



*DEALM-INS-01*

***INSTRUCTIONS FOR HANDLING,  
STORAGE AND PREPARATION OF  
FOOD***

***UNDER THE MARITIME LABOUR  
CONVENTION 2006, AS AMENDED  
(MLC, 2006, AS AMENDED) –  
REGULATION 3.2, STANDARD A3.2***

*Panama  
Maritime  
Authority*

*General  
Directorate of  
Seafarers*

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(EN)*



PANAMA MARITIME AUTHORITY  
DIRECTORATE OF SEAFARERS  
INSTRUCTIONS FOR HANDLING, STORAGE AND PREPARATION OF FOOD  
*Under the Maritime Labour Convention, 2006, as amended (Regulation 3.2, Standard A3.2)*

## OBJECTIVE

Provide instruction to all catering staff, which should be properly instructed in the areas related to food and personal hygiene, as well as handling and storage of food on board ship, ensuring that seafarers have good quality food and clean drinking water provided under regulated hygienic conditions.

## DISEASES TRANSMITTED BY FOOD

Diseases that can be transmitted by foods include, but are not limited to the following: Typhoid (*Salmonella typhi*), shigellosis (*Shigella* bacteria), cholera (*Vibrio* spp bacteria), intestinal disease (*Escherichia coli* O157: H7) and liver disease (hepatitis A virus).

## CATERING SERVICE STAFF

The staff in charge of catering on board a vessel must be free of any transmissible diseases. The staff in charge of the kitchen area shall comply with the relevant qualifications as well as present a food handler card issued by the Authority of the seaman.

Seafarers, in charge of food handling, with a diagnosis, suspected or exposed to any transmissible diseases should be restricted to work in any area or operations related to food, equipment, utensils, linens, single-use articles or cleaned and disinfected, until they are symptom free for a minimum of 48 hours.

All food handlers that present the following symptoms or illnesses, must report themselves or be reported to the master or immediate superior:

1. Boils, sores, infected wounds, diarrhea, jaundice, fever, vomiting, sore throat with fever, or discharge from the ears, eyes, nose or mouth.
2. Persistent sneezing, coughing or runny nose that causes discharges from the eyes, nose or mouth.

No one should be penalized for reporting a sick or with symptoms food handler.

In addition, cuts, spots or sores should be completely covered with waterproof bandages.

## HYGIENE

### MINIMUM HYGIENE RULES FOR CATERING STAFF

1. Bathing daily before starting their work.



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2. Keep hair and mouth covered, e.g., nets, caps, gloves, disposable mask or towel, apron, footwear and protective clothing, to prevent contact with food products, equipment and other food service areas.
3. Wear clean clothes and shoes.
4. Do not wear: watches, rings, earrings, bracelets or any type of jewelry.
5. Have clean, well trimmed and unpolished nails.
6. Refrain from coughing, sneezing or talking over food.
7. Do not smoke, eat, chew gum or drink in the area or during food preparation.
8. Avoid touching hair, face, ears or any part of the body while handling food.
9. Under go regular medical supervision.
10. Suspend work in situations of illness and presence of wounds on hands or arms.

### HAND WASHING TECHNIQUES

1. Moisten with clean water hands and forearms up to the elbow.
2. Soap until obtaining abundant lather in the direction of the hand toward the elbow.
3. Clean under fingernails using a brush or cleaning one nail with the other one.
4. Rub hands, fingers and forearms, lather for 20 seconds.
5. Rinse hands thoroughly in running water toward the elbow.
6. Dry hands with a clean towel.

*NOTE: These techniques must be repeated at all times and especially:*

<p><i>After:</i></p> <ol style="list-style-type: none"> <li>1. <i>Touching hair, face, ears or any part of the body.</i></li> <li>2. <i>Using the bathroom.</i></li> <li>3. <i>Coughing, sneezing or blowing your nose with your hands.</i></li> <li>4. <i>Touching or picking something up.</i></li> <li>5. <i>Touching trash, cleaning tool or dirty surfaces.</i></li> </ol>	<p><i>Before:</i></p> <ol style="list-style-type: none"> <li>1. <i>Starting preparing or handling food.</i></li> <li>2. <i>Eating or feeding.</i></li> </ol>
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### ENVIRONMENTAL HYGINE

#### FOOD PREPARATION AREA

The place where food is prepared must be:

1. Located far from stagnant water, landfills, latrines or any source of contamination.
2. In the best possible conditions to facilitate cleaning operations.
3. With ceiling, walls and smooth floors, clean and free of holes.



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4. You should clean the surrounding area from anything that allows animal housing.
5. Avoid passage to the preparation area to outsiders, animals and insects.
6. Use insecticides where pests are detected.

## EQUIPMENT AND UTENSILS CLEANING

The cleaning process to be followed is:

1. Wash thoroughly all equipment, utensils and work tables that were used after every meal.
2. Use soap or detergent, sponge and clean water to wash the material and equipment.
3. Remove food scraps from surfaces.
4. Rinse with clean water and let equipment and utensils dry, using dish racks, clean towels or any absorbent material preferably disposable.
5. To protect food security and have a proper cleaning of food, utensils and equipment, the food handling area must have an adequate supply of hot and cold drinking water at all times.
6. After performing cleaning works, disinfection may be required. The chemicals used for disinfection should be stored in clearly labeled containers, away from food handling areas, unless otherwise specified by the manufacturer.

## WASTE DISPOSAL

1. It is necessary to foresee storage and safe disposal of waste, to prevent disease organisms and pests in food handling operations.
2. The garbage disposal should be carried out as permitted in accordance with Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL - Regulations for the Prevention of Pollution by Garbage from Ships) and guidelines as set by the International Maritime Organization.

## FOOD SUPPLY AND STORAGE

### RECEPTION AND SUPPLIES

The provisioning of ships must be supplied with safe and available food, as well as good quality drinking water, nutritional value, hygienic conditions and appropriate amounts that adequately cover the needs of the ship; selecting food suppliers who can demonstrate adequate control over their food and adequate transportation means to the ship.

Food should be clean, in good conditions, free of deterioration and adulteration as well as safe for human consumption.



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The first stage in food processing is the reception of the same, which through a quick but thorough inspection must ensure that the characteristics of color, smell, taste, texture and appearance are appropriate for each type of food. It is also necessary to observe the packaging conditions, the expiration date and any visible contamination from harmful fauna, such as insect or excreta traces.

Annex 1 contains a table with the basic features food must meet to be accepted, and Annex 2 bears the characteristics that help identify products in poor conditions and should therefore be rejected.

## **FOOD STORAGE**

The general considerations to be taken into account for the place to store foods are:

1. A closed, dry and ventilated place, with a door accessible for its unloading and away from all type of pollution such as landfills and stagnant waters.
2. The walls and floors should be easy to clean and in good condition.
3. Food should be accommodated on a first come basis, following the criteria FIFO (first in, first out) taking into account the expiration date.
4. Containers and packaging in which food is stored must be clean, sealed and in good condition.
5. To accommodate food, pallets or shelves should be used to avoid the contact of the product with floors and walls.
6. Food should not be stored near the kitchen, cooling and freezing areas. The storage of food should be at least 15cm (6 inches) above the deck.

## **STORAGE OF FRESH FOOD**

Most fresh foods such as meats, dairy products, fruits and vegetables cannot be maintained for more than 1 or 2 days at room temperature, so it is suggested:

1. Store fruits and vegetables in cool, clean and dark places to prevent early ripening.
2. Keep out of contact with the floor, dust and insects.
3. Save in clean and covered containers.
4. Wrap and separate those having a strong smell.
5. In the case of having a refrigerator, they will be stored in the cold, allowing to preserve food for a period of time greater than at room temperature, especially in warm climates. In addition, the advantage of the cooling and freezing technique is to decrease the growth of microorganisms and the production of toxins which are responsible for making people sick, while also achieving to kill some bacterias that do not resist low temperatures as in freezing.

Refer to Annex 3 to identify the temperatures considered risk area for food.

## RECOMMENDATIONS FOR COLD FOOD STORAGE

1. Fruits and vegetables should be stored in clean place, at a temperature between 7° and 12° C.
2. The sliced or chopped fruit, should be stored in closed containers and be placed in the refrigerator, unless used for immediate consumption.
3. The cut vegetables (e.g., sticks, celery, carrot, cut potatoes and tofu) can be immersed in ice or water from potable water sources, but should be stored in the refrigerator until consumption.
4. It is recommended to refrigerate dairy products at a temperature of 7 ° C or less to reduce the multiplication of microorganisms.
5. Meat must be refrigerated at a temperature of or below 7 ° C or frozen to minus 18 ° C.
6. All stored food should be covered or protected.
7. Raw foods are stored at the bottom while cooked food goes on top to avoid being contaminated by runoff from the raw.
8. Keep the refrigerator temperature at 4.4 ° C (40 ° F) or below and the freezer temperature at -17.7 ° C (0 ° F) or below.
9. Raw meat, poultry meat and seafood should be stored in a covered container with a drip tray when being cooled to prevent cross contamination caused by fluid drainage.
10. Inspect fresh supplies every day.
11. Ripe fruits and vegetables should be used as soon as possible.
12. Perishable products such as milk, cheese and other must have a visible expiration date.
13. Products discolored, poorly shaped or in a bad state, or of questionable quality, including those with a bad smell, should be removed immediately.

## DRY FOOD PRODUCT

1. All powdered foods, canned beans and grains should be stored on shelves, cabinets or on pallets that are in dry, clean and well ventilated places.
2. Grains and powder food should be stored in their original containers or in glass or plastic bottles tightly closed and labeled.
3. Canned goods will be stacked on shelves or pallets, making sure they are not too high to prevent breakage or crushing.
4. Storing canned goods should be in a cool, clean and dry (if possible about 10 ° C (50 ° F)).
5. Inspect canned goods monthly. If you are past the expiration date, dispose of them. Products that are dented, leaking, bulging or rusted should be disposed of.
6. Unused portions of canned products should never be re-stored in their original containers. They should be placed in a suitable container, closed and stored in the freezer or refrigerator, as appropriate.



## STORAGE OF CHEMICALS AND CLEANING

All cleaning chemicals and insecticides, rodenticides, thinner or gasoline, should be stored in a different place of food and be covered, labeled and clearly identified in their original containers.

## FOOD PREPARATION

### DEFROSTING

1. Never defrost raw meat, poultry or seafood at room temperature. Only should be defrosted in the refrigerator. They should be placed separately in a drip pan so they are not resting on the thawed liquid, they should also be stored in a covered container, separated from these and below other foods in the refrigerator that may be exposed to the risk of contamination.
2. To speed up the defrosting of foods, these should be placed in a sealed plastic bag, immersed in cold tap water, changing water every 30 minutes. Alternatively, you can use the microwave to defrost food.
3. Meat, poultry and seafood should be completely defrosted before cooking and cooked immediately after thawing.
4. Never refreeze defrosted food.

### CONTAMINATION

1. Always separate raw and cooked foods, meats, poultry, fish and their juices away from other foods during preparation and storage.
2. When marinating meat, poultry or fish, do it in a covered container in the refrigerator.
3. Use different cutting boards (color coded to help keep them separate) and utensils for raw foods of animal origin (e.g., meat, poultry, seafood, eggs, and foods containing such).
4. After cutting raw animal foods, wash cutting board, utensils and countertops with hot, soapy water or disinfectant (for example, 1 tablespoon of liquid chlorine bleach per 1 gallon of water).
5. Maintain fruits and vegetables separate from the ones ready for consumption, until washed.
6. Fruits and vegetables should be washed thoroughly with water to remove dirt and other contaminants before being cut, combined with other ingredients, cooked, served, or offered for human consumption.
7. Protect spices products from contamination, having the same, in dispensers designed to provide protection or by using individual packages.
8. Being aware of the dangers (urticaria, anaphylactic shock, and death) associated with food allergies and cross-contamination that food can cause.
9. Always use clean utensils when serving to avoid contact with a dirty plate and subsequently contaminate other dishes.

10. Food handlers should avoid direct hand contact with food by using suitable tools (tissues, spatulas, tweezers and single-use gloves, etc.)
11. Food handlers should not use the tools more than once to taste food that is to be served.
12. Seawater should not be used in the preparation of food or near food preparation areas.
13. All food suspected of being contaminated by flies, cockroaches, rodents or other pests should be destroyed.

## TEMPERATURE CONTROL

1. The danger zone for food contamination is between 4 ° C (40 ° F) and 62.8 ° C (146 ° F). In general, perishable foods should not exceed the time required in these temperatures and in no case food should be moved away in this temperature range more than 2 hours, or when the temperature exceeds 32 ° C (90 ° F), more 1 hour. In addition, food should be placed in a suitable, covered container when within that temperature range, unless they are being prepared or served.
2. Overall:
  - a. Keep hot foods above 62.8 ° C (145 ° F).
  - b. Keep cold foods below 4.4 ° C (40 ° F).
  - c. Keep frozen food below -12 ° C (10 ° F).
  - d. Reheat only 1 hour at an internal temperature of 75 ° C (167 ° F).
3. Cook raw foods of animal origin (eggs, fish, meat, poultry and foods containing them) at the following minimum internal temperatures to destroy bacteria:
  - a. Fillets of beef, veal and lamb steaks, roasts and chops: 62.8 ° C (145 ° F).
  - b. Ground beef, veal, lamb and all cuts of pork: 71.1 ° C (160 ° F).
  - c. Turkey or Chicken: 74 ° C (165 ° F)
  - d. Poultry: 77 ° C (170 ° F) for breasts, 82 ° C (180 ° F) for whole poultry and thighs.
  - e. Seafood: 63 ° C (145 ° F) for ground or flaked fish, 68 ° C (155 ° F) and 74 ° C (165 ° F) for stuffed fish.
  - f. Eggs: until the yolk solidifies (about 70 ° C (158 ° F)) or 71 ° C (160 ° F) when used in a recipe with other food.
  - g. Make use of a thermometer to determine the temperature and check the fluid transfer of meat products, which is specified as Annex 1.
4. To destroy the parasites in the raw or partially cooked fish and other seafood, keep frozen at a temperature range of -20 ° C (-4 ° F) or below for 168 hours (7 days) in a freezer, or -35 ° C (-31 ° F) or below for 15 hours in a blast freezer.
5. Certain fish in the family of the tunas may be excluded from this process of freezing, as they may be related to fisheries (e.g., food, Gravlex, ceviche, carpaccio fish or sashimi) prepared in food processing plants that have been certified free of parasites.



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## **LEFT OVERS / REHEATING**

The inadequate cooling of food is a major factor for intoxication. Although small amounts of food can be cooled relatively quickly, the process should be expedited when this is not the case. Once cold, leftovers should be classified, appropriately marking its re-storage in the refrigerator and be used within the following 2 days. If not used when cold, which is better, the food should be reheated quickly, as provided in section 2.3.2.

## ANNEX 1

### CHARACTERISTICS FOR THE ACCEPTANCE OF FOOD

<i>Product</i>	<i>Color</i>	<i>Odor</i>	<i>Texture</i>	<i>Appearance</i>
Beef	Bright Red	Fresco	Elastic And Soft	Firm
Pork	Pale Pink	Fresco	Elastic And Soft	Firm
Poultry	Pale Pink	Neither Bitter Nor Strong	Elastic And Soft	Firm
Fish	Red and Bright gillst, Bright and Transparent Eyes	Characteristic	Elastic And Soft	Firm
Fruits	Bright	Fresh	Firm	It should not be damaged with bruises, pile torn, chipping or staining
Vegetables	Bright	Fresh	Firm	Avoid bruises, scratches, insects or other defects

## ANNEX 2

### FEATURES TO IDENTIFY BAD FOOD

<b>Fresh Food</b>	<b>Dried and Packaged Foods</b>	<b>Canned Food</b>
Unpleasant Smell	Packaging Broken	Rusty cans or Diced
Strange Taste	Food Spilled	Different content to what the label samples
Areas bruised or beaten	Damaged Packaging	Expired expiration date
With the presence of mold	Wet or presence of mold	Leaks in the can
Signs of deterioration by insects or rodents	Gaskets dirty or contaminated with substances	Smell, taste and look different from the usual
The Appearance very mature	Content marked differently than the label	Presence of insect or rodent feces in cans or its packaging

### ANNEX 3

#### TEMPERATURES OF RISK FOR FOOD

212°F	Boil Water	100°C
180°F	Poultry (whole, legs, thighs and wings)	83°C
170°F	Poultry Breast of	77°C
165°F	Milled poultry, stuffing, casseroles and reheating leftovers	74°C
160°F	Ground Meat (Beef, Lamb, Veal, Pork and egg dishes)	72°C
145°F	Beef, Lamb, Beef fillets and roasts.	63°C
140°F	Fully cooked ham Food Safety Zone Hot	60°C
	<b>DANGER ZONE</b> <b>Do not keep food between these temperatures</b>	
40°F	Refrigerator Temperature	4,5°C
32°F	Food Safety Zone Cold	0°C
0°F	Temperature Freezer	-18°C

#### Changes History:

Date (mm/dd/yy)	Modified Version Number	Brief description of the change made	Responsible for the change
22/11/2024	01	Change in document code form ALM to DEALM	Angie Echevers