DLA Troop Support -FTSC
15 Dec 23

APP A
DLA Troop SupportH-4155.2

FOREWORD
(Supplementation is permitted.)

Appendix A is an aid for the inspection of Meal, Ready-to-Eat (MRE) rations. It provides guidelines for sampling, inspecting, classifying defects, and determining lot serviceability. Users of this publication are encouraged to submit comments and recommended changes to improve this publication, through channels, to DLA Troop Support, ATTN: DLA Troop Support- FTSC. Changes will be coordinated and implemented as appropriate.

BY ORDER OF THE COMMANDER

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ARMY VETERINARY SERVICES

This DLA Troop Support Handbook 4155.2, App A, supersedes DSCP Handbook 4155.2, App A Dec 23

TABLE OF CONTENTS

I. GENERAL.

A. Purpose and Scope. This Appendix provides a reference and guide for the surveillance inspection of Meal, Ready-to-Eat (MRE) rations and was written and coordinated to facilitate use on both DLA / DLA Troop Support-controlled MREs and those controlled by the individual Military Services.

B. Explanation of Inspection Concept. This Appendix incorporates the concept of condition coding a lot based on the serviceability of the various components contained within the different menus and their estimated remaining shelf life. Basically, it involves a two-step process: (1) Determine if any components exceed an action number and if so, (2) classify menus containing the defective components using the criteria contained in Table N.

C. Receipt Inspection Guidance. For receipt inspections, use the same sampling criteria and defect tables as for surveillance. In some cases, a cursory inspection may be performed in lieu of a receipt inspection (see guidance on cursory inspections below). In addition, inspectors shall advise DLA Troop Support (Department of the Air Force (DAF) Public Health for Air Force inspection activities) when containers/products fail to comply with essential receipt criteria identified in the appropriate monographs. Notification should be by the most expeditious means when there is a possibility that warranty action can be initiated. Inspectors will be provided additional guidance concerning warranty inspection/actions if required.

D. Cursory Inspections. Cursory inspections are simply the visual inspection of palletized load and conveyance to determine if there is any obvious damage or contamination that occurred during transport. Cursory examination is only authorized for MREs received directly from an assembly plant, or for loads that received a full (not cursory) inspection at the installation from which the MREs were received within the last 30 days.

E. Inspection Test Date (ITD) Extensions. Inspectors may extend an ITD based on their estimate of the lot's remaining shelf-life. Table N is provided to aid the inspectors in arriving at the best estimate possible without the benefit of laboratory testing. Remarking of the unitized loads/cases with a revised ITD is the responsibility of the accountable officer.

F. Disposition Recommendations.

1. The accountable officer/agency will be informed of inspection results by the Veterinary/Medical Food Inspector. Inspectors will include (as a minimum): the condition code as determined with this Appendix, estimated remaining shelf-life, TTI stage, and a summary of general lot characteristics. Inspectors are also encouraged to provide additional comments and pictures that will assist the accountable officer/agency in determining a final disposition.

2. Final disposition instructions for lots placed on medical hold require review and approval by the local medical authority.

3. The points listed below should be considered when developing a disposition recommendation. This list is not all inclusive and each point will not always apply.

a. Can the defective menu(s)/component(s) be removed or replaced just prior to consumption?

b. How rapidly is the most defective component expected to deteriorate to the point that it is likely to become unserviceable?

c. Can the lot be issued and supplemented/substituted with similar commercial items, Supply Catalog items, or operational ration component(s)? Component replacement of MREs can be performed successfully but the ultimate decision will be made through communication between the accountable officer and DLA Troop Support.

Note: If it can be determined that the substandard components deteriorated through some action or inaction that occurred prior to the military service taking possession from DLA Troop Support, DLA Troop Support may provide replacement rations or ration components. If the deterioration took place because of poor storage and transportation after the military service took possession of the rations, the decision regarding supplements or substitution would be made, and purchased by, the accountable officer.

G. <u>Inspection Equipment</u>. The items listed below are recommended as the minimum necessary to perform the inspections of MREs. However, this list is not intended to be all encompassing.

1. Adequate lighting.
2. Magnification lens (3 to 5 power recommended) is optional.
3. Metal ruler.
4. Paper plates.
5. Disposable cutlery.
6. Paper cups.
7. Paper towels.
8. Scissors, general use (must be strong enough to easily cut menu bags and retort pouches).
9. Tape (for re-taping menu bags and cases).
10. Sharpie pen/marker.
11. Number 2 stylus.
12. Sharp knife, box cutter, or scalpel that can be sanitized.
13. Alcohol swabs.
14. Bottled water (for rinsing palate).
15. Sharpie Permanent Marker/Pen

H. Definitions.

1. **Monograph**. An information and instruction sheet that provides the inspection activity with a description of a MRE component, including normal characteristics and signs of deterioration, as well as special instructions on how to examine the item. Special notes concerning inspection techniques are also included in some Monographs. Monographs can be accessed at https://www.dla.mil/Troop-Support/Subsistence/QA-Publications/Appendix-A/.

2. Component Classification. The Monograph index (Table M) indicates the classification for each component and can be accessed at https://www.dla.mil/Troop-Support/Subsistence/QA-Publications/Appendix-A/.

a. Primary. Any individual component in the MRE which, if unserviceable, will make the meal nutritionally inadequate for any method of intended use.

b. Secondary. Any individual component in the MRE which, if unserviceable, will reduce the nutritional value of the meal but will not render the meal unfit for its intended purpose.

c. Ancillary. Any component in the MRE which contributes little or no nutrition to the meal and if unserviceable, will not cause the meal to be nutritionally deficient for any intended use.

3. Major A Defect. This classification should be used for defects that are likely to cause hazardous or unsafe conditions for individuals using, maintaining, or dependent upon the product. The words *"are likely to"* are important. They do not mean *"could possibly"* since it is always possible to develop grand scenarios that transform trivial happenings into major catastrophes. Therefore, the use of this classification requires experience, prudence, and sound judgment.

4. Major B Defect. These are defects that are not hazardous or unsafe. However, they may restrict the use of the product or make its consumption unlikely under the conditions for which the rations were originally designed. Examples: Extreme color (darkening), odor (rancidity), or flavor (bitterness) changes in primary components of a ration that makes them unlikely to be consumed under normal field conditions where resupply or alternative feeding strategies are available. However, under more restrictive conditions the components could be consumed without concern that illness could be produced.

5. Minor Defect. These are defects that make the product less useful than it should be, but not seriously so. Minor defects usually do not affect serviceability. However, their identification is important since they often reveal early signs of deterioration and can be detected before the item reaches a condition that makes its consumption unlikely under conditions of normal use. Their early detection may lead to a predictive intervention by the accountable officer to ensure consumption before the component or menu loses its serviceability.

6. Product Codes.

a. Assembly code information/Assembler's lot number: Contract and component identification markings found on the shipping container, menu bags, and/or accessory bags that reflect ration assembly information only (e.g., assembly contractor, date of pack, assembly lot numbers, Inspection Test Date (ITD), etc.).

b. Component code information/component lot number: Item identification markings found on the primary package and, when applicable, the secondary package, that reflects the producer's name, the USDA Establishment Number, the production lot number of the component, the nomenclature, etc.

7. Action Number (AN). A number which, when reached or exceeded, indicates additional inspection is necessary or indicates a component has deteriorated beyond acceptable limits.

8. Condition Coding. Traditionally, condition codes have been based primarily on estimates of remaining shelf-life. MRE serviceability will be determined based on the usability status of all menus. However, to aid accountable officers in choosing the best disposition option, inspectors will provide them the best possible estimate of remaining shelf-life. A list of applicable condition codes and their descriptions are as follows:

a. Condition Code A (issuable without qualification): Refer to Table N.

b. Condition Code B (issuable with qualification): Refer to Table N. Accountable officers are required to determine what qualifications will be specified in order to issue Condition Code B stock (e.g., issue with instructions to consume as soon as possible; or to replace specific components with supplements, provided that the inspector has determined that supplementary components are available).

c. Condition Code H (unserviceable - destroy in accordance with local policy): Refer to Table N. This classification will be used only when the entire lot has been deemed unserviceable.

d. Condition Code J (laboratory testing, medical hold rework, or reclassification hold): Any item on hold pending laboratory analysis, rework, or awaiting authority for disposal.

e. Condition Code L (warranty action hold): Any item placed on hold pending warranty action. Warranty inspections will be directed by the contracting officer and/or the chain-of-command. Inspectors who are asked to perform a warranty inspection will be supplied with specific sampling and inspection instructions.

9. Thermostabilized Component. Any component subjected to a thermal process in a closed retort approved by a process authority.

10. MRE Lot Serviceability. Two factors are considered when determining the overall serviceability of a MRE lot. First, the lot is condition coded using Table N and then the integrity of the packaging and packing is considered. It is recognized that the status of a MRE lot initially declared unserviceable may change as the result of a rework effort or special instructions provided by the accountable officer at/prior to issue.

11. Time-Temperature Indicator. A small label attached to the outer case used to monitor storage conditions. The TTI should be used as a tool only and shall not be the sole factor for determining disposition of rations in storage.

12. Abrasion. A break or crack in the outer lamination of the retort pouch.

13. Foldover wrinkle. Pouch material is overlapped on itself in the seal area that reduces the closure seal to less than 1/16 inch.

14. Entrapped Matter. Foreign material may be trapped in the seal area when the pouch is sealed or bonded. Entrapped matter weakens the seal, but as long as there is 1/16 inch of continuous seal all the way across the seal area (i.e., from one side of the pouch seal to the other), then the seal is considered acceptable.

15. Delamination. Delamination is the separation of laminated films in a flexible laminated pouch.

16. Stress Crack. It is possible that the foil barrier layer in the MRE pouch material may break, but the outer layer (lamination) of polyester or oriented polypropylene is still intact. This would be called a stress crack, and it is not scored as a defect.

17. Barrier Layer. For an MRE retort pouch this is the lamination (foil) that prevents transmission of light, water vapor, or oxygen into out of the retort pouch.

18. Product Contact Layer. For an MRE retort pouch, this would be the inner lamination (polyolefin) which is in contact with the food.

19. Adhesive. Bonding material that binds the laminations (thin sheets of polyolefin, biaxially oriented polyamide, aluminum foil, biaxially oriented polyamide and polyester or oriented polypropylene) that make up the retort pouch material.

20. Inspection Module. In Operational Rations, the word module typically means a set of cases whose combined contents yield the components necessary to feed one meal to a given number of soldiers. For the purposes of MRE inspection, we will refer to a matched “A” and “B” case as an inspection module. This is meant to minimize confusion. The unit of issue is a single case. Both case “A” and case “B” have the same National Stock Number (NSN), and they are issued together in order to provide greater menu variety to troops. In order to make sure that inspection covers all the menus/components during inspections, inspectors will make use the term “inspection modules”. An inspection module is a matched “A” and “B” case.

21. Commercially Sterile. Food that is free of all pathogens and those spoilage organisms capable of growth during normal storage and transportation conditions. Normal transportation and storage temperature is defined as 80°F or less.

II. ROUTINE INSPECTION GUIDANCE.

A. STEP 1: Cursory or Full Inspection. Normally, rations received will undergo a full destination inspection. If the depot that the rations were received from performed a cursory inspection, then a full receipt inspection shall be performed at destination. A full receipt inspection is required unless:

1. The MREs are delivered to the installation directly from the MRE assembly plant. Inspect these deliveries for transportation damage/obvious defects only.

2. T he MREs are delivered from a depot or other installation and a current (within the last 30 days) inspection report, completed at the point of origin (for example, a depot, not another installation that received the same lot) accompanies the shipment or a current MRE inspection report is posted in the MRE Inspection database for the lot number and manufacturer/assembler delivered. The origin report in the Veterinary Service Information Management System (VSIMS) MRE Inspection Database or accompanying inspection report should match the lot number and manufacturer/assembler information on the shipping container, plus the delivery origin.

B. STEP 2: Evaluation of Storage Conditions (Surveillance).

1. Storage conditions may vary significantly and as a minimum, MRE storage areas should be clean and dry. MREs should not be stored directly on the floor. The area should be free of pests in accordance with:

a. MIL-STD 904D, Detection, Identification, and Prevention of Pest Infestation of Subsistence.

b. TG-38 Protecting Meals Ready-To-Eat Rations (MREs) and Other Subsistence During Storage.

2. When multiple pallets of MREs are warehoused, the storage facility should meet the additional standards of the current version of MIL-STD 3006, Guidelines for Auditing Food Establishments, Appendix A. MREs cannot be stacked more than 4 pallets high without the use of storage aids, pallet racks/pallet sets, etc. These pallet racks/pallet sets should support the full weight of any additional pallets. The pallet (s) above shall not be in contact with or supported by the pallets beneath. Temperature history of storage locations must also be considered when recommending/determining when the next inspection is due.

3. All cases opened for inspection, or damaged, shall be recouped or repaired in a manner sufficient to ensure protection of the product during subsequent storage and handling. Cases should be back filled so that no more than one case will have less than 12 menu bags.

C. STEP 3: Determine If Grand Lotting Is Appropriate.

1. Lotting procedures will be as follows:

a. Contractor's lots are composed of rations from the same assembly contractor, having the same contract number and lot number, and stored under substantially similar storage conditions.

b. Grand lots for the purpose of MRE inspections will be composed of rations from the same assembly contractor that have the same contract number. Grand lots will contain rations from two or more contractor's lots as long as the contractor (assembler) and production year are the same. Additionally, the rations must have been stored under substantially similar storage conditions (Check the TTI values on cases from each contractor's lot, they should be nearly the same). Samples from grand lots must represent all individual lots proportionally, even if the next highest sample size must be used. Identity of samples from each sublot must be maintained throughout the inspection. This will be accomplished by marking the menu bags with the lot code from the case that the menus are drawn from.

2. When the action number is reached or exceeded during normal inspection of a grand lot, complete the normal inspection of the grand lot, and then perform a special inspection of the affected component(s) of the nonconforming lot(s).

3. Defective contractor's lots will be segregated from grand lots and inspected individually when one or more of the following occurs:

a. A Major A defect is found in the contractor's lot.

b. The Major B or Minor defects found seem to be concentrated in one or more of the contractor's lots comprising the grand lot.

c. The inspector determines for any reason, based on initial inspection results, that inspection of each contractor's lot is necessary.

4. Grand lotting is encouraged (to conserve inspection resources) whenever it is considered appropriate by the inspection activity. Grand lotting will not be used when performing warranty inspections or on inspections of lots reported as possibly having wholesomeness deficiencies.

D. STEP 4: Determine Lot Size.

1. Lot size is expressed as the total number of inspection modules, menus, or components as appropriate:

a. For inspection of shipping containers, verify that there is an equal or nearly equal number of both case "A" and case "B". If the number of case "A" and "B" are equal, then divide the total number of cases by 2 to determine the number of "inspection modules." If the number of inspection modules is not equal or nearly equal, then follow the instructions in footnote 3 to Table A.

b. For inspection of Menu Bags and contents (including accessory bags), the sample unit is the menu, and the lot size would be the total number of menu bags in the lot. To determine this, multiply the total number of inspection modules by 24.

E. STEP 5: Inspect Shipping Containers and Selection of Menu Samples.

1. IAW Table A, select the appropriate sample size for shipping container examinations. Obviously damaged shipping cases should not be selected unless they are truly representative of the lot. Damaged cases should be set aside, inspected, and salvaged separately.

2. Using the defects listed in Table C, the inspectors should check each sample case for loose straps, different type straps on one or more cases than those on the majority of the lot, or previously opened cases. While these indicators may be the result of tampering, each may also be due to other reasons (e.g., a wholesale rework of a lot). Inspectors should contact their supervisors for guidance if pilferage or tampering is suspected.

3. Open the sample cases to determine how many different menus they contain. While the MRE was designed to have 24 different menus in each module, inspectors may encounter double packing of one or more menus.

4. Using defects listed in Table C, observe each case for signs of rodent damage or insect infestation. Post infestation findings on the inspection report, to include:

a. Whether or not the pests were alive or dead.

b. Identification of the pests (preferably based on entomological or laboratory identification).

c. Probable origin of pests (see DLA Troop Support Handbook 4155.2, paragraph XI.).

d. Probable movement of pests. For example, from outside the shipping container into the menu bags or vice-versa.

5. Classify each defective case by the most serious defect it possesses.

F. STEP 6: Perform Closed Package Inspection of Menu Bags.

1. IAW Table D, select the appropriate number of menus, being sure the samples are

proportionally representative of the menus in the lot.

2. If the inspection lot has been grand lotted, always mark each menu bag with the assembler lot code from the case from which the menu was taken. Use a permanent marker or a self-adhesive label or some other method that will not easily rub off. The assemblers lot code is a four-digit number (Julian Date) taken from the side panel of the case. In this way, if the action number is exceeded, then the inspector can determine whether all the contractor's lots require a Special Inspection. It is also recorded on the inspection report for each defect even if the action number is not exceeded.

3. Inspect for defects listed in Table F.

G. STEP 7: Perform Closed Package Inspection of Menu Bag Contents and Accessory Bag.

1. Open the menu and accessory bags.

2. Menu bag components will be inspected for defects in accordance with Table G. Accessory bags will be inspected for defects IAW Table F. When inspecting retort and thermostabilized pouches, use the following Non-Destructive Open Package Inspection (NDOPI) method:

a. Lay pouch on flat surface; check for swelling.

b. Visually scan both sides of the surface of the pouch. Use the light source by changing the position of the pouch in relation to the light source to better spot anomalies, such as delamination. Run fingers along both sides of the pouch surface, particularly along the ridges of wrinkled areas, feeling for breaks in the outer layer of the laminate. These will feel like small snags. Using a nylon is a good way to find abrasions or draw a stylus gently across the possible abrasion. It may also be helpful to examine possible abrasions with a magnifying glass.

c. Press down firmly on the pouch, pushing the food towards the outer edge.

d. Look at the edge of the pouch, looking for indication that product has leaked through the pouch seal.

e. Examine the seal area around the pouch and look for abnormalities.

3. Thoroughly examine all pouches within the menu bag under a good light source and, if available, with the aid of a magnifying glass. When a component exhibits more than one defect, it will be classified by the most serious defect it possesses. However, for the purpose of gathering additional information, the lesser defects will also be noted.

H. STEP 8: Perform Destructive Open Package Inspection (DOPI).

1. Open package inspection will be performed in accordance with Table H and those defects listed in Table J. Select menu bags that did not already have defects noted during the closed package inspection. Use the following procedures for inspecting each retort pouch and thermostabilized pouch in the DOPI sample:

a. Lay pouch on flat surface; check for swelling.

b. Visually scan both sides of the surface of the pouch. Use the light source by changing the position of the pouch in relation to the light source to better spot anomalies, such as delamination. Run fingers along both sides of the pouch surface, particularly along the ridges of wrinkled areas, feeling for breaks in the outer layer of the laminate (abrasions). These abrasions will feel like small snags. Using a nylon is a good way to find abrasions or draw a stylus gently across the possible abrasion. It may also be helpful to examine possible abrasions with a magnifying glass.

c. Press down firmly on the pouch, pushing the food towards the outer edge.

d. Look at the edge of the pouch, looking for indication that product has leaked through the pouch seal.

e. Examine the seal area around the pouch. Look for abnormalities such as foldover wrinkles or entrapped matter**.**

f. Using a sharp scalpel-type knife that is sanitary, make an "X" incision across the body cavity. Peel back the flaps.

g. Look at the food, smell it, and transfer to a plate for sensory exam.

h. Clean pouch and determine if the seam areas are intact by running a Number 2 Stylus down the now exposed inner surface of the pouch seal area and using a magnifying glass if necessary. The purpose of this is to determine if there are weak seal areas or channels that were plugged by the food inside the pouch.

2. Inspectors should refer to the component monographs for information relative to the product's normal characteristics, the most likely deteriorative conditions to be observed and any unique inspection information and special notes concerning the item. Monographs contained in the MRE can be accessed at https://www.dla.mil/Troop-Support/Subsistence/QA-Publications/Appendix-A/.

3. Each component of the sample DOPI menus (including all accessory items) will be opened and inspected. The procedure for the inspection of the Flameless Ration Heater (FRH) will be as listed in 4. below. If no Major A or Major B defects are noted and the action number for minor defects is not exceeded during normal open package inspection, this phase of the inspection should be considered complete.

4. The FRH will be tested using a randomly selected sample size of thirteen from the DOPI menus. Follow the instructions on the pouch to activate the heater, except a retort pouch will not be used. A heater that fails to activate after ten minutes shall be considered defective. Heaters that are defective due to failure to activate will not be classified and tallied on the DLA Troop Support Form 5117, but should be documented in Part VIII, Narrative Comments and DLA Troop Support -FTSC should be notified (215) 737-7771/7773 (DSN 444) or Email: IndividualRationInspectionReporting@dla.mil. The results of FRH testing are not a factor when determining the serviceability of the rations but the contracting officer may provide further instructions or guidance if faulty heaters are identified.

5. Classify each defective component by the most serious defect it possesses.

Note: The disposal of any FRH that has not been activated shall follow prescribed Directives, Instructions, or Guidelines of the respective Service and any Environmental Protection Agency (EPA), Local, or State Regulations. OCONUS operations should follow local environmental laws and/or the Status of Forces Agreement (SOFA).

I. STEP 9: Recording Results.

1. Record the following information for all defective components:

a. Menu number.

b. Assembler's lot number.

c. Component nomenclature and code.

d. Processor's and/or plant name (if available).

e. Defect number.

f. Specific defect code (if applicable).

g. Narrative description of defect (if necessary). Note: Anytime an inspector uses the defect description for "other", they will need to enter a description to complete the report.

h. Tally defects (Major A, Major B, Minor) according to type of components.

2. All components observed during the inspection with Major A or Major B defects will be discarded (whether they are part of the sample or not). Components not exhibiting defects or those exhibiting only minor defects may be reassembled into the lot.

3. Component packages with a Major A or Major B packaging defect (other than swelling) should be opened to evaluate the effect the defect has on the product. Any findings should be recorded as a note on the inspection record. Do not taste product from defective pouches. **NOTE:** This inspection is an exception to normal destructive open package inspection (DOPI), during which product is given a sensory examination and compared to criteria found in

the applicable monograph.

J. STEP 10: Determine if Special Inspection is Required. Special inspection is normally required when any action number is reached/exceeded. However, there are rare occasions when an action number may be exceeded, and it may be appropriate to waive the Special Inspection. This would normally be a situation in which it can be determined that there is degradation throughout the grand lot. For example, a situation in which the entire lot is heat stressed or infested. If the TTI value is 4 or 5 and the Normal Inspection shows that multiple components are heat stressed in numbers that exceed the action numbers. If a Special inspection is deemed necessary, go to Section III for procedures.

K. STEP 11: Determine Disposition. Disposition based on routine inspection results will be determined when no Major A or Major B defects were noted or the action number for minor defects combined has not been reached.

1. The Condition Code of a lot may only be downgraded based on special inspection results or if a factor such as heat stress or infestation causes uniform degradation throughout the lot.

2. If deemed necessary, samples may be submitted to the appropriate supporting laboratory. The lot will then be placed in Condition Code J, pending results of the tests.

L. STEP 12: Provide Results and Recommendations to Accountable Officer/Agency.

1. Input data to the appropriate VSIMS database and provide a copy of the inspection report to accountable officer.

2. If VSIMS access is not available, complete DLA Troop Support Form 5117, and provide copy of report to accountable officer.

3. Historically, there have been examples of MRE lots which have been reworked or supplemented to preclude loss to the government. Normally, this is facilitated and/or contracted by DLA Troop Support. Many times, inspectors have included these recommendations for service-owned rations, but the replacement components were never provided to the soldiers who consumed the MREs. The inspector should not make these recommendations unless they have assurance from the accountable officer that the replacement components will be made available. In addition, by making this recommendation the inspector takes on the additional responsibility of following up on the replacements. Also, informing the unit that will be consuming the rations, that replacements are recommended, and which accountable officer made the commitment to provide supplements and/or replacement components. Otherwise, components should be assessed as Serviceable (Condition Code A or B, as is, without replacements or supplements) or Unserviceable (Condition Code H) or on Medical Hold (Condition Code J).

M. Step 13: Scheduling the Next Surveillance Inspection.

1. Condition Code A – Reinspect in 6 months if this lot is in stock. If average storage temperatures are between 80-100^{o}F, inspect within 3 months. If average storage temperatures are in excess of 100^{o}F, inspect within 1 month.

2. Condition Code B – Reinspect within 3 months if this lot is still in stock. If average storage temperatures are in excess of 100°F, inspect within 1 month.

III. SPECIAL INSPECTION GUIDANCE. During a Special Inspection, the inspector pulls an additional quantity of only those components that met or exceeded the Action Numbers during the Normal Inspection. All defective samples will be classified by the most serious defect they possess. If you are performing a grand lot inspection and defects are present for a particular lot or lots, complete the Normal Inspection and then perform a Special Inspection on the lot(s) that require further examination. There may be situations in which it is not necessary to perform a Special Inspection. Normally this would be due to a deteriorative condition throughout the lot that is readily apparent during the Normal Inspection. Possible examples would be heat stress or infestation throughout the lot. When Action Numbers are reached or exceeded, but the inspector believes that a Special Inspection is not necessary, then the inspector must discuss this with his chain-of-command and request approval to forego the Special Inspection. The name of the approving officer and the reason for not performing the inspection should be documented on the inspection report.

A. STEP 1: Determine Lot Size. Initially determine lot size of the individual suspected defective components as determined during routine inspection (reached/exceeded Action Number). Each defective component will be inspected as a separate lot. To determine component lot size, you must determine which menus contain the defective component(s) utilizing Table S and the previous inspection results. These menus will be the only menus selected for the special inspection.

B. STEP 2: Determine Sample Size for Each Component and Select Samples.

1. Sample size will be determined in accordance with Table B, E or I. Special Inspections are performed only on contractor's lots.

2. Inspect IAW applicable defect table (Table F, G or J).

a. The sample size for each component involved will dictate the minimum number of cases that must be selected for special inspections.

b. Table S on the DLA Troop Support website can be used to determine the menu arrangement for the ration lot in question. This way the inspector can determine which lots to pull. The website address is: https://www.dla.mil/Troop-Support/Subsistence/QA-Publications/Appendix-A.

C. STEP 3: Perform Inspection of Selected Components. This will be accomplished in the same manner as performed on individual components during Normal Inspection, to include pouch examination, DOPI, and comparison with characteristics in the monographs.

D. STEP 4: Determine Disposition of the Lot.

1. If none of the Action Numbers (ANs) are reached or exceeded, each menu is considered to be fully useable, and the Condition Code of the lot may remain unchanged.

2. Compare defects noted with the ANs for each type of component (primary, secondary, ancillary) and use the criteria in Table N to determine the condition code of the lot.

E. STEP 5: Provide Results and Recommendations to Accountable Officer/Agency.

1. Input data to the appropriate VSIMS database and provide a copy of inspection report to accountable officer.

2. If VSIMS access is not available, complete DLA Troop Support Form 5117, and provide copy of report to accountable officer.

3. If rations are placed in less than condition code A and not entered into the VSIMS database, notify DLA Troop Support FTSC telephonically @ (215) 737-7773/7771 (DSN 444) or Email: IndividualRationInspectionReporting@dla.mil.

IV. SAMPLING AND EXAMINATION TABLES.

TABLE A 1/ 2/ 3/ 4/ 5/
SAMPLING CRITERIA FOR INSPECTION OF SHIPPING CONTAINERS (NORMAL INSPECTION)

LOT SIZE 4/ (modules)	SAMPLE SIZE 5/ (cases A+B)	DEFECT CLASS	ACTION NUMBER
1-250	6 modules (6 A + 6 B cases)	Major B Minor	1 3
251-17,500	20 modules (20 A + 20 B cases)	Major B Minor	2 8
17,501-250,000	32 modules (32 A + 32 B cases)	Major B Minor	3 11
> 250,000	50 modules (50 A + 50 B cases)	Major B Minor	4 15

1/ For use with Table C.
2/ American National Standard ANSI/ASQ Z1.4 was the basis for the sampling tables within this appendix.
3/ At time of receipt or turn-in only equal numbers of unopened case A and B should be accepted. There should be equal numbers of case A and case B unless an odd number of cases are received. If an odd number of cases are received, there will be one extra of case A or B, which will not affect inspection or recommendations. If there are additional unequal numbers of case A and B, report the discrepancy to the Accountable/Receiving officer and recommend rejection of unmatched cases. At the request of the accountable officer, the inspector may perform a separate inspection of the unmatched MRE cases as a separate lot. In such an inspection, sample size will be IAW with sampling tables as a separate lot. MREs of a single type will not be placed in Condition Code A. They must be stored and issued separately.
4/ Lot Size is expressed as "Modules", meaning total number of "A" & "B" cases (e.g., If you have 50 A cases and 50 B cases, then you have 50 modules as your lot size).

5/ Total sample size is comprised of 50% A cases and 50% B cases. When A & B cases are combined, they create a completed module.

TABLE B 1/ 2/ 3/
SAMPLING CRITERIA FOR INSPECTION OF SHIPPING CONTAINERS (SPECIAL INSPECTION)

LOT SIZE 2/ (modules)	**SAMPLE SIZE 3/** (cases A+B)	**DEFECT CLASS**	**ACTION NUMBER**
1-75	3 modules (3 A + 3 B cases)	Major B Minor	1 3
76-250	10 modules (10 A + 10 B cases)	Major B Minor	2 8
251-600	16 modules (16 A + 16 B cases)	Major B Minor	3 11
601-1,600	25 modules (25 A + 25 B cases)	Major B Minor	4 15
1,601-5,000	40 modules (40 A + 40 B cases)	Major B Minor	6 22
5,001-17,500	63 modules (63 A + 63 B cases)	Major B Minor	8 31
> 17,500	100 modules (100A + 100B cases)	Major B Minor	11 45

1/ For use with Table C.
2/ Lot Size is expressed as "Modules", meaning total number of "A" & "B" cases (e.g., If you have 50 A cases and 50 B cases, then you have 50 modules as your lot size).
3/ Total sample size is comprised of 50% A cases and 50% B cases. When A & B cases are combined, they create a completed module.

TABLE C 1/ 2/
SHIPPING CONTAINER DEFECTS

CATEGORY		**DEFECT**
MAJ B	**MINOR**	
501		Evidence of rodent or insect infestation on or in the shipping container. **2/**
502		Container damaged, contents exposed or affected.
	601	Container damaged, contents not exposed or affected.

616	Missing TTI.
618	Shrink Wrap is torn or does not cover all four sides of pallet.
619	TTI is attached to case strap.
620	Exterior of case shows mold growth.
623	Case strap or straps missing.

1/ For use with Table A and B.
2/ Requires immediate corrective action according to local Pest Management Program.

TABLE D 1/ 2/ 3/
SAMPLING CRITERIA FOR CLOSED PACKAGE INSPECTION OF MENU BAGS AND CONTENTS INCLUDING ACCESSORY BAGS AND CONTENTS (NORMAL INSPECTION)

LOT SIZE (Menus)	**SAMPLE SIZE** (Menus)	**DEFECT CLASS AND ACTION NUMBERS**		
		MAJ A	MAJ B	MIN
24 - 6,000	24	1	1	15
> 6,001	48	1	1	33

1/ For use with Table F and G.
2/ Sample menus will be selected from the shipping containers selected for the Table A examination.
3/ All defects noted on menu bags and contents and accessory bags and contents will be combined and compared to the normal inspection action numbers.

TABLE E 1/ 2/
SAMPLING CRITERIA FOR CLOSED PACKAGE INSPECTION OF MENU BAGS AND CONTENTS INCLUDING ACCESSORY BAGS AND CONTENTS (SPECIAL INSPECTION)

LOT SIZE (Components)	**SAMPLE SIZE** (Components)	**DEFECT CLASS AND ACTION NUMBERS**		
		MAJOR A	MAJOR B	MINOR
24 – 36,000	24	1	2	9
> 36,001	48	1	3	11

1/ For use on Table F and G.
2/ On special inspections, compare separate component inspection results to the action numbers.

TABLE F 1/ 2/
UNOPENED MENU BAG DEFECTS

CATEGORY			DEFECT
MAJOR A	MAJOR B	MINOR	
	503		Rodent damage/insect infestation of menu bag. **2/**
	514		Less than 12 menus in a case.
		602	Visible tear/cut/hole/open seam in menu bag.

1/ For use with Tables D and E.
2/ Requires immediate corrective action according to local Pest Management Programs.

TABLE G 1/ 2/ 3/ 4/ 5/ 6/
CLOSED PACKAGE DEFECTS OF
FOOD COMPONENTS AND ACCESSORY BAG ITEMS

CATEGORY			DEFECT
MAJOR A	**MAJOR B**	**MINOR**	
401			Swollen pouch. **3/**
402			Tear/cut/hole/open seal in primary package of peanut butter cheese spread, or thermostabilized component.
406			Menu bag is missing the entrée.
	504		Rodent damage/insect infestation of accessory bag. **2/**
	505		Complete loss of menu. **4/**
	506		Tear/cut/hole/open seal in primary package (other than those covered by defect 402 or 608).
	507		Inadequate vacuum with moderate to extreme effect on product. **5/**

508		Foldover wrinkle extending into the seal such that the closure seal is reduced to less than 1/16 inch (retorted and thermostabilized pouches only).
509		Presence of entrapped matter (for example, product, moisture, grease, etc.) that reduces the closure seal to less than 1/16 inch, or seal area width not a continuous 1/16 inch around the pouch.
513		Missing Secondary Component from menu bag, or primary component other than the entrée is missing.
515		Accessory pouch missing from the menu bag.
	603	Visible tear/cut/hole/open seam in accessory bag.
	604	Rupture of normal appearing cheese spread or peanut butter package when kneaded.
	605	Presence of delamination when multi-layered laminate is used. (not applicable to dehydrated components).
	606	Inadequate vacuum, product not affected or only slightly affected. **5/**
	607	Unserviceable paperboard sleeve or insert card carton (e.g., missing, severely torn, sleeve or card do not match the entrée, fruit, or starch component).
	608	Tear/cut/hole/open seal or loose lid (hot sauce) in package of ancillary component.
	609	Presence of delamination when multi-layered laminate is used. (dehydrated components).
	610	Abrasion in the exterior surface of retorted or thermostabilized pouches.
	617	Ancillary component missing from the menu bag.

621	Missing tear notch on food component or accessory bag.
622	Spoon or eating utensil missing from the menu bag.

1/ For use with Table D and E.
2/ Requires immediate corrective action according to local Pest Management Programs.
3/ Cake items often exhibit more internal air than thermostabilized items. Do not score as swellers due solely to their naturally puffy appearance.
4/ Score when one or more defective components cause the entire menu to be unserviceable. For example, one or more leaking, ruptured, or contaminated packages may affect the other components. See Table k, for further explanation.
5/ See component Monograph (defects 507 and 606 apply to vacuum packaged items only).
6/ See component Monograph.

TABLE H 1/ 2/ 3/
SAMPLING CRITERIA FOR DESTRUCTIVE OPEN PACKAGE INSPECTION (DOPI) (NORMAL INSPECTION)

LOT SIZE (Menus)	**SAMPLE SIZE** (Menus)	**DEFECT CLASS AND ACTION NUMBERS**		
		MAJ A	MAJ B	MINOR
24 - 6,000	24	1	1	15
6,001 or more	48	1	1	33

1/ For use with Table J.
2/ Sample menus will be selected from those shipping containers selected for the Table A examination.
3/ All defects noted will be combined and compared to the normal inspection action numbers.

TABLE I 1/
SAMPLING CRITERIA FOR DESTRUCTIVE OPEN PACKAGE INSPECTION (DOPI) (SPECIAL INSPECTION)

LOT SIZE (Components)	**SAMPLE SIZE** (Components)	**DEFECT CLASS AND ACTION NUMBERS**		
		MAJOR A	MAJOR B	MINOR
1 – 3,000	12	1	1	8
3,001 - 6,000	20	1	2	9
6,001 - 36,000	32	1	3	10

36,001 or more	50	1	3	11

1/ For use with Table J.

TABLE J 1/ 2/ 3/
DESTRUCTIVE OPEN PACKAGE INSPECTION (DOPI) DEFECTS

CATEGORY			DEFECT
MAJOR A	**MAJOR B**	**MINOR**	
403			Evidence of rodent damage/insect infestation in product. **2/**
404			Product off conditions as evidenced by abnormal odor, color, flavor, or texture suggesting contamination and/or spoilage for no apparent reason (e.g., package failure not evident).
405			Foreign material present, affecting wholesomeness (e. g., glass, metal, wire).
	510		Primary component fails to rehydrate (moderate to extreme) or dissolve (extreme).
	511		Moderate to extreme texture, odor, color, or flavor change in a primary component not affecting wholesomeness (product unlikely to be consumed under conditions of intended use).
	512		Mechanical damage to primary component significantly affecting serviceability.
		611	Slight texture, odor, color, or flavor change in a primary component not affecting wholesomeness.
		612	Primary component fails to rehydrate (slight) or dissolve (slight to moderate).
		613	Moderate to extreme texture, odor, color, or flavor change in a secondary or ancillary component not affecting wholesomeness.

614	Secondary or ancillary component fails to rehydrate or dissolve (moderate to extreme).
615	Evidence of mechanical damage to secondary or ancillary component significantly affecting serviceability (e.g., crushed gum).

1/ For use with Table H and I.
2/ Requires immediate corrective action according to local Pest Management Programs.
3/ Specify defect(s) observed. Enter all specific defect codes that apply and a narrative description when appropriate.

TABLE K
SPECIFIC DEFECT CODES

A. INSECT / RODENT	
A1.	Rodent.
A2.	Insect.
A3.	Other (describe).
B. PACKAGING, PACKING, MARKING, LABELING AND UNITIZATION	
B1.	Essential case markings missing.
B2.	Essential case markings illegible.
B3.	Essential case markings incorrect.
B4.	Essential Labeling missing.
B5.	Essential Labeling illegible.
B6.	Essential labeling incorrect.
B7.	Improperly unitized load.
B8.	Unit load failure.
B9.	Missing tear notch.
B10.	Tear notches ripped or torn.
B11.	Sifter (see Monographs).
B12.	Inadequate vacuum.
B13	Delamination (separation of layers in laminate material).
B14.	Foldover wrinkle.
B15.	Entrapped matter or seal area width not a continuous 1/16 inch around the pouch.
B16.	Abrasion.
B17.	Sweller.
B18.	Leaker.
B19.	Other (describe).
C. TEXTURE CHANGES	
C1.	Too thick or pasty.
C2.	Chewy / gummy.
C3.	Mealy.
C4.	Tough / stringy.
C5.	Caked or hardened.
C6.	Brittle.
C7.	Crumbly, cracking.
C8.	Excessively dry.
C9.	Loss of crispness.
C10.	Soft / mushy.
C11.	Curdled.
C12.	Gritty / grainy.

C13. Spongy / rubbery.
C14. Syneresis (The contraction of a gel, or a homogeneous colloid system, when left standing separates into two phases: a coherent gel and a liquid. A good example is the separation or weeping of liquid from a gelatin mold when left sitting in a refrigerator too long).
C15. Liquefaction (passing from dry, solid, or semi-solid) to a liquid state (e.g., complete loss of gel structure in jelly component).
C16. Caramelized.
C17. Watery gravy or excessive product juices (probably due to product formulation and/or time-temperature abuse).
C18. Honeycombing.
C19. Coagulation/gelation (beverage base).
C20. Other (describe).

D. ODOR CHANGES

D1. Medicinal, vitamin-like.
D2. Chemical odor, solvent-like/turpentine/paint-like.
D3. Plastic-like.
D4. Hay-like (oxidized).
D5. Fermented.
D6. Scorched/burnt.
D7. Sulfur-like.
D8. Musty, moldy, mildew.
D9. Overripe.
D10. Not ripe.
D11. Stale.
D12. Cardboard.
D13. Soured.
D14. Putrid.
D15. Acidic/vinegary.
D16. Other (describe).

E. FLAVOR CHANGES

E1. Loss of flavor, flat, bland.
E2. Chemical flavor, solvent-like, turpentine/paint-like.
E3. Medicinal, vitamin-like.
E4. Plastic-like.
E5. Hay-like (oxidized).
E6. Bitter.
E7. Burnt.
E8. Soapy.
E9. Musty, moldy, mildew.
E10. Rancid (this may also be an odor change).
E11. Stale.
E12. Fermented.
E13. Earthy.
E14. Tart, acidic.
E15. Overripe.
E16. Green, not ripe.
E17. Tobacco.
E18. Sweet, perfume like, flowery.
E19. Metallic.
E20. Excessively over-processed / scorched.
E21. Canned.
E22. Putrid (this may also be an odor change).
E23. Sour.
E24. Excessively salty.

E25.	Other (describe).
F. APPEARANCE CHANGES	
F1.	Darkened.
F2.	Bloomed, blotchy (e.g., chocolate).
F3.	Oily, oiled-off (partial disintegration of an oil in water emulsion whereby a film, pockets, or droplets of oil form on the surface of the product or within the product).
F4.	Off-color (e.g., pink, off-white, reddish, green).
F5.	Cloudiness (beverage bases except orange).
F6.	Webbing (caffeine leeching).
F7.	Other (describe).
G. FOREIGN MATERIAL	
G1.	Potentially hazardous (e.g., glass, splinters, metal).
G2.	Not potentially hazardous.
G3.	Other (describe).
H. COMPLETE LOSS OF MENU (Does Not Consider Caloric Count)	
NOTE: The purpose of this defect category is to enable inspectors and evaluators of the inspection data to properly identify menus that contained one (or more) leaking component that adversely affected the entire meal. For example, if an applesauce pouch leaks, the entire menu may be unfit for use because of the mold growth that would likely occur inside the menu bag.	
H1.	Due to one leaking or ruptured component.
H2.	Due to more than one leaking or ruptured component.
H3.	Due to one or more components contaminated by insecticide/pesticide.
H4.	Due to one or more components contaminated by an unidentified substance.
H5.	Other (describe).
J. MISSING COMPONENTS/MENUS	
J1.	Required component(s) missing from menu.
J2.	Required menus missing.
J3.	Required eating utensil (spoon) missing.

TABLE N 1/ 2/ 3/ 4/ 5/
CONDITION CODE CRITERIA
DEFECTS FROM SPECIAL INSPECTION RESULTS
(COMPONENTS THAT EQUALS OR EXCEEDS
AN ACTION NUMBER)

	CATEGORY		
CONDITION CODE A	**MAJOR A**	**MAJOR B**	**MINOR**
Primary	0	0	1
Secondary	0	1	2
Ancillary	0	1	2
CONDITION CODE B			
Primary	0	1	2
Secondary	0	2	3
Ancillary	0	2	3
CONDITION CODE H, J, or L (see note 5)			
Primary	1	2	NA
Secondary	1	3	NA
Ancillary	1	3	NA

1/ Lots determined to be unwholesome will be classified Condition Code J until final disposition is made by the responsible veterinarian.

2/ Each column lists the maximum number of components allowed to equal or exceed an action number for that category (Note this is the number of defective components with the same defect, not the total number of defects for the same component. For example, multiple observations of darkened hot sauce would be counted as one ancillary component with a Major B defect. Likewise, components that are identical except for the flavoring are also grouped together. If both the jalapeno cheese spread and the bacon cheese spread show significant darkening, that would be one primary component with a Major B defect).

3/ Each row lists the maximum number of components allowed to equal or exceed an action number by component classification.

4/ Compare the number of components from the inspection that equals or exceeds the special inspection action numbers for each category. If the number in any row/column intersection is exceeded, the lot must be downgraded to the next lower Condition Code.

5/ For lots that fail inspection and do not meet a serviceable condition code, a condition code of J or H is assessed. If it is necessary to send samples to the lab for food safety or production-related defects, or to investigate the lot further; then assess a condition code of J. If condition J is assessed, this will need to be revised once the lab evaluation or investigation is complete. Changing the condition code after the report is submitted is the responsibility of the report approver. If the defects have a readily explainable cause, such as heat stress, physical damage, or infestation, then Condition Code H (condemnation) is appropriate. Condition Code L means that warranty action is pending. Warranty inspections will be directed by the contracting officer and/or the chain-of-command. Inspectors who are asked to perform a warranty inspection will be supplied with specific sampling and inspection instructions.

V. INSPECTION RECORDS.

A. Inspection Form. All inspections will be entered on DLA Troop Support Form 5117. Local reproduction of DLA Troop Support Form 5117 is authorized.

B. Database. All inspections (except turn-ins) will be entered into the Veterinary Service Information Management System (VSIMS) MRE inspection database. Localized copy of DLA Troop Support Form 5117 will be completed if inspectors do not have access to this database.

C. Distribution. For DLA owned/controlled stocks, one copy of the VSIMS MRE Inspection database inspection report will be provided to the accountable officer. Copies of all reports not on the VSIMS MRE Inspection database will also be maintained in the local quality history files. Inspections resulting in less than Condition Code A status not placed in the VSIMS database must be telephonically reported to DLA Troop Support -FTSC (215) 737-7771/7773 (DSN 444) or Email: IndividualRationInspectionReporting@dla.mil. Other distribution will be according to the directives of the responsible inspection agency and/or Military Service.