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National Guidelines for Food Safety Training Programs in the Food Retail and Food Service Sectors

Federal/Provincial/Territorial Committee on Food Safety Policy

May 9, 2006

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1.0 Introduction

Over the past years, the food retail and food service industry and Federal/Provincial/Territorial (FPT) food committees have discussed the need to harmonize training requirements in Canada as well as a national approach for certification. In January 2004, the FPT Committee on Food Safety Policy (FPTCFSP) established the Sub-committee on Food Retail/Food Service Food Safety Education. The Sub-committee was tasked with the development of national guidelines for food safety training programs, taking into account the learning outcomes outlined in the model *Food Retail and Food Services Code* (the FRFS Code) developed by the Canadian Food Inspection System Implementation Group (CFISIG)¹. The Sub-committee, which was comprised of representatives from governments, industry and academia, collaborated to draft the National Guidelines for Food Safety Training Programs in the Food Retail and Food Service Sectors (the National Guidelines). During the development process, current provincial and industry practices and criteria were reviewed and incorporated² where suitable to enhance the finished product and harmonize it with existing practices and criteria. The National Guidelines were endorsed by the FPTCFSP on May 9, 2006. The endorsement of the National Guidelines highlights the commitment of Provincial and Territorial jurisdictions to strive for the harmonization of food safety training programs and the certification of food handlers. The contributions of the Sub-committee members and others who provided input in the development of the National Guidelines are gratefully appreciated.

2.0 Intent and Purpose

The National Guidelines are intended as a complement to the FRFS Code, which outlines basic requirements and learning outcomes for food safety training. Both documents are for voluntary use by industry and governments.

The purpose of the National Guidelines is two-fold:

- To provide a model for the development and maintenance of food safety training programs across Canada, for the benefit of industry, academia and government officials; and
- To serve as a reference point for government recognition of food safety training programs submitted by private organizations.

Food safety training in the food retail and food service sectors is the responsibility of individual Provincial/Territorial jurisdictions. In some jurisdictions, food safety training and the recognition

¹ The Food Retail and Food Service Code (September 2004), is available on the CFISIG website, at: http://www.cfis.agr.ca/english/regcode/codes_tbl_e.shtml

² Special permission was obtained to reproduce, in part or in whole, certain portions of the British Columbia Centre for Disease Control Food Handler Training Equivalency Evaluation Form (June 2004).

of food safety training programs are legislated or legislation is under development. The purpose of the National Guidelines is not to supercede any legislated requirements. However, the National Guidelines can serve as the basis for regulatory amendments and for the development of new regulatory initiatives. Such an approach would support harmonization of food safety training programs and their recognition across jurisdictions.

3.0 Scope

The National Guidelines can be used to develop and assess training programs intended for operators and/or food handlers. The following guidance is provided in the FRFS Code on training of operators and food handlers:

Section 6.2 (a): “Mandatory educational programs must be required in all jurisdictions for managers/supervisors of food establishments, or a designated person in their absence”.

Section 6.3.2: “Every operator³ of a food establishment should ensure that food handlers have the necessary knowledge and skills to enable them to handle food hygienically.”

Section 6.3.2 does not specify how food handlers should acquire the necessary knowledge and skills. Hence, it could be through formal training programs or other less formal means. Provincial/Territorial authorities should be contacted to determine whether there are any regulatory or policy requirements indicating if food safety training programs should target both groups together (operators and food handlers) or whether separate training programs can be made available to one group or the other.

4.0 National Guidelines

The National Guidelines are organized into five main components:

- Organization Requirements
- Course Contents
- Course Delivery
- Course Examination
- Training Program Evaluation and Maintenance

An organization (private or governmental) that is developing or updating a food safety training program should take into consideration each component and incorporate what is most appropriate for the intended use.

If a private organization intends to seek government recognition of a training program, it should have documentation available to demonstrate that the program meets the requirements outlined in

³ Defined as “a holder of a permit, an owner, lessor or manager of the food premises” in the FRFS Code. Section 6.5 of the FRFS Code refers to learning outcomes for “operators” and “food handlers” For the purpose of this document, “operators” is therefore considered equivalent to “managers/supervisors”.

these five components, unless otherwise specified in Provincial/Territorial regulatory or policy requirements.

Private organizations seeking government recognition of on-line courses should provide access to the course for review purposes.

4.1 Organization Requirements

The organization should meet one of the following classifications:

- public or private training institution (e.g., school, college, institute, university);
- public health or other government organization (e.g., health authority, municipality, provincial agency)
- food industry or professional organization (e.g., restaurant, grocery, environmental health); or
- private trainer or training company that has documented support of credibility.

In addition, the organization should:

- have a philosophy, mission and/or goals towards food safety education in the food retail/food service sectors that are aligned with the learning outcomes of the FRFS Code;
- be responsible to its students and is capable of administrating and maintaining student records according to privacy legislation;
- ensure that any translation of course promotion, content and examination is equivalent to the information in the original language; and
- have policies regarding students that have English/French as a second language as well as students with disabilities and low literacy levels.

4.2 Course Contents

4.2.1 Course Development

Course developer(s) qualifications:

The course should be developed by an individual or a team that has:

- food safety qualifications (e.g., food sanitation, public/environmental health, home economics) and
- instructional design qualifications (e.g., post secondary education or experience in education theory, learning styles, curriculum planning, development of course materials).

In addition to the above, the individual or team involved in the development of on-line courses should have:

- on-line instructional design qualifications (e.g. post secondary education or experience in developing on-line courses)

4.2.2 Target Audience and Literacy Level

The target audience for the food safety training program should be identified and the literacy level should be adequate for the target audience, without compromising the course contents.

4.2.3 Course Attributes

The course has should have the following:

- accurate and current
- logical progression of contents,
- progress at an appropriate pace, based on the anticipated capabilities of the students,
- provide examples that are applicable to current practices,
- user-friendly (e.g. clear text and images), and
- inclusive of cultural/disability/gender differences.

4.2.4 Course Components

All courses, whether they are delivered in class room setting, on-line or using alternate formats, should include a number of the following components:

- learning outcomes
- unit outlines, including key points
- explanations, demonstrations and examples
- a glossary of terms
- practice and problem solving exercises
- self-assessment, feedback and review activities

In addition to the above, courses delivered on-line or through alternate forms of delivery should:

- provide means for easy navigation by the students (on-line courses only)
- have controls in place to ensure that students will successfully progress through all course material in the prescribed manner (e.g. access to modules based on completion of previous modules)

4.2.5 Detailed Course Contents

Appendix 1 provides guidelines for the detailed course contents to address the Learning Outcomes for Operators and Food Handlers identified in sections 6.5.1 and 6.5.2 of the FRFS Code (Appendix 2).

4.3 Course Delivery

4.3.1 Course Information and Pre-Requisite Skills

There should be written information provided to students regarding:

- the costs of the course and the examination, the mode of payment as well as the refund

policy

- the delivery format (e.g. classroom, on-line or alternate means of delivery)
- the duration of the course and estimated time commitment to complete it
- the language(s) in which the course is offered
- the activities and assignments required to successfully complete the course
- information on instructors (e.g. co-ordinates and qualifications)
- the passing score for attaining certification
- the expected time frame for receiving the test results and certification upon successful completion of the course
- the confidentiality of the student's test results
- the required language, literacy skills and any other pre-requisite skills

In addition to the above, for on-line or alternate delivery courses, there should be written information provided to the students regarding:

- independent learning and study skills
- computer literacy skills
- availability of technical assistance (e.g., onscreen directions, toll free 24/7 help line, email enquiries, practice before starting the course)
- technical requirements in terms of hardware and software (e.g. operating system, processor, RAM, screen resolution, sound, drives, Internet access speed, Web browser or other specific computer applications)
- access to course materials
- access to a qualified instructor (e.g., via telephone or email)
- interactions with other students (e.g. chat room)
- on-line self-assessment, feedback and examination procedures
- maximum time permitted to complete the course

Promotional materials such as advertising brochures should contain the above-noted information or direct the student where he/she can locate the information (e.g. website).

4.3.2 Instructor Qualifications

Instructors of the food safety training program should have adequate qualifications in food safety education, including:

- post-secondary degree/diploma/certificate in an appropriate and applicable discipline, or a combination of education and experience and completion of "Train-the-Trainer" courses, where required by the authority having jurisdiction
- knowledge of applicable, current food safety legislation and food safety practices
- successful completion of the course to be taught (e.g. minimum 90% score on the examination).

In addition to the above, instructors involved in delivering on-line courses should have education or experience in on-line instructional practices and techniques.

The organization ensures the qualifications of instructors remain current (e.g. through on-going teaching or renewed training/certification) as deemed necessary by the organization. If an

instructor has not taught a course for more than three years, it is recommended that he/she successfully completes the course again or at least successfully challenge the exam.

4.3.3 Classroom Course Delivery

Length of course:

The duration of a course may vary according to a number of factors (e.g. target audience, class size). However, a minimum of 8 hours is recommended to adequately cover the course contents outlined in Appendix 1.

Class size:

Class size may vary according to the target audience and available facilities. Where possible, class size should be limited to 25 students or less to maximize learning and teacher-student interactions, especially when the target audience has lower language or literacy skills.

Teaching formats and materials:

A variety of teaching formats may be used (e.g. role play, case studies, group activities, open ended discussions, self-evaluations, demonstrations, etc.).

Teaching materials should include an instructor guide and a student manual and/or workbooks. Other teaching materials should include instructional media such as audio and/or video presentations, slides, displays, etc.. All teaching materials should be based on the Course Content requirements (section 4.2).

A course outline should be provided to the students, either in their manual/workbook or separately. The outline should identify:

- the topics to be addressed in each section of the course
- the learning objectives for each section
- the course time allotted for each section
- the criteria to evaluate student success

The instructor guide should reflect the contents of the above-noted student materials. In addition, it should:

- describe methods of delivery (instructor and learner activities), opportunities for students to receive assistance and resource materials required for all sections of the course
- identify supplementary information not contained within the student materials.

4.3.4 Alternative Forms of Course Delivery

4.3.4.1 On-line Course Delivery

Training programs that make use of an on-line course delivery method should meet the requirements outlined in section 4.3.3 with the following exceptions:

Length of course:

Given that autonomous students may progress at a faster pace than in a class room setting, a minimum of 6 hours is recommended to adequately cover the course contents outlined in Appendix 1.

Some students may need substantially more time to complete the course due to a number of reasons (e.g. work and family obligations). In order to make sure the course is completed in a reasonable time frame and to maintain quality control on the student database and potential changes to the course, a maximum time of one month is recommended.

Teaching formats and modes:

On-line courses can use a variety of formats and modes for the delivery of materials to the students (e.g. text, static images, animated images, video, multi-media).

4.3.4.2 Other Alternative Forms of Course Delivery

Other alternate forms of course delivery may be used to accommodate geographical limitations and students with special needs (e.g. distance learning with interactive video broadcast).

In addition to section 4.3.3, programs offered using other alternative delivery methods should provide:

- appropriate access to course materials
- appropriate access to assistance and instructors
- controls to ensure students cover all course materials in the prescribed manner
- procedures to safeguard the examination process (section 4.4.2)

Length of course:

As per programs offered on-line, a maximum time of one month is recommended.

4.4 Course Examination

4.4.1 Examination Development

The examination should provide a fair evaluation of a person's food safety knowledge. The following are considerations for the development of examination questions, their relative

weighting and a recommended passing score.

- Examination questions are developed to assess knowledge of the learning outcomes corresponding to the Course Contents (section 4.2).
- There are enough questions to assess the achievement of the learning outcomes and to provide a comprehensive coverage of the Course Contents (e.g., 50 questions or more).
- Examination questions are based on adult learning principles, and are piloted and/or pretested to ensure they are well understood and yield the anticipated answers.
- The format of the questions should be appropriate to the target audience (e.g., multiple choice, short answers).
- There is a bank of questions of sufficient size to ensure randomization of questions and exams
- A score of 70% is required for successful completion of the examination.
- Examination questions addressing public health and food safety risk are either weighted higher than other questions and/or the examination has a higher proportion of these questions.

4.4.2 Examination Administration and Security

An organization may allow its instructors to deliver, supervise and mark the exams of their own students, provided they respect the following requirements.

Specific examination procedures should be in place to ensure the security of the exam questions and the examination results. The following are considerations for examination administration and security that should be outlined.

- Identification of proctor requirements (e.g., counting and matching examinations to attendees, returning examinations for marking)
- Examination ordering and receiving (including a maximum number of examinations per proctor; the requirement that examination packages be opened by authorized instructor/proctor only; the requirement that examinations be kept in a secure location)
- Requirements for an appropriate testing room (that includes an adequate supply of chairs and writing surfaces and room that is well-signed, well lit, free from noise distractions and of appropriate size for the number of attendees)
- Identification of measures to accommodate students with special needs
- Identification of measures to safeguard the security of the final examination (e.g., proper identification of examinees, using different versions of the exam, protecting the exams and the answers and maintaining the examinees' records)
- Identification of standard verbal instructions that proctors are to provide to all examinees (e.g. protocol during exam, minimum passing grade, time limit)
- Identification of how exams are to be distributed and collected
- A requirement that the examination be conducted in a "closed book" manner with proctor and/or instructor supervision
- Identification of steps to be taken in the event of a security violation and/or appeal (e.g. breaches of protocol resulting in revocation of trainer certification, confirmed cheating by a student during the examination)

- Identification of the documentation to be completed by the proctor and the required timelines for completion (i.e., confidentiality agreement, order form, irregularity report, failure reports)
- Identification of confidentiality requirements in reporting examination results to third parties.

There should be a signed contractual agreement between the organization and the authorized instructor/proctor requiring adherence to the above-noted examination procedures.

4.4.3 Examination for Courses with Alternative Forms of Delivery

The examination for courses with on-line and other alternative forms of delivery should meet the requirements outlined in section 4.4 and should be proctored by one of the following methods:

- The student is required to locate a suitable proctor (e.g. a registered member of a profession such as a public health inspector, an educator, librarian, faith leader, nurse, hospital technologist, accountant, professional engineer, etc.), or,
- The organization takes the responsibility of assigning an appropriate proctor.

There should be procedures that provide the proctor with detailed information on the administration of the exam as well as on the process to ensure valid test results (e.g. provision of the student's password for access to the final test).

4.4.4 Scoring Examinations and Communication of Results

There should be procedures for communicating the examination results to the students within a given time frame (e.g. a two week period) and providing certification if applicable.

4.4.5 Student Concerns and Appeals

There are procedures for addressing student concerns and appeals which include the timeline for an appeal and the required documentation to complete an appeal.

4.5 Training Program Evaluation and Maintenance

Training programs are evaluated on a regular basis, by seeking input from instructors and students. The training organization is also encouraged to seek input from public health authorities, academic institutions and subject matter experts⁴.

Following completion of the course, students should be given the opportunity to anonymously complete a course evaluation survey regarding the effectiveness of the training material, the instructor, and the teaching and evaluation methods.

⁴ Should public health authorities have concerns about specific training programs, they should endeavour to bring them to the attention of the organization.

Input from students and instructors should be reviewed by the organization and any deficiencies identified should be evaluated. If the deficiencies noted warrant modifications in the training program, changes are made as soon as feasible. The survey results should be kept on file and any subsequent follow-up actions should be documented.

Completion and success rates should also be reviewed to evaluate potential course improvements.

5.0 Definitions

Course:	Refers to the portion of the Training Program that is delivered to the students, aside from the examination.
Food Safety Training Program:	Training Program that encompasses the five components of the National Guidelines
Organization:	Private or public entity that is developing a food safety training program.
Proctor:	Person assuring all aspects of an examination are being carried out with precision, with full attention to security and to the fair treatment of examinees.

6.0 Contact Point

The contact point for the National Guidelines is the FPTCFSP Secretariat:

Health Canada,
Health Products and Food Branch
Bureau of Regulatory, International and Interagency Affairs
Interagency Program
(613) 957-0906

Appendix 1 - Detailed Course Contents

Notes:

- (1) The Key Points in the table below are provided as examples to assist in the development of the course contents. The FRFS Code served as the basis for these Key Points. References to the pertinent sections of the Code are provided when available for further information.
- (2) Some of the Key Points (e.g. time and temperature controls) may be subject to Provincial/Territorial regulatory requirements, which would take precedence.
- (3) The time devoted to each portion of the course should be based on its relevance to public health and food safety risks.
- (4) The level of detail in each portion of the course should be based on the target audience.

Course Contents	Key Points
1. Legal Requirements	
Authorities	<ul style="list-style-type: none"> • What are the applicable laws or codes • Authorities assigned by these laws or codes to the regulatory authority (e.g. licensing, inspection, enforcement, etc.)
Responsibilities	<ul style="list-style-type: none"> • Responsibilities and rights assigned by these laws or codes to the food employee and person in charge (e.g. compliance with requirements, safe food handling, collaboration with government officials, etc.)
2. Foodborne Illness (FBI) /Injury (FRFS Code - Section 5.8)	
Causes of FBI or injury	<ul style="list-style-type: none"> • Direct microbial, chemical and physical contamination • Cross-contamination/indirect contamination (microbial) • Contamination with allergens not intended to be in the food
Why is FBI or injury serious?	<ul style="list-style-type: none"> • Customers and workers become ill or die • FBI have a greater impact on vulnerable populations (e.g., children, the elderly and immuno-compromised individuals) • Reactions to allergens can be life threatening, even in very small amounts • Business losses and costs
FBI/injury complaints	<ul style="list-style-type: none"> • Refer to manager • Record details of persons and food • Do not give medical advice

3. Food Contamination (Sources and Prevention) (FRFS Code - Sections 2.10, 2.11, 2.12, 3.4, 3.5.2, 4.4, Appendix C)	
Microbial contamination (including cross-contamination/indirect contamination)	<ul style="list-style-type: none"> • Sources: infected workers, contaminated work surfaces, contamination from food to worker to other food, improperly washed dishes, contaminated water used in food preparation or for washing food or ware • Prevention: good personal hygiene; proper food preparation, handling, storage and disposal; proper washing and sanitizing practices; use of potable water for contact with food or as an ingredient, for ice and steam production; protection of water source (e.g. appropriate connections and backflow prevention)
Chemical contamination	<ul style="list-style-type: none"> • Sources: cleaning agents, pesticides, dissolved metals, unlabeled containers, food additives • Prevention: Proper storage of non food chemicals, use of food additives according to written procedures, no use of unlabeled containers
Physical contamination	<ul style="list-style-type: none"> • Sources: glass, wood, hair, bandages, insects, metal particles, stones • Prevention: Good employee hygiene, adequate pest control and maintenance programs, inspection of incoming goods, food protection
Allergen contamination	<ul style="list-style-type: none"> • Types of food allergens: peanuts, eggs, milk, tree nuts (almonds, Brazil nuts, cashews, hazelnuts or filberts, macadamia nuts, pecans, pine nuts, pistachio nuts, walnuts), wheat, soy, sesame seeds, fish (including and shellfish), sulphites • Prevention of contamination: Proper procedures for storing handling and dispensing allergens, including the protection of foods not supposed to contain allergens • Prevention of potential reactions: Advise customers about ingredients upon request; if in doubt on food content, advise that allergens may be present
4. Basic Microbiology and Factors Affecting Microbial Growth (FRFS Code - Sections 2.10, 3.3, 3.4, 3.5.1, 4.1.11, 4.1.12; Appendices A and B)	
What are microorganisms and why are they important?	<ul style="list-style-type: none"> • Living organisms too small to see with the naked eye • Pathogens cause disease (intoxications and infections) in humans while spoilage organisms only affect the food • Food can look safe but may be contaminated

Types and sources of microorganisms	<ul style="list-style-type: none"> • Bacteria, viruses, parasites, protozoa, fungi (mould) and yeast • Sources: food, water, humans, animals and the environment
Toxins	<ul style="list-style-type: none"> • Waste products from bacteria growing in food (e.g. meat, eggs, milk) and in humans (e.g. found in cuts, burns, boils, pimples) • Not destroyed by heat • Can cause foodborne intoxications
Spores	<ul style="list-style-type: none"> • Produced by some bacteria during stressful conditions (e.g. lack of nutrients or moisture) • Not destroyed by heat and disinfectants • Under favourable conditions (temperature, protein, moisture), produce living bacterial cell that grow and reproduce
Carriers	<ul style="list-style-type: none"> • Humans who show no noticeable effects but may carry infections
Transmission of microorganisms	<ul style="list-style-type: none"> • Cycle: food, handler, environment • Microbes are transmitted or “hitchhike” through the cycle • Direct and indirect transmission
Temperature control and Danger Zone	<ul style="list-style-type: none"> • Temperature control is the most effective method for reducing growth of pathogens • Rapid growth of pathogens in the Danger Zone (4°C to 60°C or 40°F to 140°F) • Freezing does not kill pathogens but prevents their growth
Nutrients/protein	<ul style="list-style-type: none"> • Nutrients needed for rapid growth of pathogens • Main nutrients: water and energy (e.g. protein) • Foods rich in nutrients: Meat, poultry, fish, eggs, dairy products, fruits and vegetables
pH	<ul style="list-style-type: none"> • Measures the degree of acidity or alkalinity • Scale ranges from 0 to 14 (acidic to alkaline); 7 is neutral • Sour/acidic foods have low pH • Rapid growth of pathogens over pH of 4.5, especially in moist foods

Water activity (a_w) and moisture	<ul style="list-style-type: none"> • Water activity measures the moisture available to microorganisms • Rapid growth of pathogens in moist foods, especially those with a pH above 4.5 • Moist foods of concern include dairy products, meat, fish, eggs, and vegetables • Dry foods do not contain enough moisture for pathogens to grow, but pathogens can survive in them. Dry foods are potentially hazardous when moisture is added to them
Oxygen	<ul style="list-style-type: none"> • Bacteria that need oxygen are called aerobic bacteria • Anaerobia bacteria grow if no oxygen present
Potentially hazardous foods	<ul style="list-style-type: none"> • Require time/temperature control to limit the growth of pathogens and the formation of toxins • Include: <ul style="list-style-type: none"> - Moist foods with pH above 4.5 - Dairy products, meat, fish, eggs, cooked vegetables, some raw vegetables (e.g., bean sprouts, garlic in oil), some raw fruits (e.g. cut melons)
5. Food Safety Management System (FRFS Code - Sections 3.1, 3.6, 3.7, 4.0)	
Importance	<ul style="list-style-type: none"> • To control and minimize food contamination (whether by chemical, microbial and physical contaminants and allergens)
Elements	<ul style="list-style-type: none"> • Basic elements of a food safety management system (e.g. HACCP)
Main critical control points (CCPs) and related control measures	<ul style="list-style-type: none"> • Time/temperature controls • Allergen controls
Pre-requisites	<ul style="list-style-type: none"> • Facility and equipment maintenance (incl. pest control, sanitation) • Receiving, storage and transportation controls • Good food handling and packaging practices • Good personal hygiene
6. Time/Temperature Controls for Potentially Hazardous foods (FRFS Code - Section 3.3 and Appendices A and B)	

Thermometer	<ul style="list-style-type: none"> • Used to verify temperatures • Preferred type: instant-read food service type with metal probe • Placed correctly in food to obtain accurate reading • Keep calibrated according to recommended method and frequency • Clean and sanitize after use
Sequence	<ul style="list-style-type: none"> • Minimize the time the food is kept in the Danger Zone by using proper sequence (freezing, thawing, refrigeration, cooking, hot and cold holding, cooling and reheating)
Freezing	<ul style="list-style-type: none"> • Temperature: -18°C/0°F • Do not refreeze without cooking first • Freeze fish at -20°C/-4°F for 7 days to kill parasites
Thawing	<ul style="list-style-type: none"> • Thaw foods at 4°C/40°F in the refrigerator; never thaw at room temperature • Emergency thawing: run cool water over plastic wrapped item
Refrigeration	<ul style="list-style-type: none"> • 4°C/40°F or less
Cooking	<ul style="list-style-type: none"> • Food mixtures containing potentially hazardous foods: 74°C/165°F (internal temperature) for a minimum of 10 seconds • Some meats require different time/temperature combinations • Use thermometer to measure unless item too small
Hot holding	<ul style="list-style-type: none"> • Temperature: at least 60°C/140°F • Time: maximum of 2 hours
Room temperature holding	<ul style="list-style-type: none"> • Time: maximum of 2 hours
Cooling after cooking	<ul style="list-style-type: none"> • Put on ice or refrigerate before the food enters the Danger Zone • Temperature/time: <ul style="list-style-type: none"> - from 60°C/140°F to 20°C/68°F within 2 hours - from 20°C/68°F to 4°C/40°F or less within next 4 hours • Chill in small portions; use Ice Wand™ type of instrument
Cooling after preparation at room temperature	<ul style="list-style-type: none"> • Temperature/time: <ul style="list-style-type: none"> - from 20°C/68°F to 4°C/40°F or less within 4 hours

Reheating	<ul style="list-style-type: none"> • Use highest temperature possible to reach internal temperature 74°C/165°F • Boil and stir stews, soups, gravies • Do not use holding ovens, steam tables or soup urns to reheat cold food
7. Displaying, Serving/Dispensing and Discarding	
Food display controls	<ul style="list-style-type: none"> • Keep food out of Danger Zone • Use sneeze guard • Discard old food before replacing with fresh food • Use properly washed serving utensils
Food serving/dispensing techniques	<ul style="list-style-type: none"> • Handles of serving utensils do not touch the food • Use disposable plastic bags, wax paper, or non-latex gloves to dispense food • Do not touch surfaces of ware that come into contact with mouths or food • Cover cutlery; invert glasses and cups • Use trays to serve • Hold plates underneath with thumb on rim
Discarding food and single-service items	<ul style="list-style-type: none"> • Food served but not eaten must be discarded • Single service items such as plastic cutlery and chopsticks should be discarded after one use
8. Facility and Equipment (FRFS Code - Section 4.0)	
Facility	<ul style="list-style-type: none"> • Keep clean, in good repair and free of pest to prevent food contamination • Adequate waste disposal
Equipment	<ul style="list-style-type: none"> • Sufficient in number and capacity • Properly designed, constructed, located, operated, maintained and cleaned to prevent food contamination • Made of food contact materials if in direct contact with food
9. Receiving and Storage (FRFS Code - Sections 2.9, 3.2 and 3.7)	

Receiving	<ul style="list-style-type: none"> • Inspection of incoming goods needed to verify condition and source. • Goods must be from approved source only and have proper and intact labelling. • Check the required storage requirements (e.g. refrigerated or frozen) and do not accept foods that have not been transported at the required temperature • Do not accept spoiled or damaged products (e.g., no dents, corrosion, bulging, stains and leakage, spoilage) • Check manufacturer’s best before date and do not accept foods after that date.
Storage Requirements	<ul style="list-style-type: none"> • Types of storage (e.g. room temperature, refrigerated and frozen food storage, non-food storage) • Clean storage facilities • Adequate amount of shelving • Keep foods and ware 15cm/6" off floor • Good air circulation; low moisture • Group foods • Ready to eat foods above raw and uncooked foods • Keep allergenic foods and ingredients away from other foods • Keep chemicals in separate storage location • Verify refrigerated and frozen storage temperatures regularly
Stock Rotation	<ul style="list-style-type: none"> • Do not overstock • Date containers of chilled foods going into cold or frozen storage • First in - First out (FIFO) principle • Segregate or discard foods that are beyond the manufacturer’s best before date. • Recommended storage times for refrigerated, frozen and dry goods
10. Cleaning and sanitation (FRFS Code - Section 4.0)	
Importance	<ul style="list-style-type: none"> • To control and minimize microbial contaminants
Equipment - cleaning and sanitizing frequency	<ul style="list-style-type: none"> • Often enough to prevent the accumulation of food residue and other debris • At least every 4 hours for equipment used continuously at room temperature for the handling potentially hazardous foods

Equipment - cleaning and sanitizing method	<ul style="list-style-type: none"> • Cleaning: <ul style="list-style-type: none"> - remove gross debris - clean with detergent (use friction) - rinse with hot tap water to remove detergent • Sanitize with very hot water or chemicals
Clearing and cleaning tables	<ul style="list-style-type: none"> • Discard used food • Use clean, damp cloth or paper towel with sanitizer • Change table linens between settings
All dishwashing	<ul style="list-style-type: none"> • Scrape and pre-soak dishes • Do not use wipers (dish rags) • Thoroughly rinse off detergents before sanitizing • Sanitize with very hot water or chemicals • Do not towel dry • Wash hands before handling clean ware • Ware should be dry and cool before storage
Manual dishwashing	<ul style="list-style-type: none"> • 3 sinks: washing, rinsing and sanitizing • Clean wash water at 45°C/113°F or higher • Use detergent, acid or abrasive cleaners • Use friction • Rinse in hot tap water • Sanitizing: chemical disinfectants and 45°C/113°F water temperature • Air dry on clean, non-porous, sloped drain boards
Mechanical dishwashing	<ul style="list-style-type: none"> • Two types of sanitizing: hot water and chemical • Several different types of dishwashers • Follow manufacturer's directions and appropriate methods in FRFS Code • Use water temperature booster if needed • Do not overcrowd • Invert cups, bowls and glasses • Pre-soak cutlery and mix to stop nesting • Clean and maintain washing equipment
11. Personal Hygiene (FRFS Code - Section 5.0)	

<p>Handwashing</p>	<ul style="list-style-type: none"> • Wash hands: <ul style="list-style-type: none"> - before commencing work and handling clean ware - after smoking, sneezing or coughing, toilet use, handling raw foods, waste and soiled objects and clearing tables • Use sinks designated for handwashing • Warm water, soap, lather and friction • Wash between fingers and use brush for fingernails • Minimum 20 seconds • Rinse with warm water running down • Dry with single-use paper towel or hot air • Do not wipe hands on clothes, cloths or aprons
<p>Personal habits</p>	<ul style="list-style-type: none"> • Change gloves when contaminated • Do not touch body: nose, hair, mouth, etc. • Do not open bags by blowing into them • Do not taste foods with fingers or lick fingers • If food needs to be tasted, use clean utensils only
<p>Working when ill</p>	<ul style="list-style-type: none"> • Communicable disease: <ul style="list-style-type: none"> - Illness in humans transmitted directly or indirectly from an infected person or animal, or the environment - Symptoms: diarrhea, fever, vomiting, jaundice and/or sore throat with fever - Advise management if suffering from a communicable disease • Do not work when ill (e.g. infections, flu) or with injuries to hands, unless it is in an area that will not result in contamination of the food (management discretion)
<p>Clothing</p>	<ul style="list-style-type: none"> • Restrain hair • Wear clean clothing and uniforms • Change when necessary

Appendix 2 - Learning Outcomes from the FRFS Code

The following Learning Outcomes are specified in sections 6.5 of the FRFS Code (September 2004), and are reproduced here for ease of reference.

6.5 Learning Outcomes

6.5.1 Operators

The person in charge shall hold a certificate confirming his/her successful completion of a training program which verifies his/her knowledge of the following aspects of food safety:

- a) The relationship between the prevention of food borne disease and the personal hygiene of a food employee.
- b) The responsibility of the person in charge for preventing the transmission of foodborne disease by a food employee who has a disease or medical condition that may cause foodborne disease.
- c) The importance of time/temperature in maintaining the safety of potentially hazardous food and preventing foodborne illness.
- d) The hazards involved in the consumption of raw or undercooked meat, poultry, eggs, fish, fruits and vegetables.
- e) The required times/temperatures for safely cooking potentially hazardous food, such as meats, poultry, eggs and fish.
- f) The required times/temperatures for safe refrigerated storage, hot holding, cooling, cooking and reheating of potentially hazardous food.
- g) The relationship between the prevention of foodborne illness and the management and control of the following:
 - i) cross-contamination;
 - ii) hand contact with ready-to-eat foods;
 - iii) handwashing and personal hygiene; and
 - iv) the importance of maintaining a clean food premises which is in a state of good repair.
- h) The relationship between food safety and the provision of equipment that is:
 - i) sufficient in number and capacity; and

- ii) properly designed, constructed, located, installed, operated, maintained and cleaned.
- i) Correct procedures for cleaning and sanitizing utensils and food contact surfaces of equipment.
- j) Knowledge of the source(s) of water used in the establishment, and measures taken to assure that it remains protected from contamination, such as providing protection from backflow and precluding the creation of cross-connections.
- k) The correct handling of poisonous or toxic materials and allergens in the food premises and the procedures necessary to assure that such materials are safely stored, dispensed, used and disposed of according to law.
- l) Knowledge of critical control points in the operation, and ability to explain steps taken to assure that the points are controlled in accordance with the requirements of the regulatory authority.
- m) The responsibilities, rights, and authorities assigned by local law or the appropriate code to the:
 - i) food employee;
 - ii) person in charge; and
 - iii) regulatory authority.

6.5.2 Food Handlers

- a) Educational courses and programs provided to food handlers should be designed to effectively meet or exceed the learning objectives outlined below, including knowledge of:
 - i) the food handler's role and responsibility in protecting food from contamination and deterioration;
 - ii) the main properties of common foods;
 - iii) the main types of microorganisms, their sources, the physical and chemical factors that affect their growth, reproduction, activity and death, and the difference between harmful and harmless microorganisms;
 - iv) the common causes of foodborne illnesses, their characteristics, and the procedures and practices that will prevent and control their incidence;
 - v) the basic elements of HACCP; and
 - vi) the allergenic properties of certain foods.

- b) Operators should maintain records indicating which employees have taken courses, the dates, and any relevant additional information.