.
4. To determine the length:
 - a. For commodities labeled 2 inches or less in width, take one measurement along the length. The measurement should not be made along the edges. (If desired, more measurements may be taken and an average length calculated.)
 - b. For commodities labeled from 2 inches up to and including 2 feet in width, take at least 2 measurements and compute the average length. The measurements should be spaced at approximately equal intervals and not be made along the edges.

- c. For commodities labeled from 2 feet up to and including 5 feet, take at least 3 measurements spaced at approximately equal intervals across the width, and compute the average width. Measurements should not be made along the edges.
 - d. For commodities labeled 5 feet or wider, take 3 measurements plus one additional length measurement, up to a maximum of 10 measurements, per every additional 5 feet, or portion thereof, in labeled width.
5. To be in compliance, the width or average width must meet the stated width, **and** the length or average length must meet the stated length. Both must be correct independently of the other. A separate Package Inspection Report must be completed for each dimension tested.

CARBONATED BEVERAGES
(NONALCOHOLIC)

A. Equipment

Appropriate size test measure calibrated "To Deliver."

B. Procedure

1. Rinse test measure with water. Drain for 10 seconds after water comes to the drip stage.
2. Open each sample container immediately prior to pouring. Pour product into test measure. Give the container a 1 minute drain after the product comes to the drip stage.
3. Observe the quantity of the product immediately after the excess foam has died down. It is not necessary to use a defoaming agent if this occurs within approximately 30 seconds after pouring.
4. Record errors on the appropriate form.
5. Rinse the test measure with water and give a 10-second drain between measurements of sample containers.

C. General Information

Commodities requiring refrigeration to maintain freshness or retard spoilage are tested at 40°F; others at 68°F.

In order to completely drain the can, punch a hole in the can just below the top rim. Punch from the inside to the outside so that any remaining liquids will flow out of the can. This should be done before the container has been completely emptied (approximately 1/2 full).

NOTE: Carbonated beverages may also be tested gravimetrically, see procedure "Gravimetric," Handbook 133, page 25.

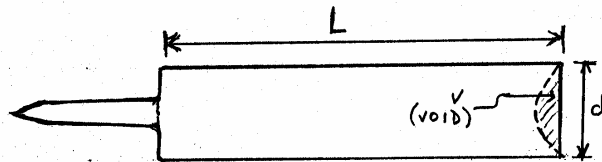
CAULKING AND SEALANTS IN TUBES (VOLUME)

A. Equipment

1. Calibrated measure (linear or caliper).
2. Calibrated graduate "To Deliver", density cup or pycnometer.
3. Slicker plate.
4. Calculator (optional).
5. Caulking gun (optional).

B. Special Note

Gravimetric testing of caulking and sealants may be performed by using the procedure for density cup or pycnometer, Handbook 133, page 37, 3-9.



C. Procedure

1. All tubes in the sample must be measured.
2. Carefully push the inner cap into the tube until it is in contact with the caulking material; this can be accomplished by using a caulking gun.
3. Determine the average length (L), and average diameter (d). A minimum of three measurements should be taken for each. Round each measurement up to the nearest 1/32 inch or 0.02 inch. Convert any fraction to a decimal.
4. Determine volume of the void (v). Using slicker plate and graduate, fill void with measured amount of water.
5. Calculate volume of tube contents (V) in cubic inches using:

$$V = [\pi (d^2 \div 4) L] - v$$

where $\pi = 3.1416$, $d =$ average internal diameter of tube
 $L =$ average length of tube $v =$ volume of void

Multiply result by 0.554 112 6 for fluid ounces, or by 16.387 06 for milliliters.

FIREWOOD - BULK

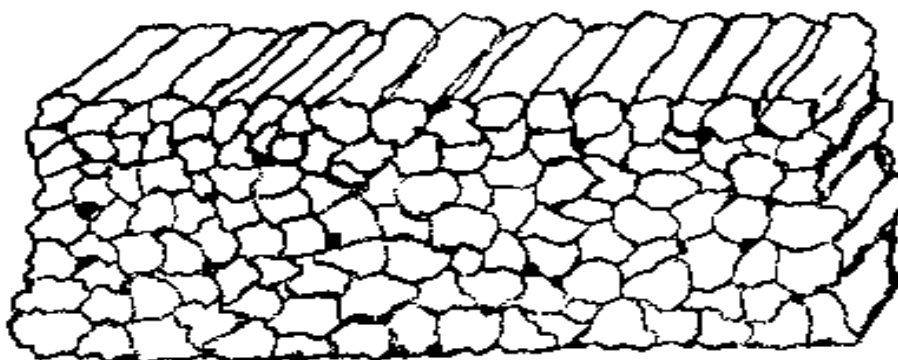
UNPACKAGED OR PACKAGES LABELED 4 CUBIC FEET OR MORE

A. Equipment

1. Calibrated linear measure.
2. Calculator.
3. Gloves (optional).

B. Special Notes

1. Testing firewood is more easily performed by two people.
2. Measurements are made in increments no greater than 1/8 inch. A measurement falling between increments is rounded up to the next higher increment.
3. Inspection is made after the firewood has been delivered and stacked in a geometrical shape that will simplify calculations (i.e., rectangular, triangular or a combination). The stack may need adjustment before measuring. Width measurements may be made during the stacking process.
4. Ranked and well-stowed means the pieces of wood are placed parallel to each other and touching so that air spaces are kept to a minimum.



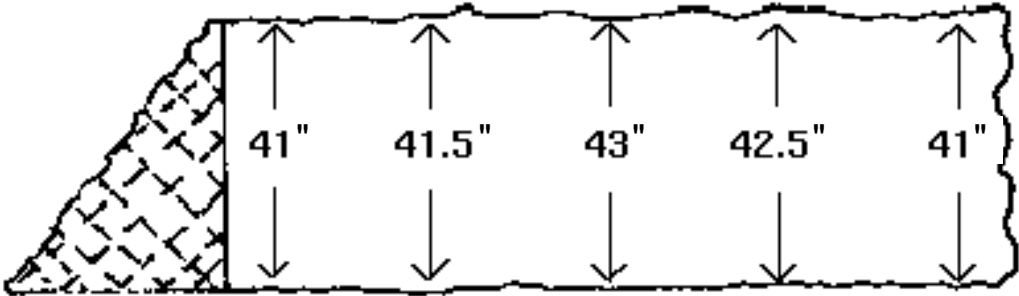
Cord of 128 cubic feet ranked and well-stowed.



Same cord of 128 cubic feet, not ranked and well-stowed. Shows overage!

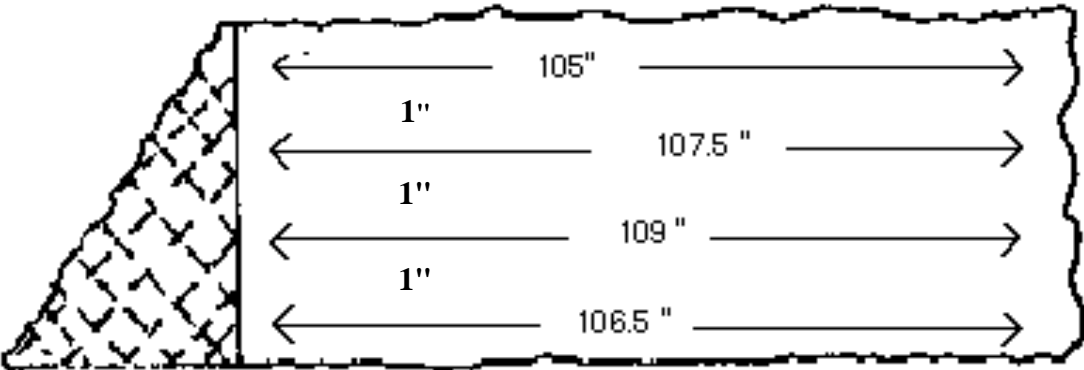
C. Procedure

- 1. Measurement of a rectangular stack or rectangular portion of a stack.
 - a. Average Height: Starting at one end of the stack, measure the height of the stack, on both sides, at approximately 2 foot intervals, along the length of the stack, or at four proportionately equal intervals if the stack is less than 6 feet long. (Minimum of 4 measurements on each side shall be taken.) Calculate the average height.



Average Height = (41" + 41.5" + 43" + 42.5" + 41") ÷ 5 = 41.8"

- b. Average Length: Starting at the base, measure the length of the stack at approximate 1 foot intervals up to the top, or at four proportionately equal intervals if the stack is less than 3 feet high. (Minimum of 4 measurements) Calculate the average length.

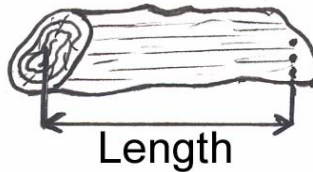


Average Length = (106.5" + 109" + 107.5" + 105") ÷ 4 = 107 inches

- c. Average Width: This dimension is calculated by averaging the length of individual pieces of wood. A representative random sample of the individual pieces shall be selected. If a triangular stack is combined with a rectangular stack, the sample shall be selected randomly from the entire stack. The minimum sample size is in the following table.

Amount Represented	Number of Pieces
1/2 cord and less	12
More than 1/2 cord to 1 cord	24
Over 1 cord to 1-1/2 cords	36
Over 1-1/2 cords to 2 cords	48
Over 2 cords	48 plus 12 for each 1/2 cord or fraction thereof

Measure the length of the pieces, measuring from center-to-center, as shown. Calculate the average length.

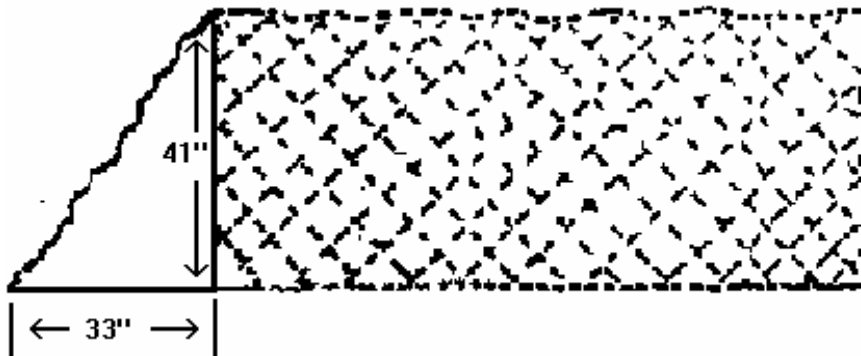


Length of Angle-Cut Log

$$\text{Average Length} = (18" + 18.25" + 19" + 17.75" + 18.5" + 18") \div 6 = 18.25 \text{ in}$$

- 2. Measurement of a triangular portion of a stack:

- a. Measure the height and the base of the triangular portion.



Triangular Measurements: Height = 41"; Length = 33"

- b. Average width of the stack is the same as previously calculated.
3. Calculate the volume:
- Volume of the rectangular portion = average height of the stack x average length of the stack x average width of the stack. (Example: 41.8" x 107" x 18.25" = 81,624.95 cu in)
 - Volume of the triangular portion = height x base length x average width of the stack divided by 2. (Example: 41" x 33" x 18.25" ÷ 2 = 12,346.125 cu in)
 - Volume of the combined portions = volume of the rectangular portion + volume of triangular portion. (Example: 81,624.95 cu in + 12,346.125 cu in = 93,971.075 cu in)
- NOTE: For stacks with multiple rows, the volume of the total stack is the sum of the volumes of the individual rows.
- Volume of stack in cords = volume of stack in cubic inches divided by 221,184 cubic inches per cord. (Example: 93,971.075 cu in ÷ 221,184 cu in per cord = 0.42 cords)
 - Percentage of the cord = decimal fraction of the cord times 100. (Example: 0.42 cords x 100 = 42% [Percent].)

TABLE OF EQUIVALENTS				
1 cubic foot = 1,728 cubic inches				
1 cord = 128 cubic feet = 221,184 cubic inches				
Common Fractions		Decimal Fractions		Percentages
1/8	=	.125	=	12.5%
1/4	=	.25	=	25%
3/8	=	.375	=	37.5%
1/2	=	.5	=	50%
5/8	=	.625	=	62.5%
3/4	=	.75	=	75%
7/8	=	.875	=	87.5%

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CONVERSIONS AND EQUIVALENTS FOR FIREWOOD INSPECTIONS

CUBIC INCH EQUIVALENTS FOR COMMONLY USED CUBIC FOOT LABELS

CUBIC FOOT	CUBIC INCH
2 1/4 (2.25)	3,888
2.2	3,801.6
2	3,456
1.9	3,283.2
1.75	3,024
1.7	2,937.6
1-1/2	2,592
1.4	2,419.2
1	1,728
0.9	1,555.2
7/8	1,512
0.8	1,382.4
3/4 (0.75)	1,296
0.7	1,209.6
0.65	1,123.2
5/8	1,080
0.6	1,036.8
1/2 (0.5)	864
3/8	648
1/4 (0.25)	432
1/8	216

DECIMAL EQUIVALENTS FOR COMMONLY USED FRACTIONS

FRACTION	DECIMAL
7/8	0.875
3/4	0.750
5/8	0.625
1/2	0.500
3/8	0.375
1/4	0.250
1/8	0.125

SI (METRIC) - INCH - POUND CONVERSION FACTORS

SI (METRIC)	INCH - POUND
1 cm ³ (cubic centimeter)	0.06102374 in ³ (cubic inch)
1 dm ³ (cubic decimeter)	0.0353147 ft ³ (cubic foot)
1 m ³ (cubic meter)	35.3147 ft ³

INCH - POUND	SI (METRIC)
1 in ³ (cubic inch)	16.3871 cm ³ (cubic centimeter)
1 ft ³ (cubic foot)	28.3168 dm ³ (cubic decimeters) 0.0283168 m ³ (cubic meter)

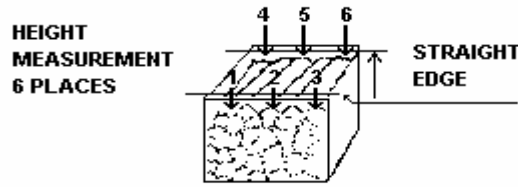
FIREWOOD IN CONTAINERS

LABELED CONTENTS OF 4 CUBIC FEET OR LESS

- A. Equipment
- | | |
|-------------------------------|---|
| 1. Calibrated linear measure. | Additionally for Bundles
1. Tracing Paper. |
| 2. Calculator (optional). | 2. Template marked in square inches. |
| 3. Gloves (optional). | 3. Strap(s) for securing bundle. |
- B. Special Notes
1. Measurements are made in increments no greater than 1/8 inch. Except when measuring the height of boxed wood, a measurement falling between increments is rounded up to the next higher increment.
 2. Unless otherwise indicated, all measurements are to be taken without rearranging the wood or removing it from the package.
 3. Ranked and well-stowed means the pieces of wood are stacked so that the individual pieces are touching and parallel, and in a compact manner minimizing spaces between pieces.
 4. If the layers of wood are cross-hatched or not ranked in distinct sections in the package, the wood shall be removed from the package and measured according to the procedures for bulk firewood, page 245.
- C. Procedure
1. Boxed wood.
 - a. Average height determination of wood within the box:

Open the box and measure the internal height of the box (h).

Take three measurements (d) along each end of the stack by measuring from the bottom of a straight edge placed across the top of the box to the highest point on the two outer-most top pieces of wood and the center-most top piece of wood rounding measurements down to the nearest 1/8 inch.

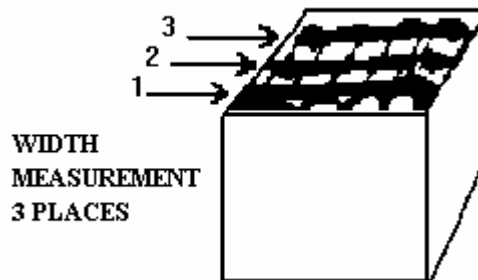


Calculate the average width

$$\text{Average Height of Stack} = h - [(d^1 + d^2 + d^3 + d^4 + d^5 + d^6) \div 6]$$

- b. Average width of the wood within the box:

To determine the width, take three measurements. These measurements shall be taken on both ends and in the middle of the box, measuring the inside distance from

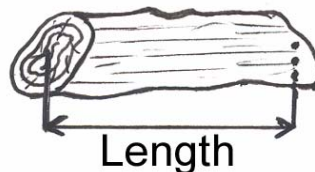


one side of the box to the other, perpendicular to the long axis of the wood.

Calculate the average width

$$\text{Average Width} = (W^1 + W^2 + W^3) \div 3$$

- c. 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 the five pieces, measuring from center-to-center.



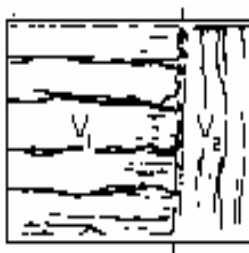
Calculate the average length of the five pieces

$$\text{Average Length} = (L^1 + L^2 + L^3 + L^4 + L^5) \div 5$$

- d. Calculate the volume of the wood within the box.

$$\text{Volume of Wood (in cu ft)} = \frac{\text{Average Height (in inches)} \times \text{Average Width (in inches)} \times \text{Average Length (in inches)}}{1728 \text{ in}^3/\text{ft}^3}$$

- e. For boxes packed with the pieces in two distinct sections (at right angles to each other), calculate the volume of wood in the box by determining the average height, width, and length as in 1a, 1b, and 1c for each section, then totaling the calculated volumes of the two sections. Except that the width measurement for V_2 shall be taken from the inside edge of the box adjacent to V_2 to the plane separating V_1 and V_2 .



$$\text{Total Volume} = V_1 + V_2$$

2. Bundles and Bags of Firewood.

- a. 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. 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 inches. Count the number of square inches enclosed within the perimeter line (portions of square inches not completely within the perimeter line shall be estimated to the nearest one quarter square inch). Repeat this process on the opposite end of the bundle or bag. Calculate the average area.

$$\text{Average Area} = (\text{Area \#1} + \text{Area \#2}) \div 2$$

NOTE: Two thin straps, one inch to two inches wide, with connecting buckles, and long enough to easily encircle the bundle or bag, should be used to secure the wood.

- b. Average length of the pieces of wood:

Select the five pieces with the greatest girth. Measure the length of the pieces as shown in Step 1c. for boxed wood.

Calculate the average length of the pieces of wood.

$$\text{Average Length} = (L^1 + L^2 + L^3 + L^4 + L^5) \div 5$$

- c. Calculate the volume of the wood.

$$\begin{array}{l} \text{Volume of Wood} \\ \text{(in cu ft)} \end{array} = \begin{array}{l} \text{Average Area} \\ \text{(in inches}^2\text{)} \end{array} \times \begin{array}{l} \text{Average Length} \\ \text{(in inches)} \end{array} \div 1728 \text{ in}^3$$

LIQUOR
VOLUMETRIC TEST PROCEDURE

A. Equipment

1. Calibrated glass graduates “To Contain” (see Special Note 1).
2. Thermometer -20°F to 120°F.
3. Calculator (optional).

B. Special Notes

1. “To Deliver” graduates may be used if a correction factor is known for the difference between “To Deliver” and “To Contain” graduates which must be added to the observed volume before calculations.
2. Gravimetric testing of liquor may be performed by using the procedure for establishing a weight per liquid volume.

C. Procedure

1. Select “To Contain” graduate for the volume of liquor that you wish to test.
2. Wet graduate with liquor and give a 10-second drain. This compensates for the retention in the liquor bottle.
3. Pour a sample bottle into wetted graduate. After giving the sample a 1 minute drain, record the volume to be corrected (V_O).
4. Insert the thermometer in graduate until reading stabilizes, then read temperature.
5. Liquor is corrected to 60°F by using the values from Table 7, beginning on page 257.
6. Formula: $\text{Error} = [V_O \times (CF_{ot})] - V_L$ V_O = Observed Volume

CF_{ot} = Correction Factor for the observed liquor temperature in degrees Fahrenheit from Table 7

V_L = Labeled Volume

D. Examples

1. Liquor temperature is 84°F.

Proof is 80.6 (use table value for 80 proof).

$$CF_{ot} = 0.991$$

Labeled Volume is 750 ml $V_L = 750$ ml

Observed Volume is 746 ml $V_O = 746$ ml

$$\text{Error} = [V_O \times (CF_{ot})] - V_L$$

$$\text{Error} = [746 \text{ ml} \times (0.991)] - 750 \text{ ml} = -10.71 \text{ ml}$$

2. Liquor temperature is 64°F.

Proof is 70.

$$CF_{ot} = 0.999$$

Labeled Volume is 1.75 L (1750 ml) $V_L = 1750$ ml

Observed Volume is 1746 ml $V_O = 1746$ ml

$$\text{Error} = [V_O \times (CF_{ot})] - V_L$$

$$\text{Error} = [1746 \text{ ml} \times (0.999)] - 1750 \text{ ml} = -5.75 \text{ ml}$$

E. Reference

Bureau of Alcohol, Tobacco and Firearms.

TABLE NUMBER 7, TABLE FOR CORRECTION OF VOLUME TO 60°F

Proof	Temperature °F											
	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	
5												1.001
10												1.001
15												1.001
20								1.002	1.002	1.002		1.002
25								1.002	1.002	1.002		1.002
30			1.003	1.003	1.003	1.002	1.002	1.002	1.002	1.002		1.002
35			1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003		1.003
40	1.006	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.003		1.003
45	1.007	1.006	1.006	1.005	1.005	1.005	1.005	1.005	1.004	1.004		1.004
50	1.008	1.007	1.007	1.006	1.006	1.006	1.006	1.005	1.005	1.005		1.004
55	1.009	1.008	1.008	1.008	1.007	1.007	1.007	1.006	1.006	1.006		1.005
60	1.010	1.010	1.009	1.009	1.008	1.008	1.008	1.007	1.007	1.006		1.006
65	1.011	1.011	1.010	1.010	1.009	1.009	1.008	1.008	1.007	1.007		1.006
70	1.013	1.012	1.012	1.011	1.010	1.010	1.009	1.009	1.008	1.008		1.007
75	1.014	1.013	1.013	1.012	1.011	1.011	1.010	1.010	1.009	1.008		1.008
80	1.015	1.014	1.013	1.013	1.012	1.011	1.011	1.010	1.009	1.009		1.008
85	1.016	1.015	1.014	1.014	1.013	1.012	1.011	1.011	1.010	1.009		1.008
90	1.016	1.016	1.015	1.014	1.013	1.013	1.012	1.011	1.010	1.010		1.009
95	1.017	1.016	1.016	1.015	1.014	1.013	1.012	1.012	1.011	1.010		1.009
100	1.018	1.017	1.016	1.015	1.014	1.014	1.013	1.012	1.011	1.010		1.009
105	1.018	1.017	1.017	1.016	1.015	1.014	1.013	1.012	1.011	1.011		1.010
110	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.013	1.012	1.011		1.010
115	1.019	1.018	1.017	1.016	1.016	1.015	1.014	1.013	1.012	1.011		1.010
120	1.019	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.012	1.011		1.010
125	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.012	1.012		1.011
130	1.020	1.019	1.018	1.017	1.016	1.016	1.015	1.014	1.013	1.012		1.011
135	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.012		1.011
140	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.012		1.011
145	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013	1.012		1.011
150	1.022	1.021	1.020	1.019	1.018	1.017	1.015	1.014	1.013	1.012		1.011
155	1.022	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013		1.012
160	1.022	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013		1.012
165	1.023	1.022	1.020	1.019	1.018	1.017	1.016	1.015	1.014	1.013		1.012
170	1.023	1.022	1.021	1.020	1.019	1.018	1.016	1.015	1.014	1.013		1.012
175	1.023	1.022	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.013		1.012
180	1.024	1.022	1.021	1.020	1.019	1.018	1.017	1.016	1.015	1.014		1.012
185	1.024	1.023	1.022	1.021	1.019	1.018	1.017	1.016	1.015	1.014		1.013
190	1.024	1.023	1.022	1.021	1.020	1.019	1.017	1.016	1.015	1.014		1.013
195	1.024	1.023	1.022	1.021	1.020	1.019	1.018	1.016	1.015	1.014		1.013
200	1.025	1.024	1.022	1.021	1.020	1.019	1.018	1.017	1.015	1.014		1.013

TABLE NUMBER 7, TABLE FOR CORRECTION OF VOLUME TO 60°F

Proof	40°	42°	44°	46°	48°	50°	52°	54°	56°	58°
0	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	.1000	1.000
5	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000
10	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000
15	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000
20	1.001	1.001	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000
25	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.000	1.000	1.000
30	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.001	1.000
35	1.003	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.001	1.000
40	1.003	1.003	1.002	1.002	1.002	1.002	1.001	1.001	1.001	1.000
45	1.004	1.003	1.003	1.003	1.002	1.002	1.002	1.001	1.001	1.000
50	1.004	1.004	1.003	1.003	1.003	1.002	1.002	1.001	1.001	1.000
55	1.005	1.004	1.004	1.003	1.003	1.002	1.002	1.002	1.001	1.000
60	1.005	1.005	1.004	1.004	1.003	1.003	1.002	1.002	1.001	1.001
65	1.006	1.005	1.005	1.004	1.004	1.003	1.002	1.002	1.001	1.001
70	1.006	1.006	1.005	1.005	1.004	1.003	1.003	1.002	1.001	1.001
75	1.007	1.006	1.006	1.005	1.004	1.003	1.003	1.002	1.001	1.001
80	1.007	1.007	1.006	1.005	1.004	1.004	1.003	1.002	1.001	1.001
85	1.008	1.007	1.006	1.005	1.005	1.004	1.003	1.002	1.002	1.001
90	1.008	1.007	1.006	1.006	1.005	1.004	1.003	1.002	1.002	1.001
95	1.008	1.008	1.007	1.006	1.005	1.004	1.003	1.003	1.002	1.001
100	1.009	1.008	1.007	1.006	1.005	1.004	1.004	1.003	1.002	1.001
105	1.009	1.008	1.007	1.006	1.005	1.004	1.004	1.003	1.002	1.001
110	1.009	1.008	1.007	1.006	1.005	1.005	1.004	1.003	1.002	1.001
115	1.009	1.008	1.007	1.007	1.006	1.005	1.004	1.003	1.002	1.001
120	1.009	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
125	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
130	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
135	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
140	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
145	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
150	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.003	1.002	1.001
155	1.011	1.010	1.009	1.007	1.006	1.005	1.004	1.003	1.002	1.001
160	1.011	1.010	1.009	1.008	1.006	1.005	1.004	1.003	1.002	1.001
165	1.011	1.010	1.009	1.008	1.007	1.005	1.004	1.003	1.002	1.001
170	1.011	1.010	1.009	1.008	1.007	1.006	1.004	1.003	1.002	1.001
175	1.011	1.010	1.009	1.008	1.007	1.006	1.004	1.003	1.002	1.001
180	1.011	1.010	1.009	1.008	1.007	1.006	1.005	1.003	1.002	1.001
185	1.011	1.010	1.009	1.008	1.007	1.006	1.005	1.003	1.002	1.001
190	1.012	1.010	1.009	1.008	1.007	1.006	1.005	1.004	1.002	1.001
195	1.012	1.011	1.009	1.008	1.007	1.006	1.005	1.004	1.002	1.001
200	1.012	1.011	1.010	1.008	1.007	1.006	1.005	1.004	1.002	1.001

TABLE NUMBER 7, TABLE FOR CORRECTION OF VOLUME TO 60°F

Proof	60°	62°	64°	66°	68°	70°	72°	74°	76°	78°
0	1.000	1.000	1.000	.999	.999	.999	.999	.998	.998	.998
5	1.000	1.000	1.000	.999	.999	.999	.999	.998	.998	.998
10	1.000	1.000	1.000	.999	.999	.999	.999	.998	.998	.998
15	1.000	1.000	1.000	.999	.999	.999	.999	.998	.998	.998
20	1.000	1.000	1.000	.999	.999	.999	.998	.998	.998	.997
25	1.000	1.000	1.000	.999	.999	.999	.998	.998	.998	.997
30	1.000	1.000	.999	.999	.999	.998	.998	.998	.997	.997
35	1.000	1.000	.999	.999	.999	.998	.998	.998	.997	.997
40	1.000	1.000	.999	.999	.998	.998	.998	.997	.997	.996
45	1.000	1.000	.999	.999	.998	.998	.997	.997	.996	.996
50	1.000	1.000	.999	.999	.998	.998	.997	.997	.996	.995
55	1.000	.999	.999	.998	.998	.997	.997	.996	.996	.995
60	1.000	.999	.999	.998	.998	.997	.996	.996	.995	.995
65	1.000	.999	.999	.998	.997	.997	.996	.995	.995	.994
70	1.000	.999	.999	.998	.997	.997	.996	.995	.994	.994
75	1.000	.999	.999	.998	.997	.996	.996	.995	.994	.993
80	1.000	.999	.998	.998	.997	.996	.995	.995	.994	.993
85	1.000	.999	.998	.998	.997	.996	.995	.994	.994	.993
90	1.000	.999	.998	.998	.997	.996	.995	.994	.993	.992
95	1.000	.999	.998	.997	.997	.996	.995	.994	.993	.992
100	1.000	.999	.998	.997	.996	.996	.995	.994	.993	.992
105	1.000	.999	.998	.997	.996	.995	.995	.994	.993	.992
110	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.992
115	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
120	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
125	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
130	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
135	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
140	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.991
145	1.000	.999	.998	.997	.996	.995	.994	.993	.992	.990
150	1.000	.999	.998	.997	.996	.995	.994	.993	.991	.990
155	1.000	.999	.998	.997	.996	.995	.994	.992	.991	.990
160	1.000	.999	.998	.997	.996	.995	.993	.992	.991	.990
165	1.000	.999	.998	.997	.996	.994	.993	.992	.991	.990
170	1.000	.999	.998	.997	.995	.994	.993	.992	.991	.990
175	1.000	.999	.998	.997	.995	.994	.993	.992	.991	.990
180	1.000	.999	.998	.997	.995	.994	.993	.992	.991	.990
185	1.000	.999	.998	.997	.995	.994	.993	.992	.991	.989
190	1.000	.999	.998	.996	.995	.994	.993	.992	.991	.989
195	1.000	.999	.998	.996	.995	.994	.993	.992	.990	.989
200	1.000	.999	.998	.996	.995	.994	.993	.992	.990	.989

TABLE NUMBER 7, TABLE FOR CORRECTION OF VOLUME TO 60°F

Proof	80°	82°	84°	86°	88°	90°	92°	94°	96°	98°	100°
0	.998	.997	.997	.997	.996	.996	.996	.995	.995	.994	.994
5	.998	.997	.997	.997	.996	.996	.996	.995	.995	.994	.994
10	.997	.997	.997	.996	.996	.996	.995	.995	.995	.994	.994
15	.997	.997	.997	.996	.996	.996	.995	.995	.994	.994	.993
20	.997	.997	.996	.996	.996	.995	.995	.994	.994	.994	.993
25	.997	.996	.996	.996	.995	.995	.994	.994	.994	.993	.993
30	.997	.996	.996	.995	.995	.994	.994	.994	.993	.993	.992
35	.996	.996	.995	.995	.994	.994	.993	.993	.992	.992	.991
40	.996	.995	.995	.994	.994	.993	.993	.992	.992	.991	.991
45	.995	.995	.994	.994	.993	.993	.992	.991	.991	.990	.990
50	.995	.994	.994	.993	.993	.992	.991	.991	.990	.990	.989
55	.994	.994	.993	.993	.992	.991	.991	.990	.989	.989	.988
60	.994	.993	.993	.992	.991	.991	.990	.989	.988	.988	.987
65	.993	.993	.992	.991	.991	.990	.989	.988	.988	.987	.986
70	.993	.992	.991	.991	.990	.989	.988	.988	.987	.986	.985
75	.993	.992	.991	.990	.989	.989	.988	.987	.986	.985	.985
80	.992	.991	.991	.990	.989	.988	.987	.986	.986	.985	.984
85	.992	.991	.990	.989	.988	.988	.987	.986	.985	.984	.983
90	.992	.991	.990	.989	.988	.987	.986	.985	.984	.984	.983
95	.991	.990	.989	.989	.988	.987	.986	.985	.984	.983	.982
100	.991	.990	.989	.988	.987	.986	.985	.984	.984	.983	.982
105	.991	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981
110	.991	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981
115	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981	.980
120	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981	.980
125	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981	.980
130	.990	.989	.988	.987	.986	.985	.984	.983	.982	.981	.979
135	.990	.989	.988	.987	.986	.985	.983	.982	.981	.980	.979
140	.990	.989	.987	.986	.985	.984	.983	.982	.981	.980	.979
145	.989	.988	.987	.986	.985	.984	.983	.982	.981	.980	.979
150	.989	.988	.987	.986	.985	.984	.983	.982	.980	.979	.978
155	.989	.988	.987	.986	.985	.984	.982	.981	.980	.979	.978
160	.989	.988	.987	.986	.984	.983	.982	.981	.980	.979	.978
165	.989	.988	.987	.985	.984	.983	.982	.981	.980	.979	.977
170	.989	.988	.986	.985	.984	.983	.982	.981	.979	.978	.977
175	.989	.987	.986	.985	.984	.983	.982	.980	.979	.978	.977
180	.988	.987	.986	.985	.984	.982	.981	.980	.979	.978	.977
185	.988	.987	.986	.985	.984	.982	.981	.980	.979	.977	.976
190	.988	.987	.986	.985	.983	.982	.981	.980	.979	.977	.976
195	.988	.987	.986	.985	.983	.982	.981	.980	.978	.977	.976
200	.988	.987	.986	.984	.983	.982	.981	.980	.978	.977	.976

LUMBER, HARDWOOD
BOARD FOOT CALCULATION

A. Equipment

1. Calibrated linear measure.
2. Calculator (optional).

B. Special Notes

1. This procedure applies to wholesale and nonconsumer sales, and to random width hardwood lumber sold at retail.
2. This procedure is **not** applicable to retail sale of "Surfaced (S4S) Hardwood Lumber Manufactured to Stock Widths." See: Method of Sale - Wood, Hardwood, page 219 and NIST HB 130, Sections 2.12, 2.12.3.1, and 2.12.3.2

C. Board Foot

A board foot is one foot long, one foot wide, and one inch thick, or its equivalent.

1. Procedures for calculation of board feet:
 - a. Physical measurement: Measure the actual width, thickness, and length in inches.

$$\text{Board Feet} = \frac{\text{Width} \times \text{Thickness} \times \text{Length}}{144}$$

- b. Industry method:

$$\text{Board Feet} = \frac{\text{Width in Inches} \times \text{Length* in Feet} \times \text{Thickness in Inches}}{12}$$

By convention, fractional board foot units are rounded to the nearest whole number.

- c. The board foot measure of 1 inch thick boards is equal to the surface measure, S.M.

$$\text{S.M.} = \frac{\text{Width in Inches} \times \text{Length* in Feet}}{12}$$

By convention, the surface measure is rounded to the nearest whole number.

* Fractional lengths are recorded as the next lower whole foot.

- D. Reference: National Hardwood Lumber Association Grading Rules.

MULTI-UNIT PACKAGES

Multi-Unit Packages are packages containing more than one unit of the same item.

Examples: Glue Sticks - 10 sticks, each 1/4 inch diameter, 2-1/2 inch length.
 Trash Bags - 30 bags, each 28 inch wide, 8 inch deep, 32 inch long
 Facial Tissues - 600 tissues, 9 inch x 14 inch

For inspection purposes, each container having multiple individual units is considered to be one package for determining the lot size. For example, the lot size for 20 packages with 10 glue sticks in each package would be 20.

The overage or shortage for each package should be calculated by averaging measurements of individual units randomly selected from the package. To determine the number of units to be selected, use the following table derived from Table 2-7, MAV column, of the sampling and testing regulation.

NUMBER OF UNITS TO BE SAMPLED

LABELED COUNT	NUMBER UNITS	LABELED COUNT	NUMBER UNITS
UP TO & INC 83	2	541 - 625	12
84 - 116	3	626 - 725	13
117 - 150	4	726 - 815	14
151 - 200	5	816 - 900	15
201 - 240	6	901 - 990	16
241 - 290	7	991 - 1075	17
291 - 345	8	1076 - 1165	18
346 - 400	9	1166 - 1250	19
401 - 465	10	1251 - 1333	20
466 - 540	11	1334 AND GREATER	1.5 % OF LABELED COUNT ROUNDED TO WHOLE NUMBER

**PLYWOOD, HARDBOARD, PARTICLE BOARD,
PANELING, AND SIDING**

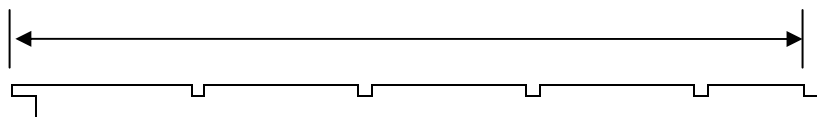
A. Equipment

1. Calibrated linear measure.
2. Caliper or micrometer

B. Notes

1. The nominal thickness is the actual or full “designated” thickness. Nominal 1/2 inch thick panel is 0.50 inch thick after any sanding or dressing.
2. Industry tolerances could be considered as being similar to maximum allowable variations. Regardless of any industry tolerance, the lot must meet the requirements for MAV’s and the average thickness when tested according to sampling and testing regulations.
3. Overlapping or interlocking panels shall be measured according to the exposed face.

MEASUREMENT



C. Procedure

1. Average at least two measurements for length and three for width. Length and width measurements should be made at least 6 inches from the edge.
2. Average at least six measurements to determine thickness. Measurements should be made at various locations keeping as far from the edges as practical.

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POLYETHYLENE OTHER THAN SHEETING

For Polyethylene Sheeting, Drop Cloths, and Tarpaulins, see HB 133, page 59, 4.7.

For other plastics (polybutyl, polypropylene, polyacetate, etc.) use bidimensional procedures as appropriate. The weights of other plastics cannot be calculated using gram per square centimeter contained in polyethylene procedures.

A. Equipment

1. A deadweight dial micrometer with a flat anvil of 1/4-inch diameter or larger in area and a 3/16-inch diameter flat surface on the spindle head. This is available from the local DMS office.
2. A calibrated linear measure.
3. Scale and calibrated weights.

B. Procedure

1. Weight: All polyethylene commodities having a weight label should be tested according to weight.
2. Thickness. (All measurements are single thickness)
 - a. All measurements should be made at least 3/4-inch from the edge.
 - b. Bags: Six measurements uniformly spaced around the circumference; compute the average.
 - c. Lay flat tubing: Six measurements uniformly spaced around the circumference; compute the average.
3. Width and length.
 - a. Lay flat tubing: Three measurements along the length and ten measurements along the width; compute the averages.
 - b. Bags: Three measurements along the width and length; compute the average. When measuring polyethylene bags, the measurements are the inside or "useable" dimensions, excluding the seams.

Note:

It is suggested that the tare sample be fully tested to determine if weight, dimension, count, or capacity statements are in error. For any statements found in error, the remaining samples may be tested for only those or any one of those statements found to be in error in the interest of saving time.

Computation of Weight:

If the film density in g/cm^3 is known, the following formula can verify that the weight and dimension statements on a container do not conflict. It is generally accepted that the minimum densities for polyethylene resins exceed 0.915 g/cm^3 so that any weight statement on a package which does not equal or exceed the value obtained by using $.915 \text{ g/cm}^3$ in the formula ($D = .915$) would indicate the likelihood of a shortage.

Formula: $M = T'' \times L'' \times W'' \times 0.03613 \times D$

M = Weight

T'' = Thickness in inches (i.e., 1.75 mil = .00175 inch)

L'' = Length in inches

W'' = Width in inches

D = Density in g/cm^3

0.03613 = Conversion factor for density from g/cm^3 to lbs/in^3

SHOELACES

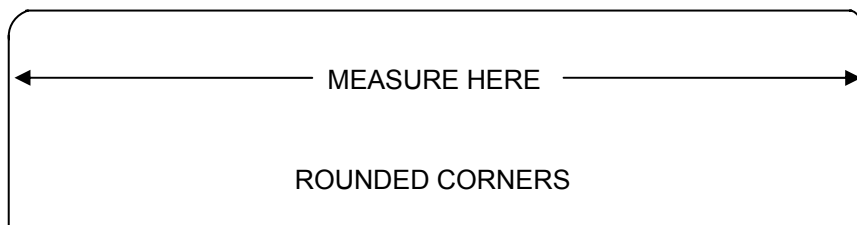
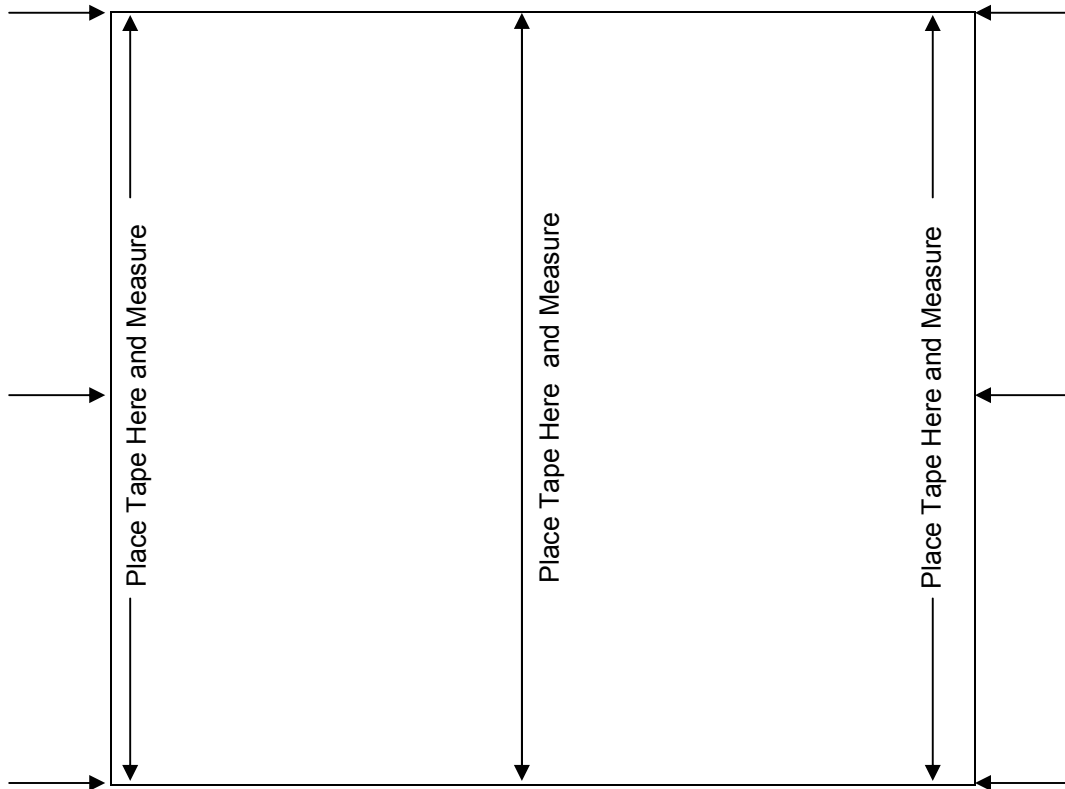
A. Equipment

1. Calibrated linear measure.
2. Means of applying a steady 3-ounce pull to shoelaces. The same equipment and set-up as used for testing Flexible Tubing, page 271, may be used.

B. Procedure

1. Apply steady 3-ounce pull to shoelace.
2. Measure total length, including the tips.

MEASURING POINTS



TEXTILES

SLEEPING BAGS, BEDDING, BLANKETS, RUGS, ETC.

A. Equipment

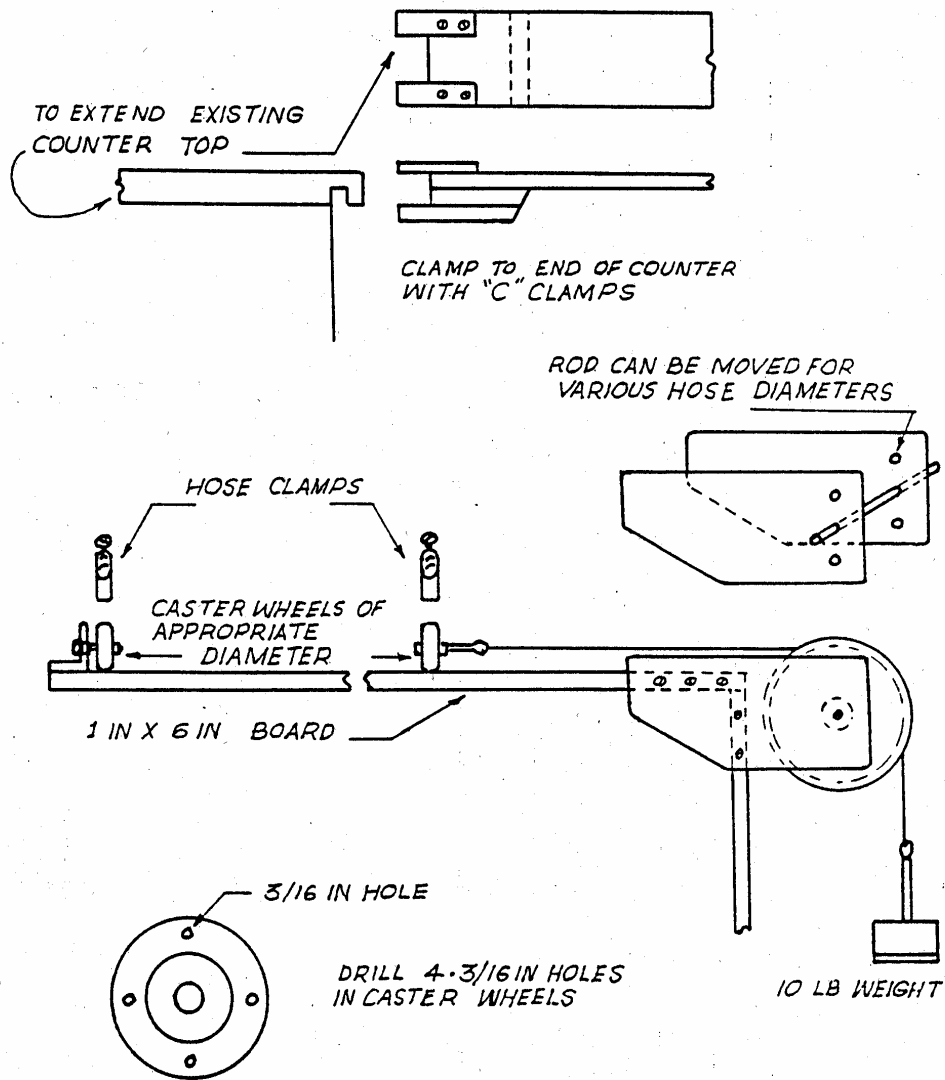
1. Calibrated linear measure.
2. Four 2-inch "C" clamps, or four weights.
3. Plastic drop cloth - to protect commodity from being soiled.

B. Special Note

When inspecting for length, width or area, spread the product and remove all wrinkles without stretching the material. The "C" clamps or weights are used to hold the product in place during inspection when there is only one inspector. Ruffles, fringes, etc., are considered part of the product and must be included in the measurement. Do not measure on a rounded corner. The product must meet each stated quantity (length, width and area) independently of the other.

C. Procedure

1. Remove the commodity from package and place on table or floor, making sure that adequate protection has been used so that the commodity is not soiled.
2. Remove wrinkles and secure commodity in place.
3. Take 3 measurements for length and 3 measurements for width and compute average length and average width.
4. $\text{Area} = \text{Average Length} \times \text{Average Width}$.



TUBING - FLEXIBLE

A. Equipment

1. Flat surface.
2. Clamp to hold tubing at one end of tubing (see illustration).
3. Clamp and 10 lb weight to apply pull to opposite end of tubing (see illustration).
4. Calibrated linear measure.

B. Special Notes

1. Flexible tubing is tubing that will extend to a length greater than its constricted length (Example: Clothes dryer vent hose, recreational vehicle drain line hose, etc.). It is labeled to indicate the extended length.
2. Other methods of applying pull to the tubing exist and may be used.

C. Procedure

1. Secure one end of tubing with clamp.
2. Apply a constant pull of ten pounds.
3. Maintain constant pull for five minutes and measure the length of the flexible tubing while maintaining constant pull.

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TURKEY: WHOLE, FROZEN

A. Equipment

1. Appropriate capacity scale and calibrated weights.
2. Calculator, optional.
3. Rubber gloves, optional.

B. Special Note

This is a destructive test procedure.

C. Procedure

1. Determine the gross weight of the turkey (i.e., without opening or removing any packaging).
2. Remove turkey from package: if present, remove temperature indicator and metal leg clip, brush or rinse off any surface ice or frost. (If rinsed, drain well.) Note the weight of the ice free bird.
3. Request the market cut the bird in half so that any cavity ice and giblet wrapping can be removed. Weigh the turkey after cutting.
4. Subtract the cut weight (3) from the whole weight (2) to determine the weight loss from cutting.
5. Remove any giblet wrap and body cavity ice. (If ice was rinsed off, drain well.) Weigh.
6. To determine the net weight, add the cutting weight loss (4) to the weight (5).
7. To determine the tare weight, subtract the net weight (6) from the gross weight (1).

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WINE
VOLUMETRIC TEST PROCEDURE

A. Equipment

1. Calibrated glass graduate "To Contain".
2. Thermometer -20°F to 120°F .
3. Corkscrew.
4. Calculator (optional).

B. Special Notes

1. For carbonated wines and champagnes, maintaining the commodity at about 40°F will simplify testing. Temperature correction is made to 68°F .
2. "To Deliver" graduates may be used if a correction factor is known for the difference between "To Deliver" and "To Contain" graduates.
3. Testing may be done by weight, according to gravimetric procedures.

C. Procedure

1. Select "To Contain" graduate for the volume of wine that you wish to test.
2. Wet graduate with wine and give a 10-second drain. This compensates for the retention in the wine bottle.
3. Pour a sample bottle into wetted graduate giving the sample a 1 minute drain, record volume to be corrected (V_o).
4. Insert the thermometer in graduate until reading stabilizes, then read temperature.
5. Wine is corrected to 68°F using a coefficient of expansion of 0.0002 per degree Fahrenheit.

6. Formula: $\text{Error} = V_o [.0002 (68 - T_o) + 1] - V_L$

V_o = Observed Volume

T_o = Actual Temperature of wine in degrees Fahrenheit

V_L = Labeled Volume

0.0002 = Coefficient of expansion per degree Fahrenheit

D. Examples

1. Example 1:

Observed Volume is 746 ml
 Observed Temperature is 76°F
 Labeled Volume is 750 ml

Utilizing the formula:

$$V_o = 746 \text{ ml}$$

$$T_o = 76^\circ\text{F}$$

$$V_L = 750 \text{ ml}$$

$$\text{Error} = 746 \text{ ml} [.0002 (68 - 76) + 1] - 750 \text{ ml} = -5.19 \text{ ml}$$

2. Example 2:

Observed Volume is 1490 ml
 Observed Temperature is 60°F
 Labeled Volume is 1.5 L (1500 ml)

Utilizing the formula:

$$V_o = 1490 \text{ ml}$$

$$T_o = 60^\circ\text{F}$$

$$V_L = 1500 \text{ ml (1.5 L)}$$

$$\text{Error} = 1490 \text{ ml} [.0002 (68 - 60) + 1] - 1500 \text{ ml} = -7.62 \text{ ml}$$

E. Reference: Bureau of Alcohol, Tobacco and Firearms.

APPENDIX

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COMMODITY CLASSIFICATIONS LIST

1.10 Confection, Flavorings & Seasonings

- 1.01 - Penny Goods
- 1.02 - Bar Goods
- 1.03 - Confectionery-Type Chocolate
- 1.04 - Chocolate Coatings & Syrups
- 1.05 - Other Flavoring Agents
- 1.06 - Packaged Goods
- 1.07 - Bulk Goods
- 1.08 - Nutmeats & Seeds
- 1.09 - Sweetening Syrups & Molasses
- 1.10 - Flavoring Extracts, Emulsions & Other Flavorings
- 1.11 - Salt
- 1.12 - Pepper
- 1.13 - Sugar & Sweeteners
- 1.14 - Herbs, Spices & Seasoning Mixes
- 1.15 - Baking Powder & Yeast
- 1.16 - Tenderizers
- 1.40 - Confections & Flavorings, N.E.C.
- 1.50 - Confections, Flavorings & Seasonings, Audits

2.00 Dairy-Type Products

- 2.01 - Eggs, including Liquid, Dried, & Frozen
- 2.02 - Butter
- 2.03 - Margarine & Butter Substitutes
- 2.04 - Natural Cheeses Except Cottage Cheese
- 2.05 - Processed Cheeses & Related Products
- 2.06 - Cottage Cheese
- 2.07 - Sour Cream & Yogurts including Imitations
- 2.08 - Ice Creams & Ices

- 2.09 - Mix, Ice Cream & Ice Milk
- 2.10 - Bars; Popsicle, Ice Cream, Ices, Fruit
- 2.11 - Canned & Evaporated Milk
- 2.12 - Dry Milk Products & Nondairy Creams
- 2.13 - Milk & Cream
- 2.14 - Buttermilk, Chocolate & Other Milk Drinks
- 2.15 - Other Dairy Drinks
- 2.16 - Puddings, Toppings, & Instant Breakfasts
- 2.17 - Dips & Salads
- 2.40 - Dairy-Type Products, N.E.C.
- 2.50 - Dairy-Type Products, Audits

3.0 Bakery Goods-Canned, Fresh, or Frozen

- 3.01 - Breads & Bread-Type Rolls
- 3.02 - Breading, Croutons, Crumbs, & Dressings
- 3.03 - Cakes
- 3.04 - Pies, nonmeat
- 3.05 - Doughnuts
- 3.06 - Pastries & Cookies
- 3.07 - Sweet Rolls & Coffee Cakes
- 3.08 - Biscuits, Crackers, & Pretzels
- 3.09 - Other Dry Bakery Products
- 3.10 - Chips: Potato, Corn, etc.
- 3.11 - Tortillas & Allied Products
- 3.12 - Sandwiches
- 3.13 - Meat, Fish, Poultry Pies
- 3.40 - Bakery Goods, N.E.C.
- 3.50 - Bakery Goods, Audits

4.00 Meat, Fish, Poultry

- 4.01 - Fish & Seafood, Canned
- 4.02 - Fish & Seafood, Frozen
- 4.03 - Fish & Seafood, Fresh
- 4.04 - Canned Meats
- 4.05 - Beef, Fresh or Frozen
- 4.06 - Veal, Fresh or Frozen
- 4.07 - Pork, Fresh or Frozen
- 4.08 - Lamb & Mutton, Fresh or Frozen
- 4.09 - Processed Pork: Ham, Bacon, etc.
- 4.10 - Sausages, Luncheon & Other Processed Meats
- 4.11 - Canned Poultry
- 4.12 - Chicken, Fresh or Frozen
- 4.13 - Turkey, Fresh or Frozen
- 4.14 - Other Poultry & Small Game
- 4.40 - Meat, Fish, Poultry N.E.C.
- 4.50 - Meat, Seafood, Poultry, Audits

5.00 Cooking Oils, Salad Dressings, Condiments

- 5.01 - Soy & Teriyaki Sauces
- 5.02 - Olive Oil
- 5.03 - Peanut Oil
- 5.04 - Other Vegetable Oils
- 5.06 - Animal or Marine Oil Products
- 5.07 - Shortening, Cooking Oils
- 5.08 - Salad Dressings, Sandwich Spreads, Mayonnaise
- 5.09 - Meat Sauces, Hot Sauces
- 5.10 - Vinegars & Ciders
- 5.40 - Cooking Oils, Salad Dressings, Condiments N.E.C.
- 5.50 - Cooking Oils, Salad Dressings, Condiments, Audits

6.00 Milling Products

- 6.01 - Cereals, Breakfast Foods
 - 6.02 - Brans, Wheat Germ
 - 6.03 - Corn Meal
 - 6.04 - Wet Corn Meal Mush
 - 6.05 - Milled Rice & Rice By-Products
 - 6.06 - Prepared Flour & Flour Mixes
 - 6.07 - Grain Mill Products N.E.C.
 - 6.08 - Macaroni & Allied Foods
 - 6.09 - Popcorn
 - 6.40 - Milling Products, N.E.C.
 - 6.50 - Milling Products, Audits
-

7.00 Produce

- 7.01 - Dried & Dehydrated Fruits & Vegetables
 - 7.02 - Canned Fruits & Vegetables, N.E.C.
 - 7.03 - Frozen Fruits & Vegetables
 - 7.04 - Fresh Fruits & Vegetables
 - 7.05 - Nuts in Shells
 - 7.06 - Mushrooms, All Forms
 - 7.40 - Produce, N.E.C.
 - 7.50 - Fruits & Vegetables, Audits
-

8.0 Other Food Preparations

- 8.01 - Jams, Jellies, Preserves
- 8.02 - Peanut Butter & Peanut Butter Mixes
- 8.03 - Honey & Honey Mixes
- 8.04 - Pickles & Other Pickle Products
- 8.05 - Soup Mixes
- 8.06 - Soups, Canned
- 8.07 - Soups, Frozen
- 8.08 - Dinners, Frozen

8.09 - Catsup & Other Tomato Based Sauces

- 8.10 - Baby Food, Canned (Nonmeat, Fish, Poultry)
 - 8.11 - Other Canned Specialties
 - 8.12 - Desserts, Ready-to-Mix
 - 8.13 - Health Foods
 - 8.40 - Other Food Preparations, N.E.C.
 - 8.50 - Other Food Preparations, Audits
-

9.00 Beverages

- 9.01 - Beers, Malt Liquors, & Brewing By-Products
- 9.02 - Wine, Brandy & Cordials
- 9.03 - Other Liquors, Distilled
- 9.04 - Ready-to-Serve Mixed Drinks
- 9.05 - Soft Drinks
- 9.06 - Flavoring Syrups
- 9.07 - Beverage Bases & Concentrated Juices
- 9.08 - Fruit Juices, Ades; Frozen
- 9.09 - Fruit Juices, Ades; Canned or Bottled
- 9.10 - Coffee, Whole Bean & Ground
- 9.11 - Coffee, Concentrated & Instant
- 9.12 - Coffee Substitutes
- 9.13 - Tea, Loose Leaf & Bag
- 9.14 - Tea, Instant or Concentrated
- 9.15 - Vegetable Juices
- 9.16 - Water & Flavored Waters
- 9.17 - Chocolate or Cocoa Based, Nondairy
- 9.18 - Ice
- 9.40 - Beverages, N.E.C.
- 9.50 - Beverages, Audits

10.00 Pharmacy Products

- 10.01 - Prescription Drugs
 - 10.02 - Medications, N.E.C.
 - 10.03 - Internal Analgesics (a remedy that lessens or removes pain)
 - 10.04 - External Analgesics & Antiseptics
 - 10.05 - Cough & Cold Items
 - 10.06 - Laxatives
 - 10.07 - Vitamins & Food Supplements
 - 10.08 - Dentifrices, inc. Rinses & Mouthwashes
 - 10.09 - Shaving Preparations
 - 10.10 - Razor Blades & Razors nonelectric)
 - 10.11 - Fragrances; Perfumes, Colognes, Toilet Water
 - 10.12 - Other Cosmetic & Toilet Preparations
 - 10.13 - Hair Products, inc. Shampoos
 - 10.14 - Body Powder & Related Products
 - 10.15 - Oils & Lotions
 - 10.16 - Tapes: Adhesive & other Medical Types
 - 10.17 - Bandages: Adhesive & Compresses
 - 10.18 - Cotton, Medical
 - 10.19 - Devices, Medical
 - 10.40 - Pharmacy Products, N.E.C.
 - 10.50 - Pharmacy Products, Audits
-

Classifications Continue
Next Page

11.00 Garden, Farm, & Pet Supplies

- 11.01 - Charcoal
- 11.02 - Hickory & Other Wood Flavoring Chips
- 11.03 - Fire Starters & Matches
- 11.04 - Firewood, Kindling & Manufactured Logs
- 11.05 - Household Insecticides & Repellents
- 11.06 - Economic Poisons, N.E.C.
- 11.07 - Phosphatic & Super-phosphate Fertilizers
- 11.08 - Organic Fertilizers & Mixed Fertilizers
- 11.09 - Peat Moss, Mulch, Bark, & Soil Conditioners
- 11.10 - Poultry Feeds
- 11.11 - Livestock Feeds; inc. Salt Licks
- 11.12 - Dog & Cat Foods
- 11.13 - Other Prepared Animal Feeds
- 11.14 - Pet & Livestock Supplies N.E.C.
- 11.15 - Vegetable & Agricultural Seeds
- 11.16 - Flower & Grass Seeds, Bulbs, Plants
- 11.17 - Rock, Sand, & Gravel
- 11.18 - Garden Tools & Related Products
- 11.19 - Herbicides
- 11.40 - Garden, Farm, & Pet Supplies, N.E.C.
- 11.50 - Garden, Farm, & Pet Supplies, Audits

12.00 Hardware & Building Materials

- 12.01 - Nails, Tacks, Brads, & Rivets
- 12.02 - Bolts, Nuts, Washers, & Screws

- 12.03 - Furniture Hardware
- 12.04 - Builders Hardware
- 12.05 - Other Hardware
- 12.06 - Electrical Equipment & Supplies
- 12.07 - Plumbing Equipment & Supplies
- 12.08 - Tile & Tile Supplies
- 12.09 - Lime & Fireclay
- 12.10 - Cement & Cement Color; Stucco, Plaster
- 12.11 - Mortar & Concrete Mix
- 12.12 - Flooring Products, except for Linoleum, Carpets, & Rugs
- 12.13 - Linoleum & Similar Floor Coverings
- 12.14 - Doors & Windows
- 12.15 - Molding & Lumber
- 12.16 - Paneling, Wallboard, & other Wall Sheeting
- 12.17 - Building Paper, Felt, & Plastic Coverings
- 12.18 - Composition Shingles, Rolled Roofing
- 12.19 - Wood Shingles Shakes & Accessory Supplies
- 12.20 - Metal Roofing Products
- 12.21 - Fiberglass Roofing, Sheets & Rolls
- 12.22 - Fencing, Flashings, Wire Products & Posts
- 12.40 - Hardware & Building Materials, N.E.C.
- 12.50 - Hardware & Building Materials, Audits

13.00 Paint & Allied Products

- 13.01 - Interior & Exterior Oil-Base Paints, including Tint Bases
- 13.02 - Interior & Exterior Water-Base Paints, including Tint Bases
- 13.03 - Lacquers
- 13.04 - Varnishes & Varnish Stains

- 13.05 - Wood Stains
- 13.06 - Rust Preventives & Solvents
- 13.07 - Wood Preservatives
- 13.08 - Putty, Fillers, Caulking Compounds, & Allied Products
- 13.09 - Glues, Adhesives, Sizing
- 13.10 - Tapes, Adhesive, N.E.C.
- 13.11 - Linseed Oil
- 13.12 - Turpentine & Softwood Distillation Products
- 13.13 - Other Wood & Gum Chemicals
- 13.14 - Wallpaper
- 13.15 - Painter's Equipment & Supplies
- 13.40 - Paint & Allied Products N.E.C.
- 13.50 - Paint & Allied Products, Audits

14.00 Maintenance Supplies

- 14.01 - Bleaches & Bluing
- 14.02 - Starch
- 14.03 - Soap
- 14.04 - Synthetic or Organic Detergent
- 14.05 - Alkaline Detergent & Acid-Type Cleaners
- 14.06 - Specialty Cleaning & Sanitary Products
- 14.07 - Polishing & Preparation Products
- 14.08 - Glycerine
- 14.09 - Dyes
- 14.10 - Sawdust & Shavings
- 14.11 - Oil, Grease Absorbents
- 14.12 - Polishing Cloths, Rags, & Chamois
- 14.13 - Swimming Pool & Spa Supplies & Equipment
- 14.40 - Maintenance Supplies, N.E.C.
- 14.50 - Maintenance Supplies, Audits

15.00 Paper & Plastic Products

- 15.01 - Bags: Grocers, Variety, Paper
- 15.02 - Bags: Specialty and Liners
- 15.03 - Gift Wrap, Ribbon, & Wrapping Products
- 15.04 - Rope, Cordage, Twine
- 15.06 - Party Favors, Supplies, Novelties, Tooth-picks, & Decorations
- 15.07 - Paper Linens, Wearing Apparel, Table Cloths, Wash Cloths & Towels
- 15.08 - Food Containers & Picnic Supplies
- 15.09 - Sanitary Napkins & Tampons
- 15.10 - Paper Napkins, Tissue Products, & Towels
- 15.11 - Foil & Plastic Wrap
- 15.12 - Oiled, Waxed, & Wax Laminated Paper
- 15.13 - School & Office Supplies, Stationary, Envelopes, & Related Products
- 15.14 - Photographic Paper & Film
- 15.15 - Artist's Materials & Supplies
- 15.40 - Paper & Plastic Products N.E.C.
- 15.50 - Paper & Plastic Products, Audits

16.00 Textile Products

- 16.01 - Bedspreads, Blankets, Bed Sets, etc.
- 16.02 - Sheets & Pillow Cases
- 16.03 - Towels & Wash Cloths
- 16.04 - Table Covers & Linens
- 16.05 - Curtains & Draperies
- 16.06 - Carpets & Drapes
- 16.07 - Carpet & Rug Padding

- 16.08 - Wearing Apparel
- 16.09 - Yardage Goods; Bolt, Roll or Package
- 16.10 - Thread & Yarn; Sewing Embroidering, Knitting, Crocheting, etc.
- 16.11 - Needles, Fasteners, Pins, & Similar Products
- 16.12 - Buttons & Button Parts, (except for precious metals)
- 16.13 - Zippers, Velcro & Slide Fasteners
- 16.14 - Agriculture Bag Sewing Threads, Twines, Yarns
- 16.15 - Upholstery Supplies
- 16.16 - Sleeping Bags & Mattresses
- 16.17 - Tents & Tarps
- 16.40 - Textile Products, N.E.C.
- 16.50 - Textile Products, Audits

17.00 Miscellaneous

- 17.01 - Cigarettes
- 17.02 - Cigars
- 17.03 - Tobacco: Chewing, Smoking, & Snuff
- 17.04 - Other Smoking Supplies & Equipment
- 17.05 - Fishing Equipment, Tackle, & Supplies
- 17.06 - Firearms, Hunting Equipment & Supplies
- 17.07 - Other Sporting & Athletic Goods
- 17.08 - Explosives, Fireworks, & Supplies
- 17.09 - Toys & Children's Items
- 17.10 - Hobby or Handicraft Equipment & Supplies
- 17.11 - Soldering Equipment & Supplies
- 17.12 - Welding Equipment & Supplies

- 17.13 - Tools, Shop Equipment & Supplies
- 17.14 - Extinguishers, Safety Products & Supplies
- 17.15 - Chemicals, General N.E.C.
- 17.16 - Pressurized Gasses
- 17.17 - Motor Oil & Automatic Transmission Fluids
- 17.18 - Lubricating Oils N.E.C.
- 17.19 - Lubricating Greases
- 17.20 - Brake Fluid
- 17.21 - Antifreeze, Coolant
- 17.22 - Automotive Window Cleaners
- 17.23 - Transportation Equipment & Hardware
- 17.24 - Automotive Products, N.E.C.
- 17.40 - Miscellaneous, N.E.C.
- 17.50 - Miscellaneous, Audits

N.E.C. - Not Elsewhere Classified

AUDITS - Used for packages inspected at the location where they are weighed or measured **AND** labeled.

CONVERSION FACTORS UNITS OF MEASUREMENT

All **boldface** figures are exact; others are generally seven significant figures.

In using conversion factors, it is possible to perform division as well as the multiplication process shown here. Division may be particularly advantageous where more than the significant figures published here are required. Division may be performed in lieu of multiplication by using the reciprocal of any indicated multiplier as divisor. For example, to convert from centimeters to inches by division, refer to the table headed "To Convert From Inches" and use the factor listed at "centimeters" (2.54) as divisor.

UNITS OF LENGTH

To Convert From Centimeters	
To	Multiply By
Inches	0.393 700 8
Feet	0.032 808 40
Yards	0.010 936 13
Meters	0.01

To Convert From Meters	
To	Multiply By
Inches	39.370 08
Feet	3.280 840
Yards	1.093 613
Miles	0.000 621 37
Millimeters	1 000
Centimeters	100
Kilometers	0.001

To Convert From Inches	
To	Multiply By
Feet	0.083 333 33
Yards	0.027 777 78
Centimeters	2.54
Meters	0.025 4

To Convert From Feet	
To	Multiply By
Inches	12
Yards	0.333 333 3
Miles	0.000 189 39
Centimeters	30.48
Meters	0.304 8
Kilometers	0.000 304 8

To Convert From Yards	
To	Multiply By
Inches	36
Feet	3
Miles	0.000 568 18
Centimeters	91.44
Meters	0.914 4

To Convert From Miles	
To	Multiply By
Inches	63 360
Feet	5 280
Yards	1 760
Centimeters	160 934.4
Meters	1 609.344
Kilometers	1.609 344

UNITS OF MASS

To Convert From GRAINS	
To	Multiply By
Avoirdupois Drams	0.036 571 43
Avoirdupois Ounces	0.002 285 71
Avoirdupois Pounds	0.000 142 86
Troy Ounces	0.002 083 33
Troy Pounds	0.000 173 61
Milligrams	64.798 91
Grams	0.064 798 91
Kilograms	0.000 064 798 91

To Convert From GRAMS	
To	Multiply By
Grains	15.432 36
Avoirdupois Drams	0.564 383 4
Avoirdupois Ounces	0.035 273 96
Avoirdupois Pounds	0.002 204 62
Troy Ounces	0.032 150 75
Troy Pounds	0.002 679 23
Milligrams	1 000
Kilograms	0.001

To Convert From AVOIRDUPOIS OUNCES	
To	Multiply By
Grains	437.5
Avoirdupois Drams	16
Avoirdupois Pounds	0.062 5
Troy Ounces	0.911 458 3
Troy Pounds	0.075 954 86
Grams	28.349 523 12
Kilograms	0.028 349 523 125

To Convert From KILOGRAMS	
To	Multiply By
Grains	15 432.36
Avoirdupois Drams	564.383 4
Avoirdupois Ounces	35.273 96
Avoirdupois Pounds	2.204 623
Short Hundredweights	0.022 046 23
Short Tons	0.001 102 31
Long Tons	0.000 984 2
Troy Ounces	32.150 75
Troy Pounds	2.679 229
Grams	1 000
Metric Tons	0.001

To Convert From AVOIRDUPOIS POUNDS	
To	Multiply By
Grains	7 000
Avoirdupois Drams	256
Avoirdupois Ounces	16
Short Hundredweight	0.01
Short Tons	0.000 5
Long Tons	0.000 446 428 6
Troy Ounces	14.583 33
Troy Pounds	1.215 278
Grams	453.592 37
Kilograms	0.453 592 37
Metric Tons	0.000 453 592 37

To Convert From METRIC TONS	
To	Multiply By
Avoirdupois Pounds	2 204.623
Short Hundredweights	22.046 23
Short Tons	1.102 311 3
Long Tons	0.984 206 5
Kilograms	1 000

To Convert From SHORT HUNDREDWEIGHTS	
To	Multiply By
Avoirdupois Pounds	100
Short Tons	0.05
Long Tons	0.044 642 86
Kilograms	45.359 237
Metric Tons	0.045 359 237

To Convert From SHORT TONS	
To	Multiply By
Avoirdupois Pounds	2 000
Short Hundredweights	20
Long Tons	0.892 857 1
Kilograms	907.184 74
Metric Tons	0.907 184 74

To Convert From LONG TONS	
To	Multiply By
Avoirdupois Ounces	35 840
Avoirdupois Pounds	2 240
Short Hundredweights	22.4
Short Tons	1 016.046 908 8
Kilograms	1.016 046 908 8
Metric Tons	

To Convert From TROY OUNCES	
To	Multiply By
Grains	480
Avoirdupois Drams	17.554 29
Avoirdupois Ounces	1.097 143
Avoirdupois Pounds	0.068 571 43
Troy Pounds	0.083 333 3
Grams	31.103 476 8

To Convert From TROY POUNDS	
To	Multiply By
Grains	5 760
Avoirdupois Drams	210.651 4
Avoirdupois Ounces	13.165 71
Avoirdupois Pounds	0.822 857 1
Troy Ounces	12
Grams	373.241 721 6

UNITS OF CAPACITY, OR VOLUME, LIQUID MEASURE

To Convert From MILLILITERS	
To	Multiply By
Minims	16.230 73
Liquid Ounces	0.033 814 02
Gills	0.008 453 5
Liquid Pints	0.002 113 4
Liquid Quarts	0.001 056 7
Gallons	0.000 264 17
Cubic Inches	0.061 023 74
Liters	0.001

To Convert From LITERS	
To	Multiply By
Liquid Ounces	33.814 02
Gills	8.453 506
Liquid Pints	2.113 376
Liquid Quarts	1.056 688
Gallons	0.264 172 05
Cubic Inches	61.023 74
Cubic Feet	0.035 314 67
Cubic Yards	0.001 307 95
Milliliters	1 000
Cubic Meters	0.001

To Convert From CUBIC METERS	
To	Multiply By
Gallons	264.172 05
Cubic Inches	61 023.74
Cubic Feet	35.314 67
Cubic Yards	1.307 950 6
Liters	1 000

To Convert From MINIMS	
To	Multiply By
Liquid Ounces	0.002 083 33
Gills	0.000 520 83
Cubic Inches	0.003 759 77
Milliliters	0.061 611 52

To Convert From GILLS	
To	Multiply By
Minims	1 920
Liquid Ounces	4
Liquid Pints	0.25
Liquid Quarts	0.125
Gallons	0.031 25
Cubic Inches	7.218 75
Cubic Feet	0.004 177 517
Milliliters	118.294 118 25
Liters	0.118 294 118 25

To Convert From LIQUID OUNCES	
To	Multiply By
Minims	480
Gills	0.25
Liquid Pints	0.062 5
Liquid Quarts	0.031 25
Gallons	0.007 812 5
Cubic Inches	1.804 687 5
Cubic Feet	0.001 044 38
Milliliters	29.573 53
Liters	0.029 573 53

To Convert From LIQUID PINTS	
To	Multiply By
Minims	7 680
Liquid Ounces	16
Gills	4
Liquid Quarts	0.5
Gallons	0.125
Cubic Inches	28.875
Cubic Feet	0.016 710 07
Milliliters	473.176 473
Liters	0.473 176 473

To Convert From LIQUID QUARTS	
To	Multiply By
Minims	15 360
Liquid Ounces	32
Gills	8
Liquid Pints	2
Gallons	0.25
Cubic Inches	57.75
Cubic Feet	0.033 420 14
Milliliters	946.352 946
Liters	0.946 352 946

To Convert From GALLONS	
To	Multiply By
Minims	61 440
Liquid Ounces	128
Gills	32
Liquid Pints	8
Liquid Quarts	4
Cubic Inches	231
Cubic Feet	0.133 680 6
Cubic Yards	0.004 951 13
Milliliters	3 785.411 784
Liters	3.785 411 784
Cubic Meters	0.003 785 411 784

To Convert From CUBIC INCHES	
To	Multiply By
Minims	265.974 0
Liquid Ounces	0.554 112 6
Gills	0.138 528 1
Liquid Pints	0.034 632 03
Liquid Quarts	0.017 316 02
Gallons	0.004 329 0
Cubic Feet	0.000 578 7
Cubic Yards	0.000 021 43
Milliliters	16.387 064
Liters	0.016 387 064
Cubic Meters	0.000 016 387 064

To Convert From CUBIC FEET	
To	Multiply By
Liquid Ounces	957.506 5
Gills	239.376 6
Liquid Pints	59.844 16
Liquid Quarts	29.922 08
Gallons	7.480 519
Cubic Inches	1 728
Cubic Yards	0.037 037 04
Liters	28.316 846 592
Cubic Meters	0.028 316 846 592

To Convert From CUBIC YARDS	
To	Multiply By
Gallons	201.974 0
Cubic Inches	46 656
Cubic Feet	27
Liters	764.554 857 984
Cubic Meters	0.764 554 857 984

UNITS OF CAPACITY, OR VOLUME, DRY MEASURE

To Convert From LITERS	
To	Multiply By
Dry Pints	1.816 166
Dry Quarts	0.908 082 98
Pecks	0.113 510 4
Bushels	0.028 377 59
Dekaliters	0.1

To Convert From CUBIC INCHES	
To	Multiply By
Dry Pints	0.029 761 6
Dry Quarts	0.014 880 8
Pecks	0.001 860 10
Bushels	0.000 465 025

To Convert From DEKALITERS	
To	Multiply By
Dry Pints	18.161 66
Dry Quarts	9.080 829 8
Pecks	1.135 104
Bushels	0.283 775 9
Cubic Inches	610.237 4
Cubic Feet	0.353 146 7
Liters	10

To Convert From CUBIC FEET	
To	Multiply By
Dry Pints	51.428 09
Dry Quarts	25.714 05
Pecks	3.214 256
Bushels	0.803 563 95

To Convert From CUBIC METERS	
To	Multiply By
Pecks	113.510 4
Bushels	28.377 59

To Convert From CUBIC YARDS	
To	Multiply By
Pecks	86.784 91
Bushels	21.696 227

To Convert From DRY PINTS	
To	Multiply By
Dry Quarts	0.5
Pecks	0.062 5
Bushels	0.015 625
Cubic Inches	33.600 312 5
Cubic Feet	0.019 444 63
Liters	0.550 610 47
Dekaliters	0.055 061 05

To Convert From DRY QUARTS	
To	Multiply By
Dry Pints	2
Pecks	0.125
Bushels	0.031 25
Cubic Inches	67.200 625
Cubic Feet	0.038 889 25
Liters	1.101 221
Dekaliters	0.110 122 1

To Convert From PECKS	
To	Multiply By
Dry Pints	16
Dry Quarts	8
Bushels	0.25
Cubic Inches	537.605
Cubic Feet	0.311 114
Cubic Yards	0.011 522 74
Liters	8.809 767 5
Dekaliters	0.880 976 75
Cubic Meters	0.008 809 77

To Convert From BUSHELS	
To	Multiply By
Dry Pints	64
Dry Quarts	32
Pecks	4
Cubic Inches	2 150.42
Cubic Feet	1.244 456
Cubic Yards	0.046 090 96
Liters	35.239 07
Dekaliters	3.523 907
Cubic Meters	0.035 239 07

UNITS OF AREA

To Convert From SQUARE CENTIMETERS	
To	Multiply By
Square Inches	0.155 000 3
Square Feet	0.001 076 39
Square Yards	0.000 119 599
Square Meters	0.000 1

To Convert From SQUARE METERS	
To	Multiply By
Square Inches	1 550.003
Square Feet	10.763 91
Square Yards	1.195 990
Acres	0.000 247 105
Square Centimeters	10 000
Hectares	0.000 1

To Convert From SQUARE INCHES	
To	Multiply By
Square Feet	0.006 944 44
Square Yards	0.000 771 605
Square Centimeters	6.451 6
Square Meters	0.000 645 16

To Convert From ACRES	
To	Multiply By
Square Feet	43 560
Square Yards	4 840
Square Miles	0.001 562 5
Square Meters	4 046.856 422 4
Hectares	0.404 685 642 24

To Convert From SQUARE FEET	
To	Multiply By
Square Inches	144
Square Yards	0.111 111 1
Acres	0.000 022 957
Square Centimeters	929.030 4
Square Meters	0.092 903 04

To Convert From HECTARES	
To	Multiply By
Square Feet	107 639.1
Square Yards	11 959.90
Acres	2.471 054
Square Miles	0.003 861 02
Square Meters	10 000

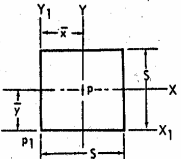
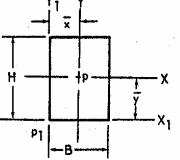
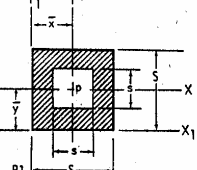
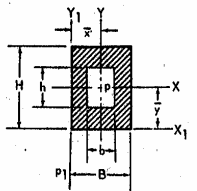
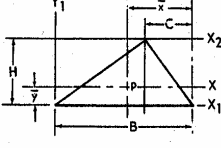
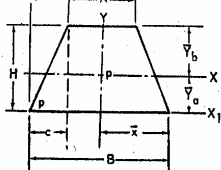
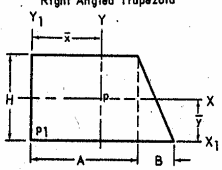
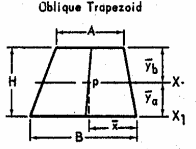
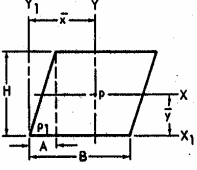
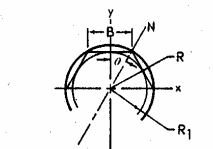
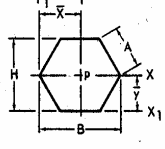
To Convert From SQUARE YARDS	
To	Multiply By
Square Inches	1 296
Square Feet	9
Acres	0.000 206 611 6
Square Miles	0.000 000 322 830 6
Square Centimeters	8 361.273 6
Square Meters	0.836 127 36
Hectares	0.000 083 612 736

To Convert From SQUARE MILES	
To	Multiply By
Square Feet	27 878 400
Square Yards	3 097 600
Acres	640
Square Meters	2 589 988.110 336
Hectares	258.998 811 033 6

Reference: Copied from units of measures, NBS Misc. Publication 286

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SECTION PROPERTIES –
PLANE AREAS

<p>Figure</p> 	<p>General Properties</p> <p>Area = S^2</p> <p>Centroids = $\bar{x} = \bar{y} = \frac{S}{2}$</p>
<p>Rectangle</p> 	<p>General Properties</p> <p>Area = BH</p> <p>Centroids = $\bar{x} = \frac{B}{2}$ $\bar{y} = \frac{H}{2}$</p>
<p>Hollow Square</p> 	<p>General Properties</p> <p>Area = $S^2 - s^2$</p> <p>Centroids = $\bar{x} = \bar{y} = \frac{S}{2}$</p>
<p>Hollow Rectangle</p> 	<p>Area = $BH - bh$</p> <p>Centroid = $\bar{x} = \frac{B}{2}$ $\bar{y} = \frac{H}{2}$</p>
<p>Oblique Triangle</p> 	<p>Area = $\frac{1}{2} BH$</p> <p>Centroid = $\bar{x} = \frac{B+C}{3}$ $\bar{y} = \frac{H}{3}$</p>
<p>Isosceles Trapezoid</p> 	<p>Area = $\frac{H(A+B)}{2}$</p> <p>Centroid = $\bar{y}_a = \frac{H(B+2A)}{3(B+A)}$ $\bar{y}_b = \frac{H(A+2B)}{3(A+B)}$</p>
<p>Figure</p> <p>Right Angled Trapezoid</p> 	<p>General Properties</p> <p>Area = $\frac{H}{2}(2A+B)$</p> <p>Centroid = $\bar{x} = \frac{3A^2 + 3AB + B^2}{3(2A+B)}$ $\bar{y} = \frac{H}{3} \frac{(3A+B)}{(2A+B)}$</p>
<p>Oblique Trapezoid</p> 	<p>General Properties</p> <p>Area = $\frac{1}{2} H(A+B)$</p> <p>Centroid = x is on a line connecting mid-points of sides A and B $\bar{y}_a = \frac{H(B+2A)}{3(B+A)}$ $\bar{y}_b = \frac{H(A+2B)}{3(A+B)}$</p>
<p>Parallelogram</p> 	<p>General Properties</p> <p>Area = BH</p> <p>Centroid = $\bar{x} = \frac{A+B}{2}$ $\bar{y} = \frac{H}{2}$</p>
<p>Regular Polygon</p>  <p>$n = \text{number of sides}$ $\theta = \frac{180^\circ}{n}$ $B = 2\sqrt{R^2 - r_1^2}$</p>	<p>Area = $\frac{nB^2 \cot \theta}{4}$ $= \frac{nR^2 \sin 2\theta}{2}$ $= nR_1^2 \tan \theta$</p> <p>Centroid = $\bar{x} = \bar{y} = 0$</p>
<p>Regular Hexagon</p> 	<p>Area = $0.866H^2$</p> <p>Centroid = $\bar{x} = \frac{B}{2} = A$ $\bar{y} = \frac{H}{2}$</p>

SECTION PROPERTIES –
PLANE AREAS

Figure	General Properties
<p>Regular Octagon</p>	<p>Area = $2.8284 R^2$</p> <p>Centroid = $\bar{x} = \bar{y} = R$</p>
<p>Circle</p>	<p>Area = $0.7854 D^2$</p> <p>Centroid = $\bar{x} = \bar{y} = R$</p>
<p>Hollow Circle</p>	<p>Area = $\pi(R^2 - r^2)$</p> <p>Centroid = $\bar{x} = \bar{y} = R$</p>

<p>Semi-Circle</p>	<p>Area = $0.3927 D^2 = 1.571R^2$</p> <p>Centroid = $\bar{x} = R$ $\bar{y} = 0.2122D = 0.4244R$</p>
<p>Hollow Semi-Circle</p>	<p>Area = $\frac{\pi(R^2 - r^2)}{2}$</p> <p>Centroid = $\bar{x} = R$ $\bar{y} = 0.4244\left(R + \frac{r^2}{R+r}\right)$</p>
<p>Ellipse</p>	<p>Area = πAB</p> <p>Centroid = $\bar{x} = A$ $\bar{y} = B$</p>

Figure	General Properties
<p>Hollow Ellipse</p>	<p>Area = $\pi (AB - CD)$</p> <p>Centroid = $\bar{x} = A$ $\bar{y} = B$</p>
<p>Semi-Ellipse</p>	<p>Area = $\frac{\pi AB}{2}$</p> <p>Centroid = $\bar{x} = A$ $\bar{y} = 0.424B$</p>
<p>Hollow Semi-Ellipse</p>	<p>Area = $\frac{\pi(AB - CD)}{2}$</p> <p>Centroid = $\bar{x} = A$ $\bar{y} = \frac{4}{3\pi} \frac{AB^2 - CD^2}{AB - CD}$</p>

<p>Circular Sector</p>	<p>Area = $R^2 \alpha$</p> <p>Centroid = $\bar{x} = \frac{2}{3} \left(\frac{R \sin \alpha}{\alpha} \right)$ $\bar{y} = R \sin \alpha$</p>
<p>Hollow Circular Sector</p>	<p>Area = $(R^2 - r^2) \alpha$</p> <p>Centroid = $\bar{x} = \frac{2 \sin \alpha (R^3 - r^3)}{3 \alpha (R^2 - r^2)}$ $\bar{y} = r \sin \alpha$</p>
<p>Circular Segment</p>	<p>Area = $\frac{R^2}{2} (2\alpha - \sin 2\alpha)$</p> <p>Centroid = $\bar{x} = \frac{4R \sin^3 \alpha}{3(2\alpha - \sin 2\alpha)}$ $\bar{y} = r \sin \alpha$</p>

SECTION PROPERTIES –
PLANE AREAS

Figure	General Properties
<p>Circular Complement</p>	<p>Area = $0.2146 R^2$</p> <p>Centroid = $\bar{x} = \bar{y} = 0.2234R$</p>
<p>Elliptic Complement</p>	<p>Area = $0.2146 BC$</p> <p>Centroid = $\bar{y} = \frac{B}{1.288} = 0.7766B$ $\bar{x} = \frac{C}{1.288} = 0.7766C$</p>
<p>Complement of Half Parabola</p>	<p>Area = $\frac{1}{3} BC$</p> <p>Centroid = $\bar{x} = \frac{3}{4} C$ $\bar{y} = \frac{7}{10} B$</p>

<p>Parabolic Segment</p>	<p>Area = $\frac{4}{3} AB$</p> <p>Centroid = $\bar{x} = 0.6A$ $\bar{y} = B$</p>
<p>Parabolic Half-Segment</p>	<p>Area = $\frac{2AB}{3}$</p> <p>Centroid = $\bar{x} = 0.6A$ $\bar{y} = 0.375B$</p>
<p>Nose Rib</p> <p>based on Parabolic Segment</p>	<p>Area = $\frac{2}{3} A(B + C)$</p> <p>Centroid = $\bar{x} = 0.6A$ $\bar{y} = 0.375(B - C)$</p>

SECTION PROPERTIES -
SOLIDS

Figure	General Properties
<p>Equilateral Triangle</p>	<p>Area = $\frac{BH}{2}$</p> <p>Centroid = $\bar{x} = \frac{B}{2}$ $\bar{y} = \frac{H}{3}$</p>
<p>Rhombus</p>	<p>Area = BH</p> <p>Centroid = $\bar{y} = \frac{H}{2}$ $\bar{x} = \frac{A+B}{2}$</p>
<p>Obtuse Angled Triangle</p>	<p>Area = $\frac{BH}{2}$</p> <p>Centroid = $\bar{x} = \frac{B+2C}{3}$ $\bar{y} = \frac{H}{3}$</p>

Figure	General Properties
<p>Cube</p>	<p>Volume = A^3</p> <p>Centroid = $\bar{x} = \bar{y} = \bar{z} = \frac{A}{2}$</p>
<p>Rectangular Prism</p>	<p>Volume = ABH</p> <p>Centroid = $\bar{x} = \frac{A}{2}$ $\bar{y} = \frac{B}{2}$ $\bar{z} = \frac{H}{2}$</p>

SECTION PROPERTIES – SOLIDS

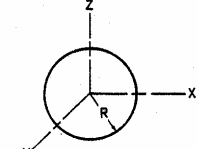
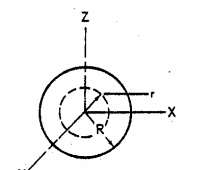
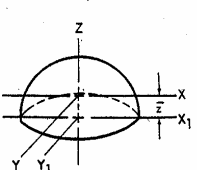
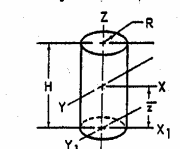
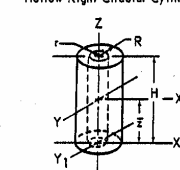
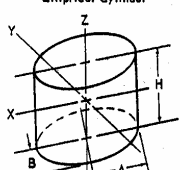
<p style="text-align: center;">Sphere</p> 	<p>Volume = $\frac{4}{3} \pi R^3$</p> <p>Area = $4\pi R^2$</p>
<p style="text-align: center;">Hollow Sphere</p> 	<p>Volume = $\frac{4}{3} \pi (R^3 - r^3)$</p>
<p style="text-align: center;">Hemisphere</p> 	<p>Volume = $\frac{2}{3} \pi R^3$</p> <p>Centroid = $\bar{z} = \frac{3}{8} R$</p>

Figure	General Properties
<p style="text-align: center;">Right Circular Cylinder</p> 	<p>Volume = $\pi R^2 H$</p> <p>Centroid = $\bar{z} = \frac{H}{2}$</p>
<p style="text-align: center;">Hollow Right Circular Cylinder</p> 	<p>Volume = $\pi H (R^2 - r^2)$</p> <p>Centroid = $\bar{z} = \frac{H}{2}$</p>
<p style="text-align: center;">Elliptical Cylinder</p> 	<p>Volume = πABH</p> <p>Centroid = $\bar{z} = \frac{H}{2}$</p>

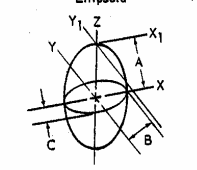
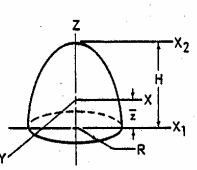
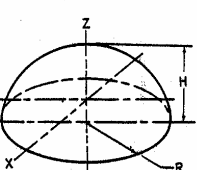
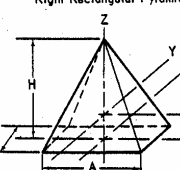
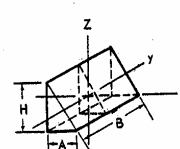
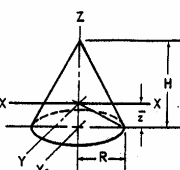
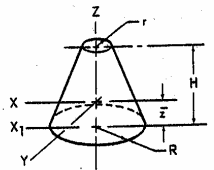
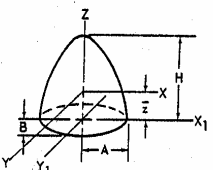
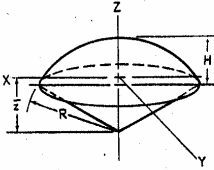
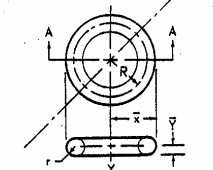
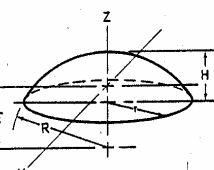
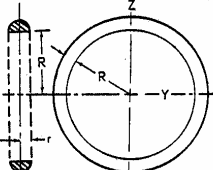
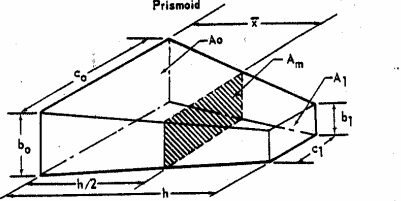
<p style="text-align: center;">Ellipsoid</p>  <p style="text-align: center;">$A > B > C$</p>	<p>Volume = $\frac{4}{3} \pi ABC$</p>
<p style="text-align: center;">Paraboloid of Revolution</p> 	<p>Volume = $\frac{\pi R^2 H}{2}$</p> <p>Centroid = $\bar{z} = \frac{H}{3}$</p>
<p style="text-align: center;">Solid Elliptical Hemispheroid</p> 	<p>Volume = $\frac{2}{3} \pi R^2 H$</p> <p>Centroid = $\bar{z} = \frac{3}{8} H$</p>

Figure	General Properties
<p style="text-align: center;">Right Rectangular Pyramid</p> 	<p>Volume = $\frac{ABH}{3}$</p> <p>Centroid = $\bar{z} = \frac{H}{4}$</p>
<p style="text-align: center;">Right Angled Wedge</p> 	<p>Volume = $\frac{ABH}{2}$</p> <p>Centroid = $\bar{x} = \frac{A}{3}$ $\bar{y} = \frac{B}{2}$ $\bar{z} = \frac{H}{3}$</p>
<p style="text-align: center;">Right Circular Cone</p> 	<p>Volume = $\frac{\pi R^2 H}{3}$</p> <p>Centroid = $\bar{z} = \frac{H}{4}$</p>

SECTION PROPERTIES – SOLIDS

<p>Frustum of a Cone</p> 	<p>Volume = $\frac{\pi H}{3} (R^2 + Rr + r^2)$</p> <p>Centroid = $\bar{z} = \frac{H}{4} \left[\frac{R^2 + 2Rr + 3r^2}{R^2 + Rr + r^2} \right]$</p>	<p>Figure</p> <p>Elliptic Paraboloid</p> 	<p>General Properties</p> <p>Volume = $\frac{\pi ABH}{2}$</p> <p>Centroid = $\bar{z} = \frac{H}{3}$</p>
<p>Spherical Sector</p> 	<p>Volume = $\frac{2}{3} \pi R^2 H$</p> <p>Centroid = $\bar{z} = \frac{3}{8} (2R - H)$</p>	<p>Torus</p> 	<p>Volume = $2\pi^2 r^2 R$</p> <p>Centroid = $\bar{x} = \bar{z} = R + r$ $\bar{y} = r$</p>
<p>Spherical Segment</p> 	<p>Volume = $\frac{\pi H}{6} (3R^2 + H^2) = \frac{\pi H^2}{3} (3R - H)$</p> <p>Centroid = $\bar{z} = \frac{3}{4} \frac{(2R - H)^2}{(3R - H)}$</p> <p>Area = $2\pi RH$</p>	<p>Outer Half of Solid Torus</p> 	<p>Length = $2\pi R$</p> <p>Volume = $\frac{4}{3} \pi r^3 + \pi^2 r^2 R$</p>

Prismoid



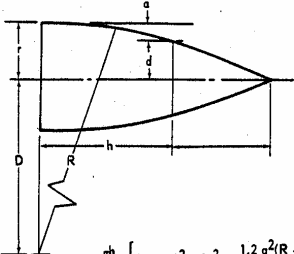
Volume $V = \frac{h}{6} (A_0 + A_1 + 4A_m)$

Centroid $\bar{x} = \frac{h(A_1 + 2A_m)}{(A_0 + A_1 + 4A_m)}$

A_0 = Area of Base
 A_1 = Area of Top
 A_m = Area @ $h/2$

Note: A_0 , A_1 and A_m must be parallel

Solid Ogive



$V = \frac{\pi h}{9} \left[(3r - a)^2 + 2a^2 - \frac{1.2 a^2 (R - r)}{R} \right]$

R = Ogive Radius
 d = Radius of Truncated Nose ($d = 0$ for a complete ogive)
 $D = R - r$
 $a = r - d$

SECTION PROPERTIES – SHELLS

Figure	General Properties
<p>Lateral Cylindrical Shell</p>	<p>Surface Area = $2\pi RH$</p> <p>Centroid = $\bar{z} = \frac{H}{2}$</p>
<p>Total Cylindrical Shell</p>	<p>Surface Area = $2\pi R(R + H)$</p> <p>Centroid = $\bar{z} = \frac{H}{2}$</p>
<p>Total Elliptical Shell</p>	<p>Surface Area = $\frac{\pi H(3A^2 + B^2)}{2A}$</p>

<p>Hollow Box</p>	<p>Surface Area = $2(AB + BC + AC)$</p> <p>Surface Area = Hollow Box With Open Ends $2C(A + B)$</p>
<p>Lateral Surface of a Circular Cone</p>	<p>Surface Area = $\pi R\sqrt{R^2 + H^2}$</p> <p>Centroid = $\bar{z} = \frac{H}{3}$</p>
<p>Lateral Surface of Frustum of Circular Cone</p>	<p>Surface Area = $\pi(R + r)\sqrt{H^2 + (R - r)^2}$</p> <p>Centroid = $\bar{z} = \frac{H}{3} \left(\frac{2r + R}{r + R} \right)$</p>

Figure	General Properties
<p>Spherical Shell</p>	<p>Surface Area = $4\pi R^2$</p>
<p>Hemispherical Shell</p>	<p>Surface Area = $2\pi R^2$</p> <p>Centroid = $\bar{z} = \frac{R}{2}$</p>
<p>Elliptical Hemispheroidal Shell</p>	<p>Surface Area = $\pi \left[R^2 + \frac{H^2}{2E} \text{LOG}_e \frac{1+E}{1-E} \right]$</p> <p>Centroid = $\bar{z} = \frac{2\pi H(R^3 - H^3)}{3E^2(\text{Surface Area})}$</p> <p>$E = \frac{\sqrt{R^2 - H^2}}{R}$</p>

<p>Paraboloid of Revolution Shell</p>	<p>Surface Area = $\frac{\pi R}{6H^2} [P - R^3]$</p> <p>Centroid = $\bar{z} = \frac{P(6H^2 - R^2) + R^5}{10H(P - R^3)}$</p> <p>$P = (4H^2 + R^2)^{3/2}$</p>
<p>Sector of a Hollow Torus</p>	<p>Length $2\pi R$</p> <p>Centroid $\bar{x} = \frac{\sin \alpha}{\alpha} \left[R + \frac{A}{4R} \right]$</p> <p>Volume $2\pi R a (r_o^2 - r_i^2)$</p> <p>$A = r_o^2 + r_i^2$</p> <p>$K = \frac{2\sin^2 \alpha}{\alpha} \left[2R^2 + A + \frac{A^2}{8R^2} \right]$</p>

JULIAN CALENDAR

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	001	032	060	091	121	152	182	213	244	274	305	335
2	002	033	061	092	122	153	183	214	245	275	306	336
3	003	034	062	093	123	154	184	215	246	276	307	337
4	004	035	063	094	124	155	185	216	247	277	308	338
5	005	036	064	095	125	156	186	217	248	278	309	339
6	006	037	065	096	126	157	187	218	249	279	310	340
7	007	038	066	097	127	158	188	219	250	280	311	341
8	008	039	067	098	128	159	189	220	251	281	312	342
9	009	040	068	099	129	160	190	221	252	282	313	343
10	010	041	069	100	130	161	191	222	253	283	314	344
11	011	042	070	101	131	162	192	223	254	284	315	345
12	012	043	071	102	132	163	193	224	255	285	316	346
13	013	044	072	103	133	164	194	225	256	286	317	347
14	014	045	073	104	134	165	195	226	257	287	318	348
15	015	046	074	105	135	166	196	227	258	288	319	349
16	016	047	075	106	136	167	197	228	259	289	320	350
17	017	048	076	107	137	168	198	229	260	290	321	351
18	018	049	077	108	138	169	199	230	261	291	322	352
19	019	050	078	109	139	170	200	231	262	292	323	353
20	020	051	079	110	140	171	201	232	263	293	324	354
21	021	052	080	111	141	172	202	233	264	294	325	355
22	022	053	081	112	142	173	203	234	265	295	326	356
23	023	054	082	113	143	174	204	235	266	296	327	357
24	024	055	083	114	144	175	205	236	267	297	328	358
25	025	056	084	115	145	176	206	237	268	298	329	359
26	026	057	085	116	146	177	207	238	269	299	330	360
27	027	058	086	117	147	178	208	239	270	300	331	361
28	028	059	087	118	148	179	209	240	271	301	332	362
29	029		088	119	149	180	210	241	272	302	333	363
30	030		089	120	150	181	211	242	273	303	334	364
31	031		090		151		212	243		304		365

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RANDOM NUMBERS

USE OF TABLE OF

Random sampling numbers are helpful in random sampling when the items in the universe (lot) can be associated with a succession of numbers. In that instance, a selection of a group of numbers from the table will yield a random sample from the universe.

The use of tables of random numbers varies. Generally, to draw a random sample from a given universe, the members of the universe are associated with the set of random numbers. Then a sample is taken from the set of random numbers and the corresponding items of the universe are selected. This gives a random sample of the size desired.

For example: Suppose that there are 100 bottles on a rack and we wish to draw a random sample of 10. We note that the numbers in the Table of Random Numbers are grouped in clusters of 2 digits each. If we number the bottles from 00 to 99, we can select a random sample of ten bottles by simply picking any ten numbers from the Table of Random Numbers. Say we open to the Table of Random Numbers, Side 1, and let us pick the first ten two-figured numbers in the third column on that page. The random numbers will thus be 68, 27, 23, 76, 28, 53, 58, 35, 25, and 96. The bottles with these numbers will constitute our sample of bottles.

Possibly a better way of proceeding is to put our pencil down at random on a digit in the table. If it is even, we use Side II; if odd, use Side I. The first two-figured numbers to the right of this that is less than 26 may be used to indicate what column to start in and the next two-figured numbers to the right may be used to indicate the row. If some such method is employed, we will have greater assurance that our starting point will be random. When the starting point is once picked, movement in any direction will give a random sample of numbers.

If more numbers are needed than available in the Table of Random Numbers, reference should be made to one of the larger sets, such as Table XXXIII of R. A. Fisher and F. Yates; Statistical Tables for Biological, Agricultural and Medical Research; Interstate Commerce Commission, Bureau of Transport Economics and Statistics, Table of 105,000 Random Decimal Digits; and the Rand Corporation's A Million Random Digits, published by the Free Press (Glencoe, Ill.).

The general rules to be kept in mind in drawing a random sample are:

1. Adopt a method of selection that will give every member of the universe an equal chance of being drawn.
2. Avoid any method that associates the selection of an item with the classification of the item being selected.
3. Draw sample items from all parts of each subplot of the inspection lot.
4. Draw sample items blind.

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TABLE OF RANDOM NUMBERS

22 17 68 65 84	68 95 23 92 35	87 02 22 57 51	61 09 43 95 06	58 24 82 03 47
19 36 27 59 46	13 79 93 37 55	39 77 32 77 09	85 52 05 30 62	47 83 51 62 74
16 77 23 02 77	09 61 87 25 21	28 06 24 25 93	16 71 13 59 78	23 05 47 47 25
78 43 76 71 61	20 44 90 32 64	97 67 63 99 61	46 38 03 93 22	68 81 21 99 21
03 28 28 26 08	73 37 32 04 05	69 30 16 09 05	88 69 58 28 99	35 07 44 75 47
93 22 53 64 39	07 10 63 76 35	87 03 04 79 88	08 13 13 85 51	55 34 57 72 69
78 76 58 54 74	92 38 70 96 92	52 06 79 79 45	82 63 18 27 44	69 66 92 19 09
23 68 35 26 00	99 53 93 61 28	52 70 05 48 34	56 65 05 61 86	90 92 10 70 80
15 39 25 70 99	93 86 52 77 65	15 33 59 05 28	22 87 26 07 47	86 96 98 29 06
58 71 96 30 24	18 46 23 34 27	85 13 99 24 44	49 18 09 79 49	74 16 32 23 02
57 35 27 33 72	24 53 63 94 09	41 10 76 47 91	44 04 95 49 66	39 60 04 59 81
48 50 86 54 48	22 06 34 72 52	82 21 15 65 20	33 29 94 71 11	15 91 29 12 03
61 96 48 95 03	07 16 39 33 66	98 56 10 56 79	77 21 30 27 12	90 49 22 23 62
36 93 89 41 26	29 70 83 63 51	99 74 20 52 36	87 09 41 15 09	98 60 16 03 03
18 87 00 42 31	57 90 12 02 07	23 47 37 17 31	54 08 01 88 63	39 41 88 92 10
88 56 53 27 59	33 35 72 67 47	77 34 55 45 70	08 18 27 38 90	16 95 86 70 75
09 72 95 84 29	49 41 31 06 70	42 38 06 45 18	64 84 73 31 65	52 53 37 97 15
12 96 88 17 31	65 19 69 02 83	60 75 86 90 68	24 64 19 35 51	56 61 87 39 12
85 94 57 24 16	92 09 84 38 76	22 00 27 69 85	29 81 94 78 70	21 94 47 90 12
38 64 43 59 98	98 77 87 68 07	91 51 67 22 44	40 98 05 93 78	23 32 65 41 18
53 44 09 42 72	00 41 86 79 79	68 47 22 00 20	35 55 31 51 51	00 83 63 22 55
40 46 66 26 84	57 99 99 90 37	36 63 32 08 58	37 40 16 68 97	87 64 81 07 83
02 17 79 18 05	12 59 52 57 02	22 07 90 47 03	28 14 11 30 79	20 69 22 40 98
95 17 82 06 53	31 51 10 96 46	92 06 88 07 77	56 11 50 81 69	40 23 72 51 39
35 76 22 42 92	96 11 83 44 80	34 68 35 48 77	33 42 40 90 60	73 96 53 97 86
26 29 13 56 41	85 47 04 66 08	34 72 57 59 13	82 43 80 46 15	38 26 61 70 04
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97 86 21 78 73	10 65 81 92 59	58 76 17 14 94	04 76 62 16 17	17 95 70 45 80
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13 13 92 66 99	47 24 49 57 74	32 25 43 62 17	10 97 11 69 84	99 63 22 32 98

SIDE 2

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21	71	121	171	221	271	321	371	421	471
22	72	122	172	222	272	322	372	422	472
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515	565	615	665	715	765	815	865	915	965
516	566	616	666	716	766	816	866	916	966
517	567	617	667	717	767	817	867	917	967
518	568	618	668	718	768	818	868	918	968
519	569	619	669	719	769	819	869	919	969
520	570	620	670	720	770	820	870	920	970
521	571	621	671	721	771	821	871	921	971
522	572	622	672	722	772	822	872	922	972
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530	580	630	680	730	780	830	880	930	980
531	581	631	681	731	781	831	881	931	981
532	582	632	682	732	782	832	882	932	982
533	583	633	683	733	783	833	883	933	983
534	584	634	684	734	784	834	884	934	984
535	585	635	685	735	785	835	885	935	985
536	586	636	686	736	786	836	886	936	986
537	587	637	687	737	787	837	887	937	987
538	588	638	688	738	788	838	888	938	988
539	589	639	689	739	789	839	889	939	989
540	590	640	690	740	790	840	890	940	990
541	591	641	691	741	791	841	891	941	991
542	592	642	692	742	792	842	892	942	992
543	593	643	693	743	793	843	893	943	993
544	594	644	694	744	794	844	894	944	994
545	595	645	695	745	795	845	895	945	995
546	596	646	696	746	796	846	896	946	996
547	597	647	697	747	797	847	897	947	997
548	598	648	698	748	798	848	898	948	998
549	599	649	699	749	799	849	899	949	999
550	600	650	700	750	800	850	900	950	1000

ROUNDING VALUES

GENERAL

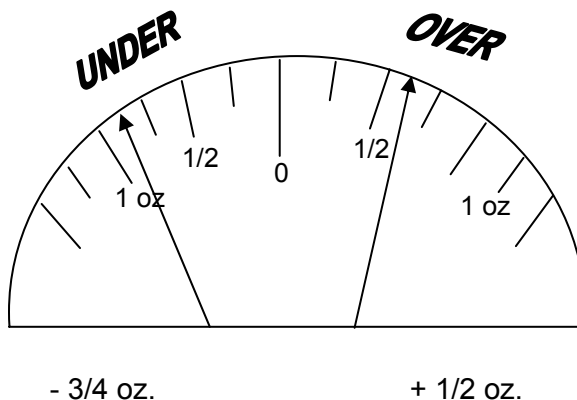
A. Recording Package Errors

Package errors are recorded only in whole units of measure. If the indicated or calculated value of a package error falls between whole units of measure, the error value is truncated not rounded.

Example: Using a scale with graduations of 0.001 lb, package errors for the first two packages inspected are + 0.019 lb. and + 0.011 lb. The unit of measure used for recording errors is 0.01 lb. Both of these errors would be recorded as +1. Minus errors are recorded in the same manner, - 0.019 lb and - 0.011 would both be recorded as -1. ($0.019 \text{ lb} \div 0.01 \text{ lb} = 1.9$, and $0.011 \text{ lb.} \div 0.01 \text{ lb} = 1.1$)

B. Scale Readings and Rounding

1. Over-Under Balance.



- Digital indications should be truncated to the lower whole unit of measure (Example: 0.122 to 12; 0.128 to 12 when using .01 as a unit of measure).

C. Calculations

When calculations are performed, it will frequently be necessary to round off the calculated number. Only the final result should be rounded. During the computations, the intermediate values should not be rounded.

**TABLE OF EQUIVALENT WEIGHTS
DECIMALS COMPLETED TO NEAREST 1/32 OUNCE**

<u>Pounds</u>	<u>Ounces</u>	<u>Pounds</u>	<u>Ounces</u>
.01	5/32	.51	8-5/32
.02	5/16	.52	8-5/16
.03	15/32	.53	8-15/32
.04	5/8	.54	8-5/8
.05	25/32	.55	8-25/32
.06	31/32	.56	8-15/16
.07	1-3/32	.57	9-3/32
.08	1-1/4	.58	9-1/4
.09	1-7/16	.59	9-7/16
.10	1-19/32	.60	9-19/32
.11	1-3/4	.61	9-3/4
.12	1-29/32	.62	9-29/32
.13	2-1/16	.63	10-1/16
.14	2-7/32	.64	10-7/32
.15	2-3/8	.65	10-3/8
.16	2-17/32	.66	10-17/32
.17	2-23/32	.67	10-23/32
.18	1-7/8	.68	10-7/8
.19	3-1/32	.69	11-1/32
.20	3-3/16	.70	11-3/16
.21	3-11/32	.71	11-11/32
.22	3-1/2	.72	11-1/2
.23	3-21/32	.73	11-21/32
.24	3-13/16	.74	11-13/16
.25	4-0	.75	12-0
.26	4-5/32	.76	12-5/32
.27	4-5/16	.77	12-5/16
.28	4-15/32	.78	12-15/32
.29	4-5/8	.79	12-5/8
.30	4-25/32	.80	12-25/32
.31	4-15/16	.81	12-15/16
.32	5-3/32	.82	13-3/32
.33	5-1/4	.83	13-1/4
.34	5-7/16	.84	13-7/16
.35	5-19/32	.85	13-19/32
.36	5-3/4	.86	13-3/4
.37	5-29/32	.87	13-29/32
.38	6-1/16	.88	14-1/32
.39	6-7/32	.89	14-7/32
.40	6-3/8	.90	14-3/8
.41	6-17/32	.91	14-17/32
.42	6-23/32	.92	14-23/32
.43	6-7/8	.93	14-7/8
.44	7-1/32	.94	15-1/32
.45	7-3/16	.95	15-3/16
.46	7-11/32	.96	15-11/32
.47	7-1/2	.97	15-1/2
.48	7-21/32	.98	15-21/32
.49	7-13/16	.99	15-13/16
.50	8-0	1.00	16-0

TABLE OF WEIGHTS AND MEASURES**ACCEPTED COMMON CONVERSIONS****Weight****Grain Weight Equivalents**

Note: The grain is the fundamental unit of the Avoirdupois, Troy, and Apothecaries Weight Systems. Useful equivalents are:

<u>1 grain</u>	=	<u>64.798918 milligrams</u>
1 apothecaries scruple	=	20 grains
1 apothecaries dram	=	60 grains
1 apothecaries / troy ounce	=	480 grains
1 apothecaries / troy pound	=	5,760 grains
1 avoirdupois dram	=	27-11/32 grains
1 avoirdupois ounce	=	437.5 grains
1 avoirdupois pound	=	7,000 grains
1 pennyweight	=	24 grains

Avoirdupois (U. S. Customary)

1 dram (dr)	=	27-11/32 grains
1 ounce (oz)	=	16 drams
1 pound (lb)	=	16 ounces
1 quarter	=	25 pounds
1 hundredweight (cwt)	=	100 pounds / 4 quarters
1 ton	=	2,000 pounds / 20 hundredweight
1 long ton	=	2,240 pounds

Troy Weight

1 pennyweight (dwt)	=	24 grains
1 ounce troy (oz t)	=	20 pennyweight
1 pound troy (lb t)	=	12 ounces troy

Apothecaries Weight

1 scruple (ʒ or sc)	=	20 grains
1 dram apothecaries (or dr ap)	=	3 scruples
1 ounce apothecaries (ʒ or oz ap)	=	8 drams apothecaries
1 pound apothecaries	=	12 ounce apothecaries

Carat Weight

1 carat	=	200 milligrams /100 points
---------	---	----------------------------

U. S. Liquid Measure

1 fluid dram (fl dr)	=	60 minims (min)
1 fluid ounce (fl oz)	=	8 fluid drams / 1.8047 cubic inches
1 gill (gi)	=	4 fluid ounce / 32 fluid drams / 7.2188 cubic inches
1 cup	=	8 fluid ounce / 2 gills / 64 fluid drams / 14.4376 cubic inches
1 pint (pt)	=	16 fluid ounce / 2 cups / 128 fluid drams / 28.875 cubic inches
1 quart (qt)	=	2 pints / 32 fluid ounces / 256 fluid drams / 57.75 cubic inches
1 gallon (gal)	=	4 quarts / 128 fluid ounces / 1,024 fluid drams / 231 cubic inches
1 barrel	=	31-1/2 gallons
1 hogshead	=	2 barrels

Dry Measure

1 dry pint	=	1/2 dry quart / 33.6 cubic inches
1 dry quart	=	2 dry pints / 67.2006 cubic inches
1 peck (pk)	=	8 dry quarts / 16 dry pints / 537.605 cubic inches
1 bushel (bu)	=	4 pecks / 32 dry quarts / 2,150.42 cubic inches
1 chaldron	=	36 bushels

U. S. Linear Measure

1 foot (ft)	=	12 inches (in)
1 yard (yd)	=	3 feet
1 rod (rd)	=	5-1/2 yards / 1 pole / 16-1/2 feet
1 furlong	=	40 rods / 220 yards / 660 feet
1 statute or land mile (mi)	=	5,280 feet / 1,760 yards / 8 furlongs / 320 rods
1 league	=	3 miles / 5,280 yards / 15,840 feet

Mariner's Measure

1 fathom	=	6 feet
1 cable length	=	120 fathoms
1 mile	=	7-1/2 cable lengths
1 statute mile	=	5,280 feet
1 nautical mile	=	6,076.11549 feet

Surveyor's Measure

1 link	=	7.92 inches
1 rod	=	25 links
1 chain	=	100 links / 4 rods / 66 feet
1 square mile	=	640 acres
1 township	=	36 square miles / 6 miles square

Cloth Measure

1 nail	=	2-1/4 inches
1 quarter	=	4 nails
1 yard	=	4 quarters

Miscellaneous Measures

1 hand	=	4 inches
1 span	=	9 inches
1 cubit	=	18 inches
1 pace	=	30 inches

Square Area Measure

1 square foot	=	144 square inches
1 square yard	=	9 square feet / 1,296 square inches
1 square rod	=	30-1/4 square yards / 272-1/4 square feet
1 rood	=	40 square rods / 1/4 acre
1 acre	=	160 square rods / 4,840 square yards / 43,560 square feet
1 square mile	=	640 acres
1 mile square	=	1 section (of land)
1 township	=	36 miles square / 36 sections / 36 square miles

Cubic Measure

1 cubic foot	=	1,728 cubic inches / 7.480519 gallons
1 cubic yard	=	27 cubic feet
1 cord	=	128 cubic feet / a stack 4' x 4' x 8'
1 ton (shipping)	=	40 cubic feet

Miscellaneous

To convert temperature: C°	=	5/9 (F° - 32)
F°	=	9/5 x C° + 32

Approximate Weight per Gallon for Some Common Liquids

Water	=	8.337 lbs / gal (at 15 C°)
Gasoline (Reg. Unleaded)	=	6.2 lbs / gal
Diesel Fuel	=	7.2 lbs / gal
Propane	=	4.24 lbs / gal
Butane	=	4.81 lbs / gal

SI (Systeme International d'Unites), METRIC SYSTEM

Originally the system was based on the units below. These original base values are not exact when measured with today's precise instruments, but are still used for common measurements.

The SI (Metric) system is based on a unit of length, the **meter**.

A cubic box 1/10 of a meter (10 cm) on the side is the unit of capacity which equals the **liter**. (1,000 cubic centimeters) The weight of the water contained in the liter is the **kilogram**.

The unit of weight, the **gram**, is the weight of water contained in a cubical box 1/100 of a meter on the side. (1 cubic centimeter)

The system is built up by multiplying or dividing the unit by 10, 100, or 1,000, always using the same prefix to indicate what the unit is multiplied or divided by.

milli means 1/1000 or divided by 1,000

centi means 1/100 or divided by 100

deci means 1/10 or divided by 10

deka means 10 or multiplied by 10

hecto means 100 or multiplied by 100

kilo means 1000 or multiplied by 1,000

Common Weight to Volume Conversions

1 gram (g) = 1 cubic centimeter (cc) of water

1 kilogram (kg) = 1 liter (L) of water

1 liter (L) = 1 cubic decimeter (dc³) = 1,000 cubic centimeters

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