

23 FEB 87

DPSCM 4155.6

DESTINATION VERIFICATION INSPECTION OF
STANDARD/VARIABLE NET WEIGHT ITEMS

I. PURPOSE AND SCOPE. This Subsection documents procedures for performing destination verification inspection of standard or variable net weight subsistence items procured on DLA contracts. These procedures are applicable to Destination Quality Assurance Representatives (DQARs) performing on delivery at purchase (destination) inspection (class 4).

II. POLICY.

A. DQARs shall perform a 100% inspection for verification of marked/required net weight whenever there is a suspicion that a grossly mismarked sampled unit may not be an isolated occurrence or at any time that 100% inspection does not impose too great a workload or cause unwarranted destruction of the product.

B. Required calculations shall be accomplished as follows:

<u>Purchase Increment/ Marked Weight Of Sample Units:</u> (1)	<u>Minimum Degree of Scale Sensitivity:</u> (2)	<u>Weighing Increment QAR shall weigh/report to nearest:</u> (3)
Greater than 75 lb	½ lb	whole lb
Greater than 10 lb to 75 lb	¼ lb	½ lb
Greater than 1 lb to 10 lb	1/8 lb	¼ lb
Greater than 8 oz to 1lb	½ oz	1 oz
Greater than 1oz to 8 oz	¼ oz	½ oz
1 oz or less	1/8 oz	¼ oz

C. Results of net weight verification inspections shall be recorded on DD Form 2393, Destination Verification Inspection of Standard/Variable Net Weight Items. Completed Form DD 2393 shall be filled with inspection records and not forwarded to the appropriate element performing the contract quality assurance function, (DPSC-HSA, DPSC-HSN, HDSRP-S or HDSRE-S), unless specifically requested.

D. When calculating the average unit net weight shortage, the quotient (number obtained when a number is divided by another) shall be calculated to four decimal places which shall be considered as the unrounded value.

This Subsection does not apply to net weight verification of fresh dairy products which is detailed in U.S. Army Health Services Command Regulation 40-28 or applicable Air Force directives.

This Subsection supersedes Subsection 218.7, 22 Mar 85.

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E. This Subsection does not apply net weight verification of fresh dairy products which is detailed in U.S. Army Health Services Command Regulation 4-28 or applicable Air Force directives.

III. DEFINITIONS.

A. Actual Receipt. The total quantity tallied-in by receiving personnel minus any shortage found. If no shortage is found, the quantity received is the same as the tally-in quantity.

B. Average Unit Net Weight Shortage. The total net weight shortage of all sample units weighed, divided by the number of sample units weighed.

C. Grossly Mismarked Sample Unit. A sample unit which is found to be 10% or more shortweight or overweight.

D. Homogenous/Fluid When Filled Products. Those products which are of uniform consistency throughout. "Fluid" at time of filling, refers to liquids or solid products (for example, shortening) which are heated and filled as a liquid.

E. Insignificant Net Weight Shortage. A shortage in which the average net weight shortage is within acceptable sampling tolerances. (Refer to Encl 1, table E.)

F. Net Weight Per Contract Unit. The specified/marked weight of the unit of purchase (e.g., item purchased in pounds, ounces, grams or containers of a standard of minimum weight).

G. S-Factor. An allowance for sample variation.

H. Range. The linear difference between the highest and the lowest numerical values in set of data, (e.g., the linear difference between + 3 and - 2 is 5).

I. Significant Net Weight Shortage. A shortage in which the total dollar value of the net weight shortage exceeds the maximum limits that are consistent with acceptable risk. (Refer to Enc 1, table E).

J. Standard Net Weight Items. Products packed in containers which have the same marked/required net weight (e.g., 60 pounds per shipping container, 5 pounds per package, etc).

K. Tally-In. A total sum or marked net weights of individual units, pieces, shipping containers, etc., or the sum of the total number of units, pieces, shipping containers, etc. received. Tally-in is performed by receiving personnel.

L. Total Net Weight Shortage. The total number of units in the lot, multiplied by the unrounded average unit net weight of a sample unit. A shortage exists when the actual net weight is less than the marked/required net weight, whereas an overage exists when the actual net weight is greater than the marked/required net weight.

M. Variable Net Weight Items. Products packed in units which do not have the same marked/required net weight.

IV. SIGNIFICANT CHANGES: This Subsection contains significant changes and should be reviewed in its entirety.

V. PROCEDURES.

A. Use of Scales.

1. Scales to be utilized in performing net weight verification inspections shall be placed on a solid foundation and the accuracy verified against test weights of known accuracy prior to use. Scales to be utilized shall also be formally calibrated at a minimum frequency of once each calendar quarter.

2. Scales with greater sensitivity than specified may be used if available, but the minimum degree of sensitivity of scales to be utilized in performing net weight verification inspections shall be as indicated in paragraph II.B.

3. If the pointer stops between two subdivisions to the scale and is midway or above, record the higher weight, otherwise, record the lower weight (e.g., on a scale graduated in pounds, pointer midway or more between 10 and 11 pounds is recorded as 11 pounds).

B. Determining Tare Weights.

1. If tare weights are furnished on shipping containers/documents or if tare weight information provided is suspected to be in error, the DQAR shall establish tare weight as follows:

a. If the item will not be rendered unserviceable, establish tare weight using a minimum of ten sample units unless otherwise specified in contractual documents. One hundred percent sampling shall be used for lots containing less than ten units.

b. If the item will be rendered unserviceable, establish tare weight using one sample unit for lots of less than 8,500 units or two sample units for larger lots, unless a larger sample size is directed by the accountable officer of DPSC-HSA, DPSC-HSN, HDSRP-S or HDSRE-S, as applicable.

c. If the DQAR finds that the tare weight as determined per paragraph V.B.1.a. or V.B.1.b. is insufficient for use in verifying net weight as required in this Subsection, the DQAR shall contact DPSC-HAS, DPSC-HSN, HDSRP-S or HDSRE-S, as applicable, for further instructions on inspecting the particular item/shipment.

2. Tare weights shall be consistent with the increment (degree of scale sensitivity) required for determining net weight.

3. Glaze on waterfoods shall be included in determining tare weights. Bandage packaging material in which cheeses are cured shall not be included as part of tare weight determinations when delivery is made in the intact bandage material type packaging.

4. Separate tare weights shall be established for each line item (e.g., market ready beef purchased as cuts/carcass equivalent).

C. 100% Verification Inspection of Standard or Variable Net Weight Items.

1. Determine and record the actual net weight of each unit.

2. Determine and record the total actual net weight of all units.

3. Compare the total actual net weight of all units with the total marked/required net weight tallied by receiving personnel.

a. If the total actual net weight is equal to or greater than the total marked/required net weight tallied by receiving personnel, there is no net weight shortage and no further net weight verification is required.

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b. If the total actual net weight of all units is less than the total marked/required net weight tallied by receiving personnel, determine the total net weight shortage and continue with step 4 which follows.

4. Round the total net weight shortage to the nearest weight increment.

a. If the rounded total net weight shortage is zero, there is no net weight shortage and no further net weight verification is required.

b. If the rounded total net weight shortage is not zero, refer to paragraph V.G. to determine if the total net weight shortage is significant.

D. Developing Sampling Plans For Other Than 100% Verification Inspection of Standard Or Variable Net Weight Items.

1. When contractual documents contain sampling criteria for verification of net weights, that criteria shall take precedence.

2. When contractual documents do not contain sampling criteria for verification of net weights, the following criteria shall apply:

a. The lot size and sample units shall be expressed in the number of shipping containers, primary containers, carcasses, etc., as appropriate.

b. The sample size shall be the number of sample units indicated in Encl 1, Table C.

3. DQARs are cautioned that the sample size required by paragraph V.D.1. or V.D.2. are minimum sample sizes. DQARs may increase the sample size when, for their professional judgment, increasing the sample size aids in performing the net weight verification inspection.

4. Strict random sampling is not required; however, for results to be representative of the shipment, sample units shall be drawn from various locations throughout the load (i.e., rear, center, and front of load) and, if appropriate, from various locations within shipping and/or intermediate containers.

E. Verification of Standard Net Weight Items.

1. Determine and record the marked/required net weight, actual net weight, and the difference (over/short) between the marked/required net weight and actual net weight of each sample unit.

2. Determine and record the total marked/required net weight, actual net weight and the difference (over/short) between the marked/required net weight and actual net weight of all sample units.

3. Compare the actual net weight of all sample units with the total marked/required net weight of all sample units.

a. If the total actual net weight is equal to or greater than the total marked/required net weight, there is no net weight shortage and no further net weight verification is required.

b. If the total actual net weight is less than the total marked/required net weight, determine the average unit net weight shortage and continue with step 4 which follows.

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4. Round the average unit net weight shortage to the nearest weight increment.
 - a. If the rounded average unit net weight shortage is zero, there is net weight shortage and no further net weight verification is required.
 - b. If the rounded average unit net weight shortage is not zero, continue with step 5 which follows.
5. Compare the average unit net weight shortage to the allowable limits in Encl 1, Table D.
 - a. If the average unit net weight is equal to or less than the allowable limits in Table D, there is no net weight shortage and no further verification is required.
 - b. If the average unit net weight shortage is greater than the allowable limits in Table D, continue with step 6 which follows.
 - c. When net weights are measured in increments other than pounds (ounces, grams), the average unit weight shortage must be converted to pounds in order to determine if it is within the allowable limits of this table.
6. Compute the total net weight shortage by multiplying the unrounded average unit net weight shortage by the total number of pieces (shipping containers, intermediate, primary containers) tallied by receiving personnel.
7. Round the total net weight shortage to the nearest equivalent weight increment.
8. Refer to paragraph V.G. to determine if the total net weight shortage is significant.

F. Verification of Variable Net Weight Items.

1. Determine and record the marked/required net weight, actual net weight, and difference (over/short) between the marked/required net weight and actual net weight of all sample units.
2. Determine and record the total marked/required net weight, actual net weight, and the differences (over/short) between the marked/required net weight and actual net weight of all sample units.
3. Compare the total net weight of sample units with the total marked/required net weight of all sample units.
 - a. If the total actual net weight is equal to or greater than the total marked/required net weight, there is no net weight shortage and no further net weight verification is required.
 - b. If the total actual net weight is less than the total marked/required net weight, determine the average unit net weight shortage and continue with step 4 which follows.
4. Round the average unit net weight shortage to the nearest equivalent weight increment.
 - a. If the rounded average unit net weight shortage is zero, there is no net weight shortage and no further net verification is required.
 - b. If the rounded average unit net weight shortage is not zero, continue with step 5 which follows.

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5. Determine the range of differences between marked/required and actual net weights of all sample units.
 - a. If there are both overages and shortages, the range is from the greatest overage to the greatest shortages.
 - b. If there are shortages only, the range is from the greatest to the least shortages.
 6. Determine the Sample Allowance (S-Allowance) by multiplying the range by the Sample Factor (S-Factor) indicated in Encl 1, Table A for the appropriate sample size selected.
 7. For sample sizes larger than 104, S-Factor is applicable.
 8. Round the S-Allowance to the nearest equivalent weight increment.
 9. Compare the rounded average unit net weight shortage to the rounded S-Allowance.
 - a. If the rounded average unit net weight shortage is equal to or less than the rounded S-Allowance, there is no net weight shortage and no further net weight verification is required.
 - b. If the rounded average unit net weight shortage is greater than the rounded S-Allowance, continue with step 10 which follows.
 10. Compute the total net weight shortage by multiplying the unrounded average unit net weight shortage by the total number of pieces (shipping containers, primary containers, carcasses, etc.) tallied by receiving personnel.
 11. Round the total net weight shortage to the nearest equivalent weight increment.
 12. Refer to paragraph V.G. to determine if the total net weight shortage is significant.
- G. Determine If Net Weight Shortage Are Significant.
1. Compute the total dollar value of total net weight shortage by multiplying the rounded total net weight shortage by the contract unit cost (price per pound, package, gallon etc.). DQARs are cautioned that for certain products (e.g., oil), it is necessary to convert the total weight shortage from pounds to the number of appropriate contract units short (e.g., gallons, quarts) prior to computing the total dollar value of the shortage.
 2. Compare the total dollar value of the total shortage to the maximum limits in Enc 1, Table E.
 - a. If the dollar value of the shortage is equal to or less than the maximum limits in Table E, there is no significant net weight shortage and DQARs need not increase the frequency of net weight verification inspections. DQARs would then report the rounded total shortage to the Receiving/Accountable Officer so that the shortage can be deducted from the contractor's invoice/manifest.

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b. If the dollar value of the shortage is greater than the maximum limits in Encl 1, Table E, there is a significant net weight shortage which must be reported as a nonconformance in accordance with the procedures detailed in Subsection 209.1. Significant net weight shortages are sufficient cause to increase the frequency of net weight verification inspections in order to protect the Government's interests.

BY ORDER OF THE COMMANDER

2 Encl

EUGENE MILLER
Chief, Administrative Management Branch
Office of Installation Services

DISTRIBUTION

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DLA-QV - 1

DPSC-WS - 25

DPSC-WXA/Library - 2

TABLE A	
S-Factor for Various Sample Sizes	
Sample Size	S-Factor
2	.96
3	.80
4	.67
5	.57
6	.52
7	.47
8	.44
9	.41
10	.39
11	.38
12	.37
13	.36
14	.35
15	.34
16-17	.33
18-19	.32
20-22	.31
23-25	.30
26-30	.29
31-35	.28
36-45	.27
46-75	.26
76-95	.25
96-104	.24
More Than 104	.23

TABLE B		
Required Degree of Scale Sensitivity and Weighing Increment		
The Weighing Increment in Block J must be rounded in decimal equivalent, calculated to four decimal places.		
WEIGHT REQUIREMENT	DEGREE OF SCALE SENSITIVITY	DECIMAL EQUIVALENT
More than 75 lbs	Nearest HALF Pound	.5000
LT or = to 75 lbs MT 10 lbs	Nearest Quarter Pound	.2500
LT or = to 10 lbs MT 1 lb	Nearest Eighth Pound	.1250
LT or = to 1 lb MT 0 ounces	Nearest 1/2 Ounce	.0312
LT or = to 0 oz MT 1 OZ	Nearest 1/4 Ounce	.0156
LT 1 ounce	Nearest 1/8 Ounce	.0078

TABLE C	
Sample Size	
LOT SIZE	SAMPLE SIZE (Based on S-1)
2-15	2
16-50	3
51-100	4
101-500	6
501-2,000	13
2,001-75,000	20
More Than 75,000	32

TABLE D	
Allowable Limits for Standard Net Weight Pack of Substance	
Required Net Weight (Pounds)	Maximum Allowable Average Unit Net Weight Shortage
Less than 0.188 lbs	2% of Required Weight (0.3% when Block J
0.188 to 0.438	.010 lbs
0.438 to 2.000	.011 lbs
2.001 to 10.000 lbs	.021 lbs
More than 10 lbs	.25 lbs

TABLE E	
Dollar Value of Cherry Cakes (Block D)	Maximum Allowable Dollar Value Total Shortage
\$1,000.00 or less	Maximum \$25.00 or 3% Total Weight Delivered
\$1,000.01 to \$20,000.00	3% of Dollar Value of Cakes Delivered (Block D).
\$20,000.01 or more	\$100.00

NOTE: If the dollar value of the shortage (Block E) exceeds the maximum allowable dollar value of the Tables then a significant unit net weight shortage exists. Convert items purchased by volume into total weight (Block D or Block J) prior to making this calculation.

TABLE F	
Rules for Determination of Range	
1. If there are both positive and negative differences, add the value of the numbers together, ignoring the plus or minus signs. (The Range of -3 to $+3 = 6$)	
2. If there are only negative differences, the range is the difference of the greatest shortage and the least shortage. (The Range of -2.25 to $-2.5 = 1.75$)	
3. If there are negative differences and at least one zero difference (no average), then the range is the value of the greatest shortage. (The Range of -2.6 to $0 = 2.6$)	

TABLE G	
Decimal Equivalent	
1/8 oz = .1250	1 oz = .0625 lbs
2/8 oz = .2500	2 oz = .1250 lbs
3/8 oz = .3750	3 oz = .1875 lbs
4/8 oz = .5000	4 oz = .2500 lbs
5/8 oz = .6250	5 oz = .3125 lbs
6/8 oz = .7500	6 oz = .3750 lbs
7/8 oz = .8750	7 oz = .4375 lbs
8/8 oz = 1.0000	8 oz = .5000 lbs
9/8 oz = 1.1250	9 oz = .5625 lbs
10/8 oz = 1.2500	10 oz = .6250 lbs
11/8 oz = 1.3750	11 oz = .6875 lbs
12/8 oz = 1.5000	12 oz = .7500 lbs
13/8 oz = 1.6250	13 oz = .8125 lbs
14/8 oz = 1.7500	14 oz = .8750 lbs
15/8 oz = 1.8750	15 oz = .9375 lbs

- NOTES**
- All computations must be rounded in accordance with DPSM 4155.12.
 - Lot size and sample size must be expressed in the type unit on which net weight will be determined.
Example: Package, Leaf, Can, etc.
 - Net Weight per contract unit: Complete Block J for Standard Pack Items only. Record unit weight in decimal equivalent (See Table G).

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A. CONTRACTOR NAME EST #/64
JONES MEAT

B. CONTRACT NUMBER
DLA134-14-D-1212

C. ITEM
BEF ROUND,

D. UNIT PRICE
BALS IMP/157 \$1.30

E. TOTAL DOLLAR VALUE QUANTITY DELIVERED
\$2,600.00

F. CONTRACT UNIT
LB

G. LOT SIZE (See Note 2)
40 PC

H. SAMPLE SIZE (See Note 3)
3 PC

I. NET WEIGHT PER CONTRACT UNIT (See Note 4)
NA

J. WEIGHING INSTRUMENT (See Note 5)
5000

1. TOTAL SHORTAGE OF SAMPLES
(Round only, to four decimal places. Bring forward from Block 11.)
8.5

2. AVERAGE UNIT NET WEIGHT SHORTAGE
(Total shortage divided by the sample size. Step 1 divided by Block 11.)
2.8

3. AVERAGE UNIT NET WEIGHT SHORTAGE
(Round Block 2 to nearest hundredth. Round Block 3. Enter to three decimal places.)
3.0

4. DOES THE ROUNDED AVERAGE UNIT NET WEIGHT SHORTAGE EQUAL ZERO? (If Yes, See Note 6)
 a. YES. Enter "Y" in Block 15.
 b. NO. Go to Block 5.
X

K. TALLY-IN

a. Piece Count
40

b. Pounds
2,000

c. Piece Count
40

d. Pounds
2,000

5. IS THE ITEM STANDARD OR VARIABLE NET WEIGHT PACKED? (If Yes)
 a. STANDARD. Go to Block 6. Steps 6 through 12 may be omitted.
 b. VARIABLE. Enter "V" in Block 6 and 7. Go to Block 6.
X

Sample Number	a. GROSS WEIGHT	b. TARE WEIGHT	c. NET WEIGHT	d. MARKED WEIGHT	e. SHORTAGE (+, - or 0)
1	52.0	2.5	49.5	51.0	-1.5
2	48.0	2.5	45.5	49.0	-3.5
3	49.0	2.5	46.5	50.0	-3.5
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

6. RECORD THE MAXIMUM ALLOWABLE AVERAGE UNIT NET WEIGHT SHORTAGE (See Note 8)
NA

7. DOES THE AVERAGE UNIT NET WEIGHT SHORTAGE IN BLOCK 3 EXCEED THE ALLOWABLE LIMITS OF BLOCK 6? (If Yes)
 a. YES. Go to Block 12.
 b. NO. If Block 6 is equal to or greater than Block 3 enter "0" in Block 12.
NA

8. DETERMINE THE RANGE (See Note 7 and Column 6)
2.0

9. RECORD THE S-FACTOR (See Note 9)
1.00

10. COMPUTE THE S-ALLOWANCE (Range times S-Factor. Step 8 times Step 9. Round up)
2.0

11. S-ALLOWANCE ROUNDED (Round Block 10 to the weighing instrument)
2.0

12. DOES A STATISTICAL NET WEIGHT SHORTAGE EXIST? (If Yes)
 a. YES. Step 7 is greater than Block 11. Go to Block 13.
 b. NO. Block 3 is equal to or less than Block 11. Enter "0" in Block 13.
X

13. TOTAL NET WEIGHT SHORTAGE (Round to the weighing instrument. Round only.)
 Unrounded Unit Net Weight Shortage times Tally-In Pieces. (Step 7 times Block 13.) If "0" go to Block 16.
113.33

14. TOTAL NUMBER OF UNITS SHORT (Round to the whole unit)
 a. Enter N/A if contract unit (Block F) is pounds and go to Block 15a.
 b. Total Net Weight Shortage divided by the Standard Net Weight per contract unit (Block 13 divided by Block I) and go to Block 15b. If "0" go to Block 16.
NA

R. TOTALS **149.0** **141.5** **150.0** **-9.5**

15. ACTUAL DOLLAR VALUE SHORTAGE
 a. Total Net Weight Shortage times Unit Price (Block 13 times Block D)
147.5
 b. Total units short times unit price (Block 14 times Block D)

c. If Block R.a. is equal to or greater than Block R.b., there is no weight shortage. No further action is required. Accept tally-in figures.
 d. If Block R.a. is less than Block R.b., complete Blocks 1-12.

16. MAXIMUM DOLLAR VALUE LIMIT OF ACTUAL SHORTAGE (Refer to Block 6 and Extract from Table B)
25.00

S. REMARKS

17. DOES THE DOLLAR VALUE SHORTAGE IN BLOCK 15 EXCEED THE MAXIMUM LIMITS IDENTIFIED IN BLOCK 16? (If Yes)
 a. YES. A significant net weight shortage has been determined. Report results to DPC-COAE and record final action in Remarks.
 b. NO. Report actual shortage from Block 15 or 16, as appropriate, to the Receiving/Accountable Officer so the Tally-in Quantity can be adjusted equal quantity received.
X

T. INSPECTOR
 a. Signature
Donna R Smith, SGT.
VFIS
 b. Location
Ft Osage, AL
 c. Date Signed
31 Oct 86

18. ACTUAL QUANTITY RECEIVED (Use either 15a or 15b.)
 a. If Block F is pounds, Tally-in pounds minus Net Weight Shortage (Block 13b. minus Block 13).
1886.5
 b. If Block F is not pounds, Tally-in Pieces minus Total Number of Units Short (Block 14a. minus Block 14).