

TP 11130E

TRAINING COURSE IN MARINE COOKING

Responsible Authority	Approval
The Director, Marine Personnel Standards and Pilotage is responsible for this document, including any changes, corrections, or updates.	Director, Marine Personnel Standards and Pilotage Marine Safety

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Scope and Application

1.1 Purpose

- (1) To give effect to the provisions of the following International Labour Conventions: Food and Catering (Ships' Cook) Convention, 1946; and Certification of Ships' Cooks Convention, 1946.
- (2) Compliance with the Canadian regulatory requirements under the *Canada Shipping Act*, 2001 for the carriage of a duly certificated ships' cook.

1.2 Scope

- (1) To provide individuals with an understanding of the duties of a cook associated with the marine environment on board ships.
- (2) To provide adequate training for developing the knowledge, skills and attitudes necessary to achieve success and gainful employment as a ships' cook.

1.3 Effective date

(1) This document enters into force on the day the Canada Shipping Act, 2001 come into force.

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Course Pre Requisites

2.1 General

- (1) Physical fitness
 - (a) Trainees must meet the provincial Health Act requirements.
- (2) Education Standard
 - (a) Applicants to meet institute, establishment or employers entry requirements.

2.2 Course Approval Conditions (General)

- (1) Location
 - (a) Access to the course location to be easy and suitable
- (2) Environment and Facility
 - (a) Suitable teaching environment, kitchen to have government approval.
- (3) Equipment
 - (a) Compliance with the detailed equipment requirements prescribed in this document for a class of 12.
- (4) Course Content
 - (a) Compliance with the detailed course content as prescribed in this document.
- (5) Course Duration
 - (a) A total of 710 hours. comprising of 550 hours of theoretical and practical training and an additional 160 hours of specific practical training.
 - (b) Candidates seeking admission to the course who have completed a minimum of 3 months galley related sea service may undergo course pre-entry test conducted by the school which may include basic arithmetic. Candidates who pass the test may be accepted into a shorter course of a minimum 360 hours duration. Courses may vary between 360-710 hours depending on the assessment made by the school.
- (6) Main Instructor Qualifications
 - (a) Approved main instructor to hold:
 - (i) A Ships' Cook Certificate/or a certificate with Interprovincial chef de cuisine seal or Canadian Federation of chef de cuisine or equivalent, with appropriate one month sea service.
 - (ii) Teaching qualifications acceptable to Transport Canada.

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Equipment Requirements

3.1 General

(1) Following minimum equipment is required for a class of 12.

3.2 Major Cooking Appliances

- (1) Bake and roast oven, electrical
- (2) Hot top burners, individual and griddle electrical
- (**3**) Broilers, Capacity
- (4) Deep fat fryer, electric, double basket
- (5) Toaster operation
- (6) Micro-wave oven operation
- (7) Freezer/Refrigerator

3.3 Mechanical Kitchen Appliances

- (1) Meat slicer
- (2) Food mixer
- (3) Food grinders
- (4) Dishwashing machine

3.4 Kitchen smallware

- (1) Cutting implements two per student to include
 - (a) peeling knife
 - (**b**) paring knife
 - (c) boning knife
 - (d) French knife
- (2) Pots Pans Strainers
- (3) Serving utensils
- (4) Baker's hand equipment
- (5) Cutting board
- (6) Knife sharpeners

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Course Curriculum

4.1 General

(1)

	Subjects	Allocated time in hours
(a) (b) (c)	Personal Hygiene Galley and storage area sanitation Dish sanitation	15
(d) (e)	Menu Planning Purchasing and storage	90
(f)	Recipes	30
(g)	Stocks and soups	30
(h)	Sauces	30
(i)	Butchering knowledge (Minimum)	15
(j)	Preparation and cookery of meat	20
(k)	Preparation, cooking and serving of fish	40
(1)	Fruits	15
(m)	Nutrition	30
(n)	Vegetables fresh and frozen	50
(o) (p)	Desserts Cookies, cakes and flour mixtures	100
(q) (r)	Baking Flour, bread and rolls	40
(s)	Micro Wave Cooking	15
(t)	Sousvide Cooking	5
(u)	Garbage handling and disposal	10
(v)	Job Safety	15

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4.2 Additional Practical Training Requirements

	Subjects	Allocated time in hours
(a)	Deep fry cooking	120
(b)	Egg Cookery (Breakfast)	30
(c)	Sandwich making	10
	Total	710

4.3 Desirable Attitudes

- (1) Students to acquire following desirable attitudes during training.
 - (a) Willingness to follow instructions
 - (b) Co-operation with fellow workers
 - (c) Proper employer/employee relationship
 - (d) Safety consciousness
 - (e) Personal conduct and neatness
 - (f) Discipline

Subject

5.1 General

- (1) Personal hygiene
- (2) Galley and Storage Area Sanitation
- (3) Dish Sanitation

5.2 Purpose

(1) To provide knowledge of basic rules, sanitation code and Health Act, and skills required to establish and maintain procedures relating to hygiene and sanitation which will result in an environment suitable for food storage, preparation and maintenance of good housekeeping.

5.3 Training Objective 1

(1) Demonstrate through assigned tasks necessity for enforcement of personal hygiene and dangers of not conforming to the requirements.

5.4 Enabling Objectives

(1) Demonstrate appropriate dress requirements

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- (2) Provide accepted check list for personal hygiene
- (3) List procedures required to maintain a sanitary environment
- (4) Describe the diseases which way develop in unsanitary conditions

5.5 Training Objective 2

(1) Provide instruction and demonstrations in the correct procedures for receiving, handling and storage of food including maintenance of galley and equipment in compliance with sanitation requirements.

5.6 Enabling objectives

- (1) Identify conditions which encourage rodents and insects. Methods of detecting their presence and preventive measures.
- (2) Provide instructions in the correct handling of food, maintenance of correct temperatures for storage and destruction of refrozen and damaged cans.
- (3) Identify proper use of cleaning aids, detergents and disinfectants.
- (4) Instruct correct procedures for operation, cleaning and maintenance of galley and equipment.
- (5) Identify the conditions for the elimination of infectious food-borne diseases.

5.7 Training Objective 3

(1) Demonstrate through assigned tasks ability to maintain effective dish sanitation.

5.8 Enabling Objectives

- (1) Demonstrate correct operation and maintenance of dishwashers to ensure sanitation, use of detergents and additives.
- (2) Identify types of harmful chemical changes caused by bacteria and the conditions bacteria need to multiply.
- (3) Provide instructions in recognition of food poisoning from improper cleaning.

5.9 Evaluation

- (1) Theory test on hygiene and sanitation
- (2) Practical tasks designed to evaluate hygiene and sanitation procedures in galley and storage areas.

Subject

6.1 General

- (1) Menu Planning
- (2) Purchasing and storage

6.2 Purpose

(1) To provide the knowledge and skills required to plan menus using food groups for balanced diets. Calculating quantities from menus taking into account the storage life of food items under different conditions and feasibility of using alternative products.

6.3 Training Objective 1

(1) Demonstrate planning of quality menus following Canada's Food Guide.

6.4 Enabling Objectives

- (1) Plan diet conscious menus
- (2) Plan seasonal menus
- (3) Use cycle menus
- (4) Plan menus with minimum wastage
- (5) Balance menus for nutritional value
- (6) Arrange for total utilization of leftovers

6.5 Training objective 2

(1) Explain classifications, grades and cuts of food. Provide instruction in establishing market analysis for economic purchasing procedure and organization of storage area.

6.6 Enabling Objectives

- (1) Systematic regulation of incoming goods
- (2) Detection of deteriorated or sub standard food items
- (3) Establish order placing procedure
- (4) Determine policy on substitution
- (5) Organization of storage area to use old stock first
- (6) Preserving of food values by correct storage
- (7) Correct placement of food to avoid spoilage
- (8) Maintain proper locking and surveillance facilities to eliminate pilferage.

6.7 Evaluation

- (1) Trainee to prepare 3 different types of menus
- (2) Trainee will prepare an essay on menu planning
- (3) Trainee will undergo a written test on menu planning
- (4) Trainee will undergo a written test on purchasing and storage
- (5) Trainee will prepare a food order for a specified voyage.

Recipes

7.1 Purpose

(1) To provide the knowledge and skills required to read recipes and their conversion to smaller or larger quantities to meet specific requirements using conversion multiples.

7.2 Training Objective

(1) Given a series of recipes and accompanying instructions trainee will modify the volume of each recipe to meet specific requirements.

7.3 Enabling Objectives

- (1) Use of commonly accepted terminology
- (2) Interpret instructional cooking aids
- (3) Explain the importance of following recipes exactly
- (4) Conversion of recipes using formula rn/nr
- (5) Determine weights and measures accurately
- (6) Application of metric conversion tables
- (7) Conversion of American measures to Canadian measures

7.4 Evaluation

- (1) Trainee to be tested theoretically on her/his ability to convert recipes
- (2) Trainee to be evaluated on her/his ability to successfully increase or decrease the volume of recipes.

Stocks and Soups

8.1 Purpose

- (1) To provide the knowledge and skills required to prepare stocks.
- (2) To provide the knowledge and skills required to prepare soups.



8.2 Training Objective 1

- (1) Given the necessary equipment and supplies, the trainee will be required to prepare the following stocks using recipes.
 - (a) White
 - (b) Brown
 - (c) Chicken
 - (d) Fish
 - (e) Vegetable

8.3 Enabling Objectives

- (1) Instruction on determining kind of stock needed
- (2) Indicate basic ingredients and seasonings
- (3) Preparation and cooking methods
- (4) Type of equipment necessary for stock products
- (5) Cooking time and temperature
- (6) Effects of cooking stock at high temperatures
- (7) Cooling and storing
- (8) Uses for stock
- (9) Reasonable substitutes when stock is not available.

8.4 Training Objective 2

(1) Given the necessary equipment and supplies, the trainee will be able to prepare thick and clear soups.

8.5 Enabling Objectives

- (1) Identify basic ingredients
- (2) Instructions on methods of making thick and clear soups
- (3) Prepare 4 clear and 4 thick soups
- (4) Relate correct garnish to finish soups
- (5) Instruction in serving different soups in correct manner and proper container.

8.6 Evaluation

- (1) Trainee will undergo written test on stock preparation
- (2) Trainee will prepare each of the five stocks

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- (3) Trainee will undergo written test on soup preparation
- (4) Trainee will prepare 3 thick and 3 clear soups using recipes
- (5) Trainee will be evaluated on correct garnish of prepared soups
- (6) Trainee will prepare at least two soups using leftovers

Sauces

9.1 Purpose

(1) To provide the knowledge and skills required to prepare mother sauces.

9.2 Training Objectives

- (1) Given the necessary supplies and equipment, the trainee will be required to prepare the following basic (mother sauces using recipes).
 - (a) Tomato sauce
 - (b) Espagnol or brown sauce
 - (c) Béchamel or cream sauce
 - (d) Veloute sauce
 - (e) Hollandaise sauce

9.3 Enabling Objectives

- (1) Knowledge of necessary ingredients
- (2) Selection of correct equipment
- (3) Knowledge of preparatory and correct cooking techniques
- (4) Knowledge of texture and correct degree of doneness
- (5) Straining, cooling and storage if required or holding temperature
- (6) Knowledge of type of seasoning used
- (7) Correct service method and uses

9.4 Evaluation

- (1) Trainee will undergo a written test on preparation of mother sauces
- (2) Trainee will be required to identify at least five food items which may be used with each mother sauce
- (3) Trainee will prepare each mother sauce

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Butchering Knowledge (Minimum)

10.1 Purpose

- (1) To breakdown a carcass into standard wholesale and portion control of regular cuts of the following.
 - (a) Beef
 - (b) Lamb
 - (c) Veal
 - (d) Pork

10.2 Training Objective 1

(1) Trainees to list in order the cuts to be made to breakdown a side of beef into regular cuts.

10.3 Enabling Objectives

- (1) Identify point at which to separate front quarter from hind quarter
- (2) Identify point at which to separate long loin from short lion
- (3) Identify point at which to separate long hip from short hip
- (4) Identify point at which to separate prime rib section
- (5) Identify point at which to separate hind shank
- (6) Identify point at which to separate plate brisket
- (7) Identify point at which to separate neck, chuck, blade, cross ribs
- (8) Identify point at which to separate brisket point, shoulder, short ribs
- (9) Identify point at which to separate flank, flank steak
- (10) Identify point at which to separate sirloin point, sirloin
- (11) Identify point at which to separate top round, bottom round, rump
- (12) Identify point at which to separate wing, T-bone, porter house, steaks
- (13) Identify point at which to separate tenderloin section

10.4 Training Objective 2

(1) Trainee to acquire thorough knowledge of the names of regular cuts.

10.5 Enabling Objectives

(1) List all regular cuts

10.6 Evaluation

- (1) Trainees on a visit to a meat packing plant will observe a side of beef being cut
- (2) Trainees will watch a demonstration of a side of beef being cut into regular cuts
- (3) Trainee will undergo a written test on the names of regular cuts

Preparation and Cookery of Meats

11.1 Purpose

- (1) To provide the knowledge and skills required to assess the quality of beef
- (2) To provide the knowledge and skills required to tenderize beef
- (3) To provide the knowledge and skills required to prepare beef using dry heat methods
- (4) To provide the knowledge and skills required to prepare beef using moist heat methods
- (5) To provide the knowledge and skills required to prepare variety of meats using combination of dry and moist heat methods.

11.2 Training Objective 1

(1) Trainees to receive instructions in specific characteristics of each Canadian grade of beef.

11.3 Enabling Objectives

- (1) Names of Canadian grades of beef
- (2) Explanation for the use of Canada approved stamp
- (3) Explanation of the letter and number in the grade stamp
- (4) Identify persons responsible for grading
- (5) Identify the number of grading stamps on each side of beef
- (6) Importance of purchasing government inspected beef
- (7) Identify colours used to indicate each grade
- (8) Identify allowable fat levels
- (9) Explain white and yellow fat indications
- (10) Recognizing marbling of fat through flesh
- (11) Distinguish texture of flesh (fine or coarse)
- (12) Distinguish colour comparison, bright red to deep dark red.

11.4 Evaluation

- (1) Trainees to undergo written test on beef grading system
- (2) Trainees on a visit to a meat packing plant will observe grading process.



11.5 Training Objective 2

(1) Trainees to receive practical instructions in establishing proper ageing technique and tenderizing meat items manually and by marination.

11.6 Enabling Objectives

- (1) Establish proper ageing temperature, humidity and time range
- (2) Explain why ageing tenderizes meat
- (3) Establish best position of beef for ageing
- (4) Recognize chemical change is carcass during ageing
- (5) Recognize smell of properly aged meat
- (6) Monitor loss of weight during ageing
- (7) Explain why properly aged meat in more expensive
- (8) Name tools and equipment used to manually tenderize
- (9) Identify effects of manual tenderizing
- (10) Name cuts of meat which benefit from manual tenderizing
- (11) Benefits of manual tenderizing
- (12) Name utensils necessary in marination
- (13) Identity purpose of ingredients used
- (14) State ratio of oil to acid
- (15) Determine length of time and temperature to marinate
- (16) Name popular juices that aid in tenderizing
- (17) State additional benefits of marinating
- (18) Name most popular spices used in marination

11.7 Evaluation

- (1) Trainees to undergo a written test on meat ageing and tenderizing
- (2) Trainees will perform manual and marinating forms of tenderizing under supervision

11.8 Training Objective 3

(1) Training to prepare beef products by roasting, baking, broiling, grilling, sautering and pan frying using dry heat methods.

11.9 Enabling Objectives

(1) Using recipes, cook meat by use of dry heat

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- (2) Prepare beef by roasting/baking
- (3) Methods of determining doneness
- (4) Popular use of drippings
- (5) Length of time a roast should rest before carving
- (6) Prepare beef by broiling
- (7) Approved methods for testing doneness
- (8) Description of temperature used and desired fat content of meat
- (9) Comparison between broiling fresh and frozen items
- (10) Use of seasonings
- (11) Prepare beef by grilling
- (12) Popular grilling temperature
- (13) Frying mediums and seasonings used
- (14) Methods used to establish degree of doneness
- (15) Prepare beef by sautering
- (16) Approximate cooking time and temperature
- (17) Method for testing degree of doneness
- (18) Popular use of drippings
- (19) Preparing beef by pan-frying
- (20) Variety of meat most suitable for pan-frying
- (21) Comparison between pan-frying and sautering
- (22) Approximate cooking time and temperature
- (23) Methods for testing doneness
- (24) Popular use of drippings

11.10 Evaluation

- (1) Trainees to undergo written test on dry heat methods
- (2) Trainees will prepare meats using dry heat methods

11.11 Training Objective 4

(1) Trainees to prepare appropriate meat products by boiling, steaming, poaching and simmering using moist heat methods.



11.12 Enabling Objectives

- (1) Using recipes cook meat by use of moist heat
- (2) Indicate variety of meat suitable for boiling and prepare same
- (3) Establish liquid to use and temperature of boiling
- (4) Methods for testing meat for doneness
- (5) Seasonings used when boiling and time of removing meat from liquid
- (6) Indicate variety of meats suitable for steaming
- (7) Instruction in the use of steam as pre cooking step
- (8) Effects of high heat on meat protein
- (9) Seasonings used when steaming
- (10) Methods for testing meat for doneness
- (11) Indicate variety of meats suitable for poaching
- (12) Temperature of poaching liquid
- (13) Seasoning used when poaching
- (14) Methods for testing meat for doneness
- (15) Indicate varieties of meats suitable for simmering
- (16) Type of seasonings used
- (17) Advantages of simmering
- (18) Method of testing meat for doneness

11.13 Evaluation

- (1) Trainees to undergo written test on moist heat methods
- (2) Trainees will prepare meats using moist heat methods

11.14 Training Objective 5

(1) Trainees to prepare appropriate meat items by braising and stewing methods.

11.15 Enabling Objectives

- (1) Using recipes, cook meats by use of braising and stewing and stewing procedures
- (2) Define combination cooking
- (3) Identify meats suitable for braising
- (4) Type, amount and temperature of fat used
- (5) Approximate time required to sear meat

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- (6) Timing the cooking process
- (7) Type of seasoning used
- (8) Method for determining doneness
- (9) Identify meat items suitable for stewing
- (10) Type, amount, temperature of fat
- (11) Selection and amount of liquid to add
- (12) Approximate time required to sear meat
- (13) Type of seasoning used
- (14) Method of determining doneness

11.16 Evaluation

- (1) Trainees to undergo written test on combination methods
- (2) Trainees will prepare meats using combination methods

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Preparation, Cooking and Serving of Fish.

12.1 Purpose

- (1) To provide the knowledge and skills required to identify and select fresh and frozen fish and seafood including their storage methods.
- (2) To provide the knowledge and skills required to clean fish.
- (3) To provide the knowledge and skills required to select correct cutting equipment and tools and correct filleting and coating techniques for preparation.
- (4) To provide the knowledge and skills required to prepare shellfish.

12.2 Training Objective 1

(1) Trainees to receive theoretical and practical instructions in the identification and selection of fresh and frozen fish to ensure quality.

12.3 Enabling Objectives

- (1) Identity different species of fish using colour charts and actual species of fresh and salt water fish on field trips.
- (2) List the types and varieties of frozen fish available.
- (3) Assess quality of fresh fish through appearance, colour, firmness, live characteristics and smell.
- (4) Storage methods and temperature level to preserve quality of fresh and frozen fish.
- (5) Proper methods for handling and defrosting frozen fish.

12.4 Evaluation

- (1) Trainee to undergo written test on selection of varieties of fish and proper storage methods.
- (2) Trainee to undergo practical test on handling and defrosting frozen fish.

12.5 Training Objective 2

(1) Trainees to receive practical instructions in cleaning washing and scaling fish to maintain shape, quality and freshness with minimum amount of blemishes.

12.6 Enabling Objectives

- (1) Method of washing fish in cold water to remove impurities but maintaining firmness of flesh and retaining flavour.
- (2) Scrape the scales off and remove parasites.

12.7 Evaluation

(1) Training to undergo practical test in cleaning washing and scaling at least 3 varieties of fish.



Training Objective 3 12.8

(1) Trainees to receive practical instructions in selecting tools and utensils for cleaning, scaling and portioning to maintain minimum amount of waste and produce cuts of uniform weight and size for preparation.

12.9 **Enabling Objectives**

- (1) Identify tools and utensils for cleaning and scaling.
- (2) Methods of cleaning fish by removing gut, gills, head, tail, fins, skin and roe.
- (3) Identify type or style of cuts of fish.
- (4) Fillet fish.
- (5) Instructions in recipes for ingredients, type of coating and method of cooking.
- (6) Instructions in cooking methods i.e. poaching, steaming, frying (shallow and deep), broiling, baking and glazing.
- (7) Prepare stuffing.

12.10 Evaluation

- (1) Trainee to undergo practical test to fillet, section and portion fresh fish.
- (2) Trainee to prepare three of the most common used varieties by dry heat and moist heat methods.
- (3) Trainee to prepare at least one variety by other methods.

12.11 Training Objective 4

(1) Trainee to receive practical instructions in cleaning and preparation of shellfish.

12.12 Enabling Objectives

- (1) Identify classifications of shellfish.
- (2) Signs of deterioration of fresh shellfish.
- Describe proper procedure to remove dirt and foreign objects and cutting, cleaning and (3) shucking procedures for all forms of shellfish.
- (4) Discard stomach and veins or shell and remove impurities by washing in cold water but maintain firmness of flesh and flavour while avoiding damage.
- (5) Sequence cleaning, washing and service time to ensure quality and freshness.

12.13 Evaluation

- (1) Trainee to undergo a written test on cleaning and preparation of shellfish.
- (2) Trainee to undergo a practical test in the preparation of shellfish.

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Fruits

13.1 Purpose

- (1) To provide the knowledge and skills required to select, clean and prepare all types of fruits for cooking.
- (2) To provide the knowledge and skills required to prepare/cook fruits for a variety of menu requirements.
- (3) To provide the knowledge and skills required to prepare fresh and canned fruits for frozen storage.

13.2 Training Objective 1

(1) Trainees to receive hand outs on the nature, selection and preparation of fruits.

13.3 Enabling Objectives

- (1) Define fruit.
- (2) Difference between fruits and vegetables.
- (3) Most commonly served fruits.
- (4) Advantages of using local fruits in-season.
- (5) Acid content of certain fruits and their juices and the effects these acids have on other food products, tools and equipment.
- (6) An overview of nutritional value of fresh fruits in a well balanced diet.
- (7) Method of cooking which best serves the intended use of the fruit to be prepared.
- (8) Uses of fruits as appetizers, accompaniments, main courses, desserts, garnishes and centrepieces.
- (9) Oxidation and its effect on fruit.
- (10) Importance of using proper tools, equipment and utensils.

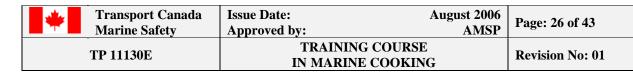
Nutrition

14.1 Purpose

- (1) To introduce students to the nutritional needs of the human body and the various food sources of essential nutrients.
- (2) To provide the knowledge and skills required to prepare meals according to Canada's Food Guide.

14.2 Training Objective

(1) Trainees to be provided with Canada's Food Guide and to receive instructions in its use.



14.3 Enabling objectives

- (1) Specific food groups for balanced diets.
- (2) Balancing menus for nutritional value.
- (3) Awareness of requirements for diabetic, restrictive sodium, restrictive fat and therapeutic diets.
- (4) Preserving food values by correct storage methods.

14.4 Evaluation

(1) Trainee to undergo written test in the correct and effective use of Canada's Food Guide when planning and preparing meals.

Vegetables Fresh and Frozen.

15.1 Purpose

- (1) Trainees to be provided with the knowledge and skills required to:
 - (a) store fresh vegetables (root and leaf) to maintain quality, colour and crispness.
 - (b) properly clean and section all types of vegetables into proper shapes and sizes with minimum waste and loss of nutrients.
 - (c) cook fresh, frozen, dried and canned vegetables.
 - (d) select proper herbs, spices, seeds and seasonings for use in a variety of preparations.
 - (e) prepare fresh and canned mushrooms for a variety of menu requirements.
 - (f) prepare French fried, boiled, mashed, baked-stuffed and scalloped potatoes.

15.2 Training Objective 1

(1) Trainees to receive hand outs on assessment of quality of vegetables and methods of storing.

15.3 Enabling Objectives

- (1) Identify vegetables by groups and names.
- (2) Assess crispness, colour, decay, smell, firmness and age.
- (3) Determine age of produce and probable storage life.
- (4) Temperature and environment to preserve quality by refrigeration, humidity and ventilation.
- (5) Preparation for storage by removing wilted leaves, branches, decay, packaging .

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(6) Repackaging in storage containers (wire baskets or perforated plastic containers) to ensure good air circulation to prolong freshness.

15.4 Evaluation

- (1) Trainees to undergo written test on assessment of quality and storage.
- (2) Trainees to write a short report on the visit to a local produce supply company.

15.5 Training Objective 2

(1) Provide hand outs followed by practical instructions in cleaning and cutting of vegetables.

15.6 Enabling Objectives

- (1) Proper time to clean vegetables.
- (2) Proper methods to use to clean vegetables.
- (3) Proper time to prepare and cut vegetables.
- (4) Proper equipment and tools to clean and cut vegetables.
- (5) Demonstrate peeling, slicing and cutting of vegetables using hand tools and machines with minimum loss of nutrients.
- (6) Prepare dried legumes for cooking.
- (7) Chemicals used to avoid discoloration of certain prepared vegetables.

15.7 Evaluation

- (1) Given a variety of vegetables trainee to properly clean and section vegetables into predetermined sizes and shapes.
- (2) Trainee to undergo a written test on cleaning and cutting of vegetables and appropriate uses of trimmings and peelings.

15.8 Training Objective 3

(1) Given the necessary equipment and supplies and specific menu requirements the trainee will prepare vegetables using the cooking method which retains maximum colour, flavour, vitamin, mineral and desired texture.

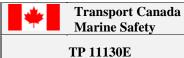


15.9 Enabling Objectives

- (1) Determine best method suited for intended use.
- (2) Determine proper cooking time and temperature for each method of preparation, i.e.
 - (a) grilling
 - (**b**) boiling
 - (c) steam cooking
 - (**d**) shallow frying
 - (e) deep frying
 - (f) bake
 - (g) braising
 - (h) pressure cooking
 - (i) stewing
 - (j) glazing
 - (k) sautéing
- (3) Describe the acid effect on vegetables.
- (4) List and describe the equipment and tools necessary to cook, drain and hold vegetables.
- (5) Describe doneness specifications for vegetables.
- (6) Describe proper methods for testing vegetables for doneness and use of cooking time chart and tables.
- (7) Compare cooking times of frozen vegetables with those of fresh vegetables.
- (8) Explain the importance of holding frozen vegetables at specific freezer temperature.
- (9) Describe desirable qualities to be retained when cooking vegetables.
- (10) Describe effects of overcooking vegetables.
- (11) Describe substances/pigments which give vegetables cooked in hard as compared to soft water.
- (12) Describe the difference between vegetables cooked in hard as compared to soft water.

15.10 Evaluation

- (1) Trainee to undergo a written test on vegetable preparation.
- (2) Given a selection of green, red, strong juice, frozen, dried legumes and canned vegetables, the trainee will prepare each group by selecting the cooking method that will retain the maximum amount of colour flavour, vitamins, minerals and desired texture.



15.11 Training Objective 4

(1) Trainee to receive hand outs and instructions on the selection and use of proper herbs, spices, seeds and seasonings to use in a variety of culinary operations.

15.12 Enabling Objectives

- (1) Define and identify various herbs, spices, seeds and seasonings.
- (2) Describe the part that each plays in food preparation.
- Describe the shelf life of herbs and spices. (3)
- (4) Explain how whole herbs, spices and seeds are used.
- Explain how grounded or powdered herbs, spices and seeds are used. (5)
- Describe the effects of over-seasoning, under-seasoning and timing. (6)
- (7) Given a list of specific foods, explain how herbs or spices are used to enhance flavour.
- (8) Describe how herbs and spices penetrate in dry and moist heat methods of cookery.

15.13 Evaluation

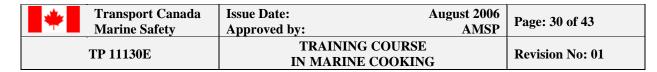
- (1) Trainee to research and write a report on herbs. spices and seeds.
- (2) Trainee to undergo a written test on herbs. spices, seeds and seasonings.
- Given a list of food dishes or preparations the trainee will correctly identify the herb or (3) spices responsible for the predominant flavouring of the dish or preparation.
- Given a list of seeds the trainee will name the particular seed most commonly used in (4) particular foods.

15.14 Training Objective 5

(1) Trainees to name, inspect, clean, cut and cook fresh and canned mushrooms to meet specific menu requirements.

15.15 Enabling Objectives

- (1) Identify and select most popular mushrooms served.
- (2) Clean fresh mushrooms and cut into various shapes.
- (3) Cook fresh and canned mushrooms using variety of methods.
- (4) Detect spoilage in fresh and canned mushrooms using established procedures.
- (5) Describe the variety of uses of mushrooms in food preparation.
- (6) Use of mushrooms for soup preparation.



15.16 Evaluation

- (1) Trainee to undergo a written test on the preparation and cooking of fresh and canned mushrooms.
- (2) Trainee to clean, cut and cook fresh and canned mushrooms to meet specific menu requirements.

15.17 Training Objective 6

(1) Given the necessary equipment, the trainee will prepare and cook potatoes to meet menu requirements.

15.18 Enabling Objectives

- (1) Identify potato varieties most suitable for each method of preparation and cookery.
- (2) French fried potatoes:
 - (a) peel, wash, cut, soak, blanch, finish and store potatoes which are blanched but not cooked.
 - (b) cook French fried potatoes.
- (3) Boiled/mashed potatoes
 - (a) Peel, cut and wash potatoes
 - (b) Use correct amount of water for boiling
 - (c) Determine length of cooking time
 - (d) Test for doneness
 - (e) Drain and hold boiled potatoes
 - (f) Mash, add required ingredients and portion
- (4) Baked/Baked-stuffed potatoes
 - (a) Clean and select correct size and wrap in foil
 - (b) Determine baking time and temperature
 - (c) Test for doneness and hold after baking
 - (d) For baked potatoes cut for service and add accompaniment
 - (e) For baked-stuffed potatoes cut and remove skin, add necessary ingredients and replace potato mixture in skin
 - (f) Heat to finish
- (5) Scalloped Potatoes
 - (a) peel wash and slice potatoes
 - (b) layer and add necessary ingredients

- (c) determine approximate cooking time
- (d) test for doneness
- (e) portion

15.19 Evaluation

- (1) Trainee to undergo a written test on potato cookery.
- (2) Trainee to prepare and cook each type of potato using accepted technique.

Subject

16.1 General

- (1) Desserts
- (2) Cookies, cakes and muffins
- (3) Baking
- (4) Flour, bread and rolls

16.2 Purpose

- (1) To provide the knowledge and skills required to select baking ingredients according to required use and specifications, and ensuring quality, freshness and taste of product.
- (2) To provide the knowledge and skills required to prepare bread, rolls, doughnuts and a variety of other baked dough products.
- (3) To provide the knowledge and skills required to bake tea biscuits, muffins and cakes.
- (4) To provide the knowledge and skills required to bake puff. pastry, soufflés, pies, custard dessert and frozen desserts.

16.3 Training Objective 1

(1) Select baking ingredients

16.4 Enabling Objectives

- (1) Identify types of baking flours and their flavours.
- (2) Identify types of yeasts.
- (3) Identify types and characteristics of sweetening products.
- (4) Identify types and characteristics of fats used in baking.
- (5) Identify types of egg products used in baking.
- (6) Identify types of milk used in baking.
- (7) Identify types and flavouring ingredients.

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(8) Maintain temperature and environment to store, maintain quality and to prevent deterioration of baking ingredients and baked products.

16.5 Evaluation

- (1) Trainee to undergo a written test on baking ingredients.
- (2) Given recipes for baked products, the trainee will follow these recipes and prepare the recommended amount of each recipe to a predetermined standard.

16.6 Training Objective 2

(1) Prepare, bake and serve a variety of dough products.

16.7 Enabling Objectives

- (1) Interpret recipes for amounts/volumes and method of preparation.
- (2) Define baked dough products.
- (3) Select equipment necessary for dough preparation.
- (4) Prepare and incorporate necessary ingredients.
- (5) Demonstrate proper pan proofing techniques.
- (6) Determine baking times and temperatures for dough products.
- (7) Cool, cut and store products.
- (8) Describe keeping and freezing qualities of baked dough products.

16.8 Evaluation

- (a) Trainee to undergo a written test on dough preparation.
- (b) Trainee to prepare flour, bake bread, rolls cookies and cakes.

16.9 Training Objective 3

(1) Trainee to bake biscuits, muffins and cake batter according to recipe specifications.

16.10 Enabling Objectives

Biscuits

- (1) Interpret recipe for amount/volume of ingredient and method of preparation.
- (2) Select type and quality of flour.
- (3) Select type of fat.
- (4) Select utensils and equipment.
- (5) Thoroughly mix ingredients and rest dough to make it easier to handle.

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- (6) Roll dough and cut into specific shape and size with a minimum amount of wastage.
- (7) Place on greased or lined pans and brush egg wash onto biscuits for glazing.
- (8) Bake at pre-determined temperature and time to achieve desired colour.
- (9) Test to ensure they are fully cooked to ensure they are light and tender, have oven and moist texture, sweetish flavour and golden or light brown colour.

Muffins

- (10) Interpret recipe for amount/volume of ingredients and method of preparation.
- (11) Select type and quality of flour.
- (12) Select type of fat.
- (13) Identify type of leavening agents.
- (14) Select utensils and equipment.
- (15) Cream and mix ingredients to specific consistency.
- (16) Fill lined muffin tins.
- (17) Bake and test to ensure they are fully cooked to ensure they are light tender spongy and moist.

Cake

- (18) Interpret recipe for amount/volumes of ingredients and method of preparation.
- (19) Identify types of cakes.
- (20) Select type of flour.
- (21) Identify type of fat.
- (22) Identify type of leavening agents.
- (23) Select utensils and equipment.
- (24) Aerate ingredients to correct temperature.
- (25) Combine ingredients to pre-determined consistency.
- (26) Fill and spread batter into greased or lined baking pans.
- (27) Bake cake batters to specific time to achieve desired colour and full cooking.
- (28) Test cake batter to ensure it is fully cooked to proper colour to ensure spring back.

16.11 Evaluation

- (1) Trainee to undergo a written test on baking biscuits, muffins and cake.
- (2) Trainee to prepare and bake biscuits, muffins and cake to recipe specifications.

16.12 Training Objective 4

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(1) Trainee to bake puff pastry, soufflés, pies, custard and frozen desserts according to recipe specifications.

16.13 Enabling Objectives

Puff Pastry

- (1) Interpret amounts/volumes of ingredients and method of preparation.
- (2) Select type and quality of flour.
- (3) Select type of fat
- (4) Identify various acids used.
- (5) Select utensils and equipment.
- (6) Knead dough and prevent drying out.
- (7) Roll and encase fat completely with dough.
- (8) Roll and cut dough into predetermined shapes, sizes and thickness.
- (9) Assemble puff pastry into specific items and allow pastry to rest in a cool place to avoid excessive shrinkage.
- (10) Bake puff pastry at predetermined temperature and for specific time to achieve the desired colour, dryness and full cooking.
- (11) Test puff pastry to ensure it is fully cooked as desired.

Soufflés

- (12) Interpret amount/volumes of ingredients and method of preparation.
- (13) Identify types of soufflés.
- (14) Determine cooking time.
- (15) Select flavouring ingredients.
- (16) Select type and size of mould and coat soufflé mould to prevent sticking sugar.
- (17) Portion and combine ingredients to form into a thickening agent.
- (18) Stir and beat ingredients to combine thoroughly.
- (19) Cook ingredients at pre-determined temperature and specific time.
- (20) Whip and fold egg whites into cooled thickened sauce with minimum disturbance of cell structure.
- (21) Portion mixture into prepared moulds.
- (22) Cook soufflés at pre-determined temperature and for specific time in a water bath to ensure even cooking.

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(23) Hold soufflés to maintain quality and service savoury soufflés immediately.

Pies

- (24) Interpret recipe for amounts/volumes of ingredients.
- (25) Determine type of flour.
- (26) Identify type of fat and approximate ratio of fat to flour.
- (27) Mix fat and flour, amount of chilled water to use and reason for using chilled water.
- (28) Describe usual resting time.
- (29) Determine dough required for top or bottom crust.
- (30) Demonstrate proper rolling procedure and placement of dough in pie plate.
- (31) Demonstrate docking of single crusted pie shells.
- (32) Use of egg wash on double-crusted pies.
- (33) Determine correct oven time and temperature for pie shells.
- (34) Determine proper oven time and temperature for double-crusted pies.
- (35) Determine approximate amount of filling to use per pie.
- (**36**) Cool and cut baked pies.
- (37) Determine proper holding temperature.
- (38) Describe pies that can and cannot be frozen.

Custard

- (39) Interpret recipe for amounts/volume of ingredients and method of preparation.
- (40) Identify types of custard desserts.
- (41) Select flavouring ingredients.
- (42) Select type of milk.
- (43) Select type and size of mould or container.
- (44) Prepare mould or container in which to cook.
- (45) Blend ingredients at pre-determined temperature.
- (46) Strain egg custard to separate liquid from solids.
- (47) Cook egg custard in a water bath at pre-determined temperature and time.
- (48) Cover to prevent crust.
- (49) Test egg custard to ensure fully cooked.

Frozen Desserts

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- (50) Interpret recipe for amounts/volumes of ingredients and method of preparation.
- (51) Identify types of frozen desserts.
- (52) Identify different components that make up frozen desserts.
- (53) Determine length of time to freeze desserts.
- (54) Select type and size of dish to serve frozen desserts.
- (55) Hold frozen desserts in a freezer to maintain quality, shape and temperature.

16.14 Evaluation

- (1) Trainee to undergo a written test on baking pastry, soufflés, pies, custard and frozen desserts.
- (2) Trainee to prepare and bake pastry, soufflés, pies, custard and frozen desserts to recipe specifications.

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Microwave Cooking

17.1 Purpose

(1) To provide the knowledge and skills required to operate and maintain a microwave oven.

17.2 Training Objective

(1) Trainee to receive instructions and demonstrations in the proper use and maintenance of a microwave oven.

17.3 Enabling Objective

- (1) Function of controls as per operating manual.
- (2) Safety factors.
- (3) Cleaning methods.

17.4 Evaluation

- (1) Trainee to undergo a written test in the proper and safe use of a microwave oven.
- (2) Trainee to prepare a dish using microwave oven.

Garbage Handling and Disposal.

18.1 Purpose

(1) To provide knowledge and skills required to maintain storage and waste disposal areas in accordance with applicable regulatory requirements and established standards.

18.2 Training Objective

(1) Trainee to describe in writing applicable requirements of Sanitation Code and regulations made under Public Health Act.

18.3 Enabling Objective

- (1) Correct method to handle food waste and disposal of garbage i.e. wet garbage, dry waste and garbage containers.
- (2) Recognition of food-borne diseases from improper cleaning and maintenance.
- (3) Methods of detecting presence of rodents and insects.
- (4) Methods to eliminate insects and control rodents i.e. regular inspection, correct storage, pesticide used and limitations.
- (5) Types of harmful chemical changes caused by bacteria.
- (6) Types and characteristics of toxic, chemical poisons and micro-organisms.
- (7) Identify and select cleaning material and detergents.

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- (8) Destruction of frozen and damaged cans.
- (9) Correcting possible health hazards in equipment and installations.
- (10) Potential maintenance problems and identification and reporting of minor breakdowns.
- (11) Necessary maintenance to ensure sanitation.
- (12) Good housekeeping and maintenance.

18.4 Evaluation

(1) Trainee to undergo a written test on kitchen hygiene and sanitation to maintain preset standards of cleanliness to prevent the spread of harmful bacteria.

Job Safety

19.1 Purpose

(1) To provide knowledge and skills required to follow accepted safety procedures, safe working habits, safe operation of machines to manufacturer's safety standards and recognize potential hazards and take appropriate action.

19.2 Training Objective

(1) List the kitchen safety procedures, safe working practices and safe operation of machines to create a safe working environment.

19.3 Enabling Objectives

- (1) Identify statutes and regulations related to safety in work place.
- (2) Identify protective clothing and equipment.
- (3) Identify and report/remove hazards.

19.4 Evaluation

- (1) Trainee to undergo a written test on statutes and regulations applicable to safety in the workplace.
- (2) Trainee to be evaluated on his daily work habits.

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Deep Fry Cooking

20.1 Purpose

(1) To provide the knowledge and skills required to perform deep fry cooking.

20.2 Training Objective

(1) Given a variety of foods, the trainee will select the proper equipment and cooking temperature to deep-fry the foods individually to predetermined levels of "doneness".

20.3 Enabling Objectives

- (1) List the major parts of a deep fryer.
- (2) List the type of frying fats.
- (3) List the proper cooking temperatures for various foods when deep fat-frying.
- (4) Preparation of foods for frying.
- (5) List frying times for various fried foods.
- (6) Demonstrate correct handling procedures for pre-breaded foods.
- (7) Demonstrate correct handling procedures for frozen pre-breaded foods.
- (8) Demonstrate proper draining procedures for foods following deep-fat frying.
- (9) Described proper type of holding for deep-fried foods.
- (10) Demonstrate correct method of shaking food while frying.
- (11) Maintain temperature while deep fat frying.
- (12) Filter the deep-fat supply.
- (13) Boil out the deep-fat fryer.
- (14) Burn off fryer element.
- (15) Use of deep-fat thermometer.
- (16) List the effect of sugar, salt and some metals on deep fat.
- (17) Determine doneness of deep-fried foods.

20.4 Evaluation

- (1) Trainee to undergo a written test on deep-fat frying.
- (2) Trainee to deep fry a variety of foods to predetermined levels of "doneness" and determine cooking temperature and time.
- (3) Trainee to demonstrate filtering of fat from deep-fat fryer, boil out the fryer and burn off elements.

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Egg Cookery (Breakfast)

21.1 Purpose

(1) To provide the knowledge and skills required to prepare eggs for breakfast foods.

21.2 Training Objective 1

(1) List the types of eggs commonly used and served on board ships.

21.3 Enabling Objectives

- (1) Canadian and American grades of eggs as to size, weight and fat content.
- (2) List information on storage, temperature and location, and uses appropriate to the following types of eggs.
 - (a) fresh
 - (b) frozen
 - (c) dried
 - (d) canned

21.4 Training Objective 2

(1) Trainee to select necessary equipment, ingredients and prepare the following types of eggs to maintain maximum nutritional value and describe serving methods.

21.5 Enabling Objective

- (1) Inspect egg for quality.
- (2) Select appropriate equipment, method and ingredients.
- (3) Determine cooking time.
- (4) Adjust temperature to maintain nutrition, colour and texture.
- (5) Cook boiled, poached, fried, scrambled and omelettes.

21.6 Training Objective 3

(1) Trainee to prepare breakfast meats.

21.7 Enabling Objectives

- (1) Identify and select breakfast meats according to menu requirements.
- (2) Select equipment.
- (3) Slice breakfast meats prior to cooking if required.
- (4) Determine cooking temperature.

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- (5) Drain fat from meats.
- (6) Sequence cooking time in relation to serving.

21.8 Training Objective 4

(1) Trainee to prepare and cook French toast.

21.9 Enabling Objectives

- (1) Select equipment.
- (2) Select bread, flavouring and blending ingredients.
- (3) Determine time and temperature to cook to meet requirements.
- (4) Prepare cooking surface to prevent sticking.
- (5) Serve immediately to prevent loss of quality.

21.10 Training Objective 5

(1) Trainee to prepare and cook pancakes.

21.11 Enabling Objectives

- (1) Interpret recipe for amount/volume of ingredients.
- (2) Select equipment.
- (3) Blend ingredients.
- (4) Determine temperature to cook.
- (5) Prepare cooking surface to prevent sticking.
- (6) Griddle pancakes for specific time.
- (7) Select accompaniment to serve i.e. butter, syrup preserves.
- (8) Serve immediately to prevent loss of quality ensuring they are light and spongy, light brown and fully cooked.

21.12 Evaluation

- (1) Trainee to undergo a written test on egg and pancake preparation.
- (2) Trainee to prepare each style of egg, French toast and pancakes using proper equipment and agents ensuring maximum nutritional value with minimum separation of liquid and egg.

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Sandwiches (Hot and Cold)

22.1 Purpose

- (1) To provide the knowledge and skills required to prepare and display cold sandwiches.
- (2) To provide the knowledge and skills required to prepare hot sandwiches according to recipe specifications.

22.2 Training Objective 1

(1) Trainee to list the types of bread to be used in sandwich preparation, their storage and handling procedures.

22.3 Enabling Objectives

- (1) Types of bread used in sandwiches.
- (2) Desired degree of freshness.
- (3) Requirement for correct storage.
- (4) Correct handling methods.
- (5) Layout procedures used in volume sandwich preparation.

22.4 Training Objective 2

(1) Trainee to list the types and amount of butter used in sandwich preparation.

22.5 Enabling Objectives

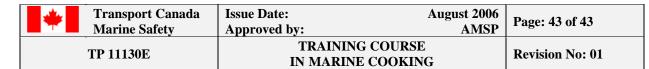
- (1) Desired butter texture for best results.
- (2) Procedure for determining amount required.
- (3) Correct buttering procedure.

22.6 Training Objective 3

(1) Trainee to identify the types of hot sandwiches i.e.: toasted, western rueben, hamburger and method and sequence of preparation.

22.7 Enabling Objectives

- (1) Types of bread used for hot sandwiches.
- (2) Types of fillings for hot sandwiches i.e. meat, eggs, cheese, sauerkraut.
- (3) Equipment and utensils to cook hot sandwiches.
- (4) Preparation and cooking of ingredients for hot sandwiches at pre-determined temperature and time.
- (5) Assemble hot sandwiches with correct ingredients.



22.8 Training Objective 4

(1) Given the required facilities, equipment and supplies. The trainee to prepare. cut, decorate, garnish and display both cold and hot sandwiches utilizing a variety of fillings and cutting procedures.

22.9 Enabling Objectives

- (1) Types of sandwiches to be produced.
- (2) The required ingredients.
- (3) Organizational plan i.e.: timing of procedures.
- (4) Portioning procedure i.e. ingredients.
- (5) Slice products.
- (6) Package finished products.
- (7) Correct holding time and temperature.
- (8) Correct handling procedure for frozen sandwiches and ingredients.
- (9) Garnish sandwiches to create eye appeal with compatible flavour and colour.
- (10) Methods used in the mass production of sandwiches.
- (11) Utilization of leftovers.
- (12) Results of improper sandwich production.

22.10 Evaluation

- (1) Trainee to undergo a written test on sandwich preparation.
- (2) Trainee to prepare, cut, decorate, garnish and display cold sandwiches utilizing a variety of fillings and cutting procedures ensuring the ingredients are fresh and have a pleasant flavour.
- (3) Trainee to prepare, cut, decorate, garnish and display a variety of hot sandwiches, which must be clearly cut and the garnish must be edible and suitable.