
CODE OF PRACTICE

"The Code of Good Hygiene Practice (GHP) and Operational Requirements for Compliance
by the Fishery and Aquaculture Business Operators (FABO)"

**Fisheries Administrative Order No. _____
Series of _____**

Department of Agriculture

Bureau of Fisheries and Aquatic Resources

April 2024

CODE OF PRACTICE

Pursuant to Fisheries Administrative Order No. _____, Series of 2020:

RULES AND REGULATIONS GOVERNING THE EXPORTATION OF FISH AND FISHERY / AQUATIC (FFA) PRODUCTS AND ITS IMPLEMENTING CODES OF PRACTICES APPLICABLE TO THE ESTABLISHMENTS AND SUPPLY CHAIN FACILITIES INTENDED FOR COMPLIANCE BY THE FISHERY AND AQUACULTURE BUSINESS OPERATOR (FABO)

Section 1: Title – This Code must be known as “The Code of Good Hygiene Practice (GHP) and Operational Requirements for compliance by the Fishery and Aquaculture Business Operators (FABO)”

Rule 1.1 Purpose – This Code is promulgated to prescribe the procedures and guidelines for the implementation of the FAO No ____, Series of ____ (“The Code of Good Practice for the Organization and Implementation of Official Controls Protocols”) to facilitate compliance therewith and achieve the objectives thereof.

Section 2: Declaration of Policy

It is the declared policy of the DA-BFAR to ensure:

- i. all FABO producing fish/fishery and aquatic products for local, or export shall meet the minimum specific hygiene rules for these products, including shellfish.
- ii. the implementation of procedures based on the Codex HACCP principles, together with the application of good hygiene practices at all stages of the supply and production chain, in line with national and international requirements.

Section 3: Application of its Provisions

The provisions of this Code must be enforced in all fish/fishery and aquatic products businesses and establishments, including aquaculture and freezer and factory vessels, whether private or public.

Rule 3.1. Jurisdiction – The Department of Agriculture, through the Bureau of Fisheries and Aquatic Resources (DA -BFAR), in co -operation with concerned LGU’s and national agencies, must have the responsibility and jurisdiction in the application of these rules and the inspection of all fisheries and aquatic businesses to which they apply. However, the DA -BFAR may coordinate with other government agencies and

LGU to which specified Official Control responsibilities have been delegated under the terms of the RA 10611 (Food Safety of 2013) and FAO No ____, Series ____, ("The Code of Good Practice for the Organization and Implementation of Official Controls Protocols").

Sec. 4. Definition of Terms

As used in this Code, but without prejudice to their use relevant Fisheries Administrative Orders the following definitions must apply:

Rule 4.1. Terms and phrases

Approval - procedure wherein DA-BFAR formally recognizes an establishment as meeting the requirements of this Order and being competent to carry out the required HACCP program.

Approval Number - a number assigned to a fishery establishment by DA-BFAR certifying its compliance with the requirements of this Order.

Aquaculture - fishery operations involving all forms of breeding, raising, and farming of fish and other fishery species in fresh, brackish, and marine water areas, by means of hatcheries, cages, pens, ponds, and similar operations as defined in FAO No 214, Series 2001.

Bivalve molluscs - filter-feeding lamellibranch molluscs, such as oysters, mussels, clams, and scallops.

Certificate of Registration (COR) - is an official document issued only by DA-BFAR attesting that the product concerned is obtained from duly registered aquaculture farms.

Chilled fish - fresh fish that has been subjected to zero degree Celsius (0°C).

Clean seawater - natural, artificial, or purified seawater or brackish water that does not contain micro-organisms, harmful substances, or toxic marine plankton in quantities capable of directly or indirectly affecting the health quality of food.

Clean water - clean seawater and fresh water of a similar quality.

Competent Authority - DA-BFAR, or other officially designated national and regional authority having the legal competence to enforce relevant national and international food safety regulations, and to verify and certify compliance with the regulatory requirements applied to the export of FFA products for all importing countries.

Contaminant - any biological or chemical agent, foreign matter, or other substances not intentionally added to food which may compromise food safety or suitability.

Contamination - the presence or introduction of a contaminant.

Cross Contamination - Contamination of raw materials, in-process and finished products brought about by other ingredients.

Control body - an independent third party to which DA-BFAR has formally delegated certain specified control tasks.

Critical Control Point (CCP) - a step in the production and processing chain where activities are carried out, or conditions prevail which can influence the safety of the product, and where control can be exercised over one or more factors to prevent or eliminate the hazard or reduce it to an acceptable level.

Establishment - any unit of a food business comprising the site, buildings, and other structures, but excluding those such as administrative offices where food is not handled and those where food handlers do not enter.

European Union (EU) - one or more of the EU territories listed in Chapter VIII; the term must be considered as synonymous with the **European Community**.

Export - the commercial of fishery and aquatic products to all importing countries, whether for profit.

Factory vessel (FV)- any vessel on board which fishery products undergo one or more of the following operations followed by wrapping or packaging and, if necessary, chilling or freezing: filleting, slicing, skinning, shelling, shucking, mincing, or processing.

Fish - includes all fish and other aquatic species such as crustaceans (crabs, prawns, shrimps, and lobsters), cephalopods (squid, cuttlefish, and octopus), mollusks (clams, mussels, scallops and oyster) and gastropods (snails).

Fish inspection - assessment of the capability of fish processing plants to implement and comply with food safety and quality control measures prescribed in this FAO.

Fish Processing Establishment - any premises or facility where fish and fishery / aquatic products are handled, prepared and / or processed, packaged, or stored, synonymous with **Fishery establishment**.

Fisheries - all activities relating to the act or business of fishing, culturing, preserving, processing, marketing, and exporting aquatic resources.

Fish / Fishery and Aquatic Products (hereafter, FFA products) - products of aquatic animals or parts thereof, including finfish and all crustaceans, mollusks, echinoderms and other aquatic products, seawater, and freshwater animals, in whatever form whether fresh, chilled, frozen, or processed, including fish oils, squalene and blubbers intended for human consumption.

Fish / Fishery / Aquatic Products Business - any public or private business engaged in commercial activities related to any stage of production, processing, and distribution of FFA products for export to all importing countries.

Fishery and Aquaculture Business Operators ('FABO') - the natural or legal entity, such as individuals, associations, partnerships, cooperatives, or corporations, responsible for ensuring that requirements of food law are met within the FA business under their direct control, and the management within the establishment to whom such responsibility has been delegated.

Fishery Establishments - any unit of a food business including fishpond, hatcheries, fishing / freezer vessels, freezing and cold storages, ice plant, processing plant, pre-processing plant, fish landing sites/ports, auction/wholesale markets, and all other businesses involved in the food chain.

Fishing vessel - any boat, ship, or other watercraft equipped to be used for taking of live fish and aquatic species or aiding or assisting one or more vessels in the performance of any activity relating to fishing, including supply, preservation, storage, transportation and/or processing.

Food hygiene - the measures and conditions necessary to control hazards and to ensure fitness for human consumption of the food considering its intended use.

Food safety - the assurance that food is processed properly and when consumed will not be harmful to the consumers.

Freezer vessel (ZV) - any vessel on board which freezing of fishery products is carried out, where appropriate after preparatory work such as bleeding, heading, gutting and removal of fins and, where necessary, followed by wrapping or packaging.

Fresh fishery products - unprocessed fishery products, whether whole or prepared, including products packaged under vacuum or in a modified atmosphere, that have not undergone any treatment, other than chilling to ensure preservation.

Frozen fish - fish which has been subjected to a freezing process to reduce its temperature to, and maintain it at, minus 18 degrees Celsius (-18°C) to preserve its quality.

Good Aquaculture practices (GAqP) - use of responsible aquaculture according to guidelines agreed between DA-BFAR and stakeholders; Fisheries AO No 214, 2001: “Code of Practice for Aquaculture”.

Good Manufacturing Practices (GMP) - a set of guidelines implemented in the fishery establishments and processing plants to ensure product safety and quality, and which includes adherence to rules and regulations relating to plant construction, sanitary operation and personnel hygiene.

Good Hygiene Practices (GHP) - form the basis of all food hygiene systems that support the production of safe and suitable food. The HACCP approach focuses on control measures for significant hazards rather than relying only on end-product inspection and testing. (Food Agriculture Organization)

Growing area - an area in the sea, estuarine or lagoon containing a natural species of shellfish; a site for the culture of shellfish.

HACCP - preventive quality management system, defined by Codex Alimentarius, that identifies, evaluates and controls hazards that are significant to the safety of a specific product; (**Hazard Analysis and Critical Control Points system**).

HACCP Compliance Certificate - a written document issued by DA-BFAR attesting that the establishment is HACCP compliant.

HACCP Plan - a company’s written document defining the formal procedures to be followed in accordance with the seven Codex HACCP principles.

Hazard - a biological, chemical or physical agent in, or condition of, food or feed with the potential to cause an adverse health effect on humans or aquatic organisms.

Identification Mark - a mark applied to the wrapping or packaging of FFA products by FABO to indicate that the establishment in which the products have been produced has been approved by Official Controls carried out in accordance with FAO No. ____, Series ____, “Rules governing the organization and implementation of official controls on fishery and aquatic products intended for export for human consumption”.

IUU Fishing – refer to illegal, unregulated, and unreported fishing. Illegal Fishing activities refer to fishing activities conducted by Philippine fishing vessel operating in violation of Philippine laws, Regional Fisheries Management Organizations (RFMOs), and laws of other coastal states. Unregulated fishing refers to fishing activities conducted by:

- (a) Vessels without nationality but operated by Filipino and / or Filipino corporation.
- (b) Philippine flagged fishing vessels operating in areas managed by RFMOs to

which the Philippines is not a part to; or

- (c) Philippine flagged fishing vessels operating in areas or fish stocks where there are no applicable conservation and management measures.

And the unreported fishing refers to fishing activities which have not been reported, or have been misreported to the Department, in contravention of national laws and regulations of the Philippines or undertaken in the area of competence of a relevant RFMO which have been reported or have been misreported, in contravention of the reporting procedures of that organization and further elaborated by regulations to be promulgated by the Department.

License To Operate (LTO) – refers to the process by which DA BFAR approve an application, of a person, corporation, cooperative, agriculture or fishery establishment, or other juridical persons, for authority to operate an establishment or to engage in any activity in the primary production and post-harvest stages of the food supply chain to produce safe primary and post-harvest animal and plant food and inputs. It includes facilities involved in activities related to agrochemicals and other inputs in the primary and post-harvest stages of production. The approval will require proving capability to operate a facility or establishment or to engage in activities in the primary production and postharvest stages of the food supply chain and covered by the license. (FSA 2013)

Local Market – where unprocessed or fresh fish / fishery and aquatic products are commercially sold in wet market or supermarket.

Local Transport Permit (LTP) – permit for domestic movement or authorizing an individual to bring, carry or ship aquatic wildlife, by products or derivatives acquired from legal sources from the point of origin to the final destination within the country, which is different from the auxiliary invoice issued by the local governments and/or BFAR for the transport and domestic movement of fish and aquatic products derived from aquaculture or conventional fishing; (FAO 233)

Mechanically separated fishery product (analog or surimi-based products)- any product obtained by removing flesh from fishery products using mechanical means that result in the loss or modification of the flesh structure;

Microbiological criteria - criteria defining the acceptability of a product, a batch of fishery products or a process, based on the absence, presence, or number of micro-organisms, and/or on the quantity of their toxins/metabolites, per unit(s) of mass, volume, area or batch.

Monitor - the act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control.

Packaging - the placing of one or more wrapped foodstuffs in a second container, and the latter container itself.

Post-harvest facilities - these facilities include, but are not limited to, fish port, fish landing, ice plants and cold storages, fish processing plants.

Potable water - water meeting the minimum requirements on the quality of water intended for human consumption, as set out in the Philippine National Standard for Drinking Water (PNSDW);

Prepared fishery products - unprocessed fishery products that have undergone an operation affecting their anatomical wholeness, such as gutting, heading, slicing, filleting, and chopping.

Pre-processing plant or establishment - a facility where preliminary processing or preparation of product is undertaken.

Pre-shipment inspection refers to the practice of employing private companies to check shipment details such as price, quantity and quality of goods ordered overseas. The Agreement on PSI recognizes that principles of the GATT Agreement apply to such activities.

Processed fishery products - processed products resulting from the processing of fishery products or from the further processing of such processed products.

Processing - any action that substantially alters the initial product such as heating, steaming, smoking, curing, maturing, drying, marinating, or a combination of these processes, but does not include those processes regarded as resulting in 'unprocessed products',

Reefer vessel (RV) means a vessel equipped to store and transport palletized or loose cargo (bulk) goods in temperature-controlled holds or chambers

Registration - the process by which all post-harvest facilities such as fish processing plants, ice plants, and cold stores, fish ports/landings and other fishery business establishments are registered with, and licensed by the LGUs, respecting the minimum standards prescribed for such facilities by DA-BFAR.

Risk - a function of the probability of an adverse health effect and the severity of that effect, consequential to a hazard.

Sanitary / Health Certificate - a document issued by DA-BFAR attesting that the FFA product has been derived and manufactured in conformity with established product sanitary / hygiene standards relevant to public health requirements.

Sanitary and Phytosanitary Import Clearance (SPSIC) - document issued by the concerned DA bureau or agency prior to importation to ensure that the products being imported meet SPS measures to protect human, animal or plant life or health, ensuring that the agricultural and fishery products are safe for consumers, and to prevent the spread of pests or diseases among animals or plants.

Sanitation Standard Operating Procedures (SSOP) - written procedures to be followed to ensure that processing and production are carried out under sanitary and hygienic conditions to achieve food safety.

Shellfish - all species of univalves and bivalves which are filter feeders, such as lamellibranch molluscs and gastropods.

Traceability - the ability to trace and follow a FFA product through all stages of production, processing and distribution from and including primary production up to and including its storage, transport, sale or supply to the final consumer and, where relevant, the import, production, manufacture, storage, transport, distribution, sale and supply of any ingredient or feed used in its production or preparation.

Unprocessed - FFA product that has not undergone processing; this includes products that have been gutted, cleaned, filleted, cut, sliced, boned, minced, skinned, trimmed, chilled, frozen, deep frozen or thawed. However, deep-frozen bivalves must be regarded as “processed products” for the purposes of this Order.

Wrapping - the placing of a FFA product in a wrapper or container in direct contact with the product concerned, and the wrapper or container itself

Rule 4.2. The terms ‘**where necessary**’, ‘**where appropriate**’, ‘**adequate**’ and ‘**sufficient**’ must mean, respectively, where necessary, where appropriate, adequate, or sufficient to achieve the objectives of the Fisheries Administrative Order No 228, 2008, and this Code of Practice.

Rule 4.3. The following acronyms must refer to:

ACMSF	- Advisory Committee on the Microbiological Safety of Food
BFAR	- Bureau of Fisheries and Aquatic Resources
CA	- Competent Authority
DA	- Department of Agriculture
EU	- European Union (also European Community)

FFA product	- Fish / Fishery and Aquatic product
FABO	- Fishery and Aquatic products Business Operators
FAO	- Fisheries Administrative Order
GAqP	- Good Aquaculture Practices
GHP	- Good Hygiene Practices
GMP	- Good Manufacturing Practices
HACCP	- Hazard Analysis and Critical Control Point
LGU	- Local Government Unit
PNSDW	- Philippine National Standards for Drinking Water
SPS	- Sanitary and Phytosanitary Measures
SSOP	- Sanitation Standard Operating Procedures
WTO	- World Trade Organization

CHAPTER I PRIMARY PRODUCTION AND ASSOCIATED OPERATIONS

PART I. SCOPE

1. This Chapter applies to FABO conducting primary production and associated operations for raw materials used in the production and processing of FFA products intended for export.

2. For the purposes of this Annex:

“Primary production” includes the farming, fishing and collection of live fishery products; and “primary products” must be construed accordingly.

“Associated operations” includes:

- i. heading, gutting, cleaning, removing fins, refrigeration and wrapping if carried out on board fishing vessels.
- ii. transport, storage and handling of live fishery products, and primary products which have not been substantially altered, at the place of production and/or within fish farms on land; and
- iii. transport of such products from the production place to the first establishment of destination.

PART II. HYGIENE PROVISIONS

1. FABO must ensure that primary products are protected, as far as reasonably possible, against contamination, having regard to any processing that they will subsequently undergo.
2. FABO must comply with appropriate national and international legislative provisions relating to the control of hazards in primary production and associated operations, including measures:
 - a) to control contamination arising from the air, soil, water, feed, veterinary medicinal products, plant protection products and biocides and the storage, handling, and disposal of waste; and
 - b) relating to fish health that have implications for human health.
3. FABO farming, harvesting, or catching primary fish products must take appropriate measures to:
 - a) keep clean and, where necessary after cleaning, disinfect in an appropriate manner:
 - i. any facilities, including those used to store and handle feed.
 - ii. equipment, containers, crates, vehicles and vessels.
 - b) use potable water, or clean water, whenever necessary to prevent contamination.
 - c) use feed additives and veterinary medicines in accordance with relevant national and international legislations.
 - d) store and handle waste and hazardous substances in a way that prevents contamination.
 - e) as far as possible, prevent animals and pests from causing contamination.
 - f) ensure that staff handling FFA products are in good health and undergo training on health risks.
 - g) prevent the introduction and spread of zoonotic agents through FFA products, including by taking precautionary measures when introducing new fish or shellfish and by reporting suspected outbreaks of such diseases to BFAR Director.
4. FABO must take account of analyses carried out on samples taken from FFA products or other samples important to human and/or fish health and must take appropriate remedial action when informed of problems identified during Official Controls.

PART III. RECORD-KEEPING

1. FABO must keep and retain records of measures put in place to control hazards in an appropriate manner and for an appropriate period, commensurate with the nature and

size of the business, and to make relevant information contained in these records available to DA-BFAR and receiving FABO on request.

2. Primary producers of FFA products must keep records on:
 - a) the nature and origin of feed fed to the fish.
 - b) veterinary medicines or other treatments administered to the fish, administration dates and withdrawal periods.
 - c) the occurrence of diseases that may affect the safety of FFA products.
 - d) the results of any analyses carried out on samples taken from fish, or other samples taken for diagnostic purposes, that have importance for human health; and
 - e) any relevant reports on checks carried out on FFA products.
3. FABO may be assisted by other persons, such as veterinarians or other appropriate specialists, with the keeping of records.

CHAPTER II

GENERAL HYGIENE REQUIREMENTS FOR FOOD AND AQUACULTURE BUSINESS OPERATORS

SECTION I GENERAL REQUIREMENTS FOR PREMISES AND ESTABLISHMENTS

1. Premises and establishments must be kept clean and maintained in good repair and condition.
2. The layout, design, construction, location, and size of FFA product premises and establishments must:
 - a) permit adequate maintenance, cleaning and/or disinfection, avoid or minimize air-borne and other contamination.
 - b) protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into FFA products and the formation of condensation or undesirable mold on surfaces.
 - c) permit GHP and pest control.

- d) provide adequate working space to enable the hygienic performance of all operations.
 - e) where necessary, provide suitable temperature-controlled handling and storage conditions with sufficient capacity to maintain FFA products at appropriate temperatures and permit those temperatures to be monitored and, where necessary, recorded.
3. FABO manufacturing, handling, and wrapping processed FFA products must have suitable rooms, large enough for the storage of raw materials separate from processed material, and sufficient separate refrigerated storage.
 4. An adequate number of flush lavatories must be available, in working order, and connected to an effective drainage system. Lavatories must have adequate natural or mechanical ventilation and must not open directly into rooms in which FFA products are handled.
 5. An adequate number of washbasins must be available, suitably located and designated for cleaning hands. They must be provided with hot and cold running water, materials for cleaning hands and for hygienic drying; they must be separate from any facilities required for washing FFA products.
 6. There must be suitable and sufficient natural or mechanical ventilation. Mechanical airflow from a contaminated area to a clean area must be avoided. Ventilation inlets must be screened or otherwise protected against access to pests and particulate contamination. Ventilation systems must be constructed to enable filters and other parts requiring cleaning or replacement to be readily accessible.
 7. Food premises must have adequate natural and/or artificial lighting. Fittings must be shatterproof or provide alternative protection to products in case of breakages.

Processing Areas	Recommended Light Intensity (Lux/foot candles)
All Inspection areas	540 Lux/ 50-foot candles.
Work rooms	220 Lux/ 20-foot candles
Other areas	110 Lux/ 10-foot candles

8. Drainage facilities must be adequate for their intended purpose and designed and constructed to avoid the risk of contamination. Where drainage channels are fully or partially open, they must be designed to ensure that waste does not flow from a contaminated area towards or into a clean area where FFA products are handled.
9. Where necessary, adequate changing facilities for personnel must be provided. These must be directly connected to but separate from processing areas.

SECTION II
STRUCTURAL REQUIREMENTS IN ROOMS WHERE
FISH AND FISHERY/AQUATIC PRODUCTS ARE PREPARED, TREATED OR PROCESSED

1. The design and layout of rooms in which FFA products are prepared, treated, or processed (excluding dining areas, but including rooms contained in means of transport) must meet the general requirements of Section I, paragraphs 1 and 2, and in particular:
 - a) surfaces such as floors, walls, and doors in areas where FFA products are handled and surfaces of equipment in direct contact with food must be maintained in a sound condition and be easy to clean and, where necessary, disinfect. Surfaces must be made from smooth, washable, corrosion-resistant, and non-toxic materials, and in the case of equipment, meet the requirements of Section III of this Chapter.
 - b) where appropriate, floors must allow adequate surface drainage.
 - c) walls must have a smooth surface up to a height appropriate for the operations.
 - d) ceilings (or, where there are no ceilings, the interior surface of the roof) and overhead fixtures must be constructed and finished to prevent accumulation of dirt and to minimize condensation, growth of undesirable mold and shedding of particles.
 - e) windows and other openings must be constructed to prevent accumulation of dirt. Those which can be opened to the outside environment must be fitted with insect-proof screens which can be easily removed for cleaning.
 - f) windows and doors must be tight fitting and, when closed, sealed against entry by pests.
2. Adequate facilities must be provided, where necessary, for cleaning, disinfecting and storage of working utensils and equipment. These must be constructed of corrosion-resistant materials, be easy to clean and have an adequate supply of hot and cold water.
3. Adequate provision must be made, where necessary, for washing FFA products. Handwashing facility must have an adequate supply of hot and/or cold potable water, consistent with the requirements of PNSDW and be kept clean and, necessary, disinfect.

SECTION III
EQUIPMENT REQUIREMENTS

1. All articles, fittings, and equipment with which FFA products come into contact must be:
 - a) designed and constructed of such materials, and kept in good condition, to minimize any risk of contamination; equipment should be free from hollow sections where food could accumulate; food contact surfaces should be sealed against accumulation of particles.
 - b) effectively cleaned and, as necessary, disinfected to avoid any risk of contamination.
 - c) constructed with materials that comply with relevant international requirements for food contact materials.
 - d) installed in a manner that allows adequate cleaning of the equipment and the surrounding area.
2. Where necessary, equipment must be fitted with appropriate control device(s). These must be kept in good operating condition and calibrated at appropriate frequencies; calibration records must be kept for an appropriate period.
3. Chemicals used to prevent corrosion of equipment and containers must be used in accordance with GMP.

SECTION IV WATER SUPPLY

1. There must be an adequate supply of potable water, meeting the criteria of PNSDW. This must be delivered at an appropriate temperature and pressure, from approved public or private water supply systems, and used whenever necessary to ensure that FFA products are not contaminated.

On-site water filters, settling tanks, and other treatment facilities must be cleaned as often as necessary to keep them operational and in a sanitary condition.

However,

- a) clean water may be used for cleaning / washing fishery products.
- b) clean seawater may be used for handling and washing with live bivalve mollusks, echinoderms, tunicates and marine gastropods.
- c) clean water may be used for the production of ice used to chill fishery products and the rapid cooling of crustacean and molluscs after their cooking
- d) clean water may also be used for external washing.

When such water is used, adequate facilities must be available for its supply. If non-potable water is used, for example for fire control, steam production, refrigeration, and similar purposes, it must circulate in a separate, clearly identified system. Non-potable water must not connect with, or be allowed to reflux into, potable water systems.

2. Recycled water used in processing or as an ingredient must not present a risk of contamination and must be of the same standard as potable water, unless DA-BFAR is satisfied that its quality cannot affect the wholesomeness of the finished FFA product.
3. Ice which meets FFA products must be made from potable water or, when used to chill whole fishery products, clean water. It must be made, handled and stored under conditions that protect it from contamination.
4. Steam used directly in contact with FFA products must not contain any substance that presents a hazard to health or is likely to contaminate the products.
5. If heat treatment is applied to FFA products in hermetically sealed containers, water used to cool the containers after heat treatment must not be a source of contamination.

SECTION V PROVISIONS APPLICABLE TO FFA PRODUCTS

1. FABO must not accept raw materials or ingredients, other than live fish, or any other material used in processing products if they are known, or might reasonably be expected, to be contaminated with parasites, pathogenic microorganisms, or toxic, decomposed or foreign substances to an extent that, even after normal sorting, preparation and processing, the final product would be unfit for human consumption.
2. Raw materials and ingredients must be stored in appropriate conditions, designed, and operated to prevent harmful deterioration and to protect them from contamination.
3. At all stages of production, processing, and distribution, FFA products must be protected against any contamination likely to render the product unfit or unsafe for human consumption.
4. Adequate procedures must be in place to control pests and to prevent domestic animals from having access to places where FFA products are prepared, handled, or stored or, where DA-BFAR so permits in special cases such as police or drug sniffer dogs, to prevent such access from resulting in contamination:
 - a) doors must be tight-fitting, adequately sealed against entry by pests, and kept closed during production, except when in use.

- b) where open windows would result in contamination, they must remain closed and fixed during production.
5. Raw materials, ingredients, intermediate products, and finished products that may support the growth of pathogenic micro-organisms or the formation of toxins must be kept at temperatures that minimize any health risk.

However, limited periods outside temperature control are permitted, to accommodate practicalities of handling during production, transport, and storage, provided this does not result in a health risk.
6. FFA products must be thawed, and subsequently handled, at temperatures that do not result in a risk to health, and in a way that minimizes the risk of growth of pathogenic microorganisms or the formation of toxins. When run-off liquid from thawing may present a health risk, it must be adequately drained.
7. Hazardous and/or inedible substances, including animal feed, must be adequately labelled, and stored in separate and secure containers.
8. Cleaning agents and disinfectants must not be stored in areas where food is handled.

SECTION VI HEAT TREATMENT

The following requirements apply only to FFA products exported in hermetically sealed containers:

1. The heat treatment used to process an unprocessed FFA product or to process further a processed FFA product must:
 - (a) raise every part of the product to the necessary temperature for the specified period prescribe by Process Control Authority; and
 - (b) prevent the product from becoming contaminated during the process.
2. FABO must check regularly the main relevant parameters (particularly temperature, pressure, sealing and microbiology), including using automatic devices, to ensure that the treatment achieves the desired objectives.
3. The treatment should conform to an internationally recognized standard (for example, pasteurization, ultra-high temperature, or sterilization).

SECTION VII
WRAPPING AND PACKAGING OF FA PRODUCTS

1. Wrapping and packaging materials must:
 - a) comply with the international requirements for food contact materials.
 - b) not be a source of contamination.
 - c) be stored in a manner that does not expose them to a risk of contamination.
 - d) if intended for re-use, be easy to clean and, where necessary, to disinfect.
2. Wrapping and packaging operations must be carried out in a way that avoids contamination of FFA products. Where appropriate and in the case of cans and glass jars, the integrity of the container's construction and its cleanliness must be assured by appropriate checks.
3. Receptacles in which fresh FFA products are kept under ice must be water-resistant and ensure that meltwater does not contaminate the products.
4. Frozen blocks prepared on board vessels must be adequately wrapped before landing.

SECTION VIII
STORAGE OF FISH AND FISHERY/AQUATIC PRODUCTS

PART A. STORAGE TEMPERATURES

Fish and Fishery/Aquatic products must be maintained at the required temperature. In particular:

1. Fresh products thawed unprocessed products, and cooked and chilled products from crustaceans and mollusks, must be maintained at a temperature approaching that of melting ice.
2. Frozen products must be kept at a temperature of -18°C or colder in all parts of the product, with short upward fluctuations of not more than 3°C being permitted.
3. However, whole frozen fish in brine intended for canning may be kept at a core temperature of -9°C or colder.
4. Live products must be kept at an appropriate temperature and in a manner that does not adversely affect food safety or their viability.
5. All temperature monitoring equipment must undergo regular, annual internal and external calibration.

PART B. DRY STORAGE MANAGEMENT

Appropriate procedures must be in place for sanitary handling of products during storage and distribution.

1. Raw materials, packaging materials, part-processed and finished products, cleaning chemicals, equipment and machinery spares should be stored, where possible, in separate storage areas.
2. Materials and products should be stored in a way that permits effective cleaning, pest control, inspection and sampling, retention of product or batch identity, and effective stock rotation.
3. Stored finished products must be protected against physical, chemical, and microbial contamination and deterioration of the product and its packaging due to pests, toxic chemicals, sources of undesirable flavor and odor, and from excesses of heat and light:
 - a) storage areas should be kept free from rodents, insects, birds and other pests; external doors should not be left open.
 - b) toxic chemicals such as pesticides, disinfectants, or other potential contaminants must not be stored close to products or raw materials; separate locked storage should be provided for these materials.
 - c) potentially contaminated incoming materials must not be stored next to finished products.
 - d) defective or suspect goods must be stored in a separate area, preferably locked.
 - e) storage facilities must be secured to protect against tampering, theft, etc.
 - f) stock control and rotation systems should be operated; product traceability must be ensured.
 - g) storage premises and areas must be kept clean and tidy to minimize places or food sources for pests. Product spillages should be removed quickly.
 - h) stored products should be elevated from the floor using non-corrodible or non-absorbent materials.

- i) stored products should be arranged with aisle or pathway which is open for mobility of forklift and inspector.
 - j) stored products should not directly touch the walls or must have enough space against the wall.
4. Protective clothing must be worn where applicable.

PART C. COLD STORAGE WAREHOUSES and COLD ROOMS

1. Storage buildings and rooms must comply with the requirements of Section I, paragraphs 1 and 2. Lighting, temperature, humidity control and ventilation should be appropriate to the products being stored.
2. Buildings and rooms must be adequately proofed against entry of pests; suitable curtains should be provided at entrances to maintain the internal conditions at an appropriate level and to deter flying pests.
3. Where the product is susceptible to temperature abuse and / or weather damage, covered bays should be provided for loading and unloading.
4. Stored products should be elevated from the floor using non corrodible or non-absorbent material.
5. stored products should be properly arranged to keep aisle or pathway open for mobility of forklift and inspector.
6. stored products should be arranged in such a manner that it does not block the circulation of the cool airflow.
7. stored products should not directly touch the walls or must have enough space against the wall.
8. loading and unloading operation must be done rapidly to avoid the thawing of the products.
9. ante room service must be temperature controlled to prevent temperature fluctuation of the cold storage.
10. strict observance of First in and First Out (FIFO) for stock rotation

11. there must be designated space for rejected products or unfit for human consumption.
12. with 3rd party calibration temperature data logger and manual temperature monitoring device
13. forklift must be battery operated.

SECTION IX

TRANSPORT OF FISH AND FISHERY/AQUATIC PRODUCTS

Conditions for the approval of transport vehicle of FFA products as follows:

1. During transport, fishery products must be maintained at the required temperature. In particular:
 - a) fresh fishery products, thawed unprocessed fishery products, and cooked and chilled products from crustaceans and molluscs, must be maintained at a temperature approaching that of melting ice. When three-layered polyethylene containers filled with water and ice are used for transporting whole and gutted fresh fishery products, ice must be present during the whole storage/transport, which must be carried out at controlled temperature. The transport and storage of whole and gutted fresh fishery products in three-layered polyethylene containers filled with water and ice must not exceed 3 days;
 - b) frozen fishery products, with the exception of whole fish initially frozen in brine intended for the manufacture of canned food, must be maintained during transport at an even temperature of not more than - 18 °C in all parts of the product, possibly with short upward fluctuations of not more than 3 °C;
 - c) if the superchilling process is used for transporting fresh fishery products, the transport in boxes without ice shall be permitted under the condition that those boxes clearly indicate that they contain superchilled fishery products. During transport, superchilled fishery products must respect temperature requirements included in a range between - 0.5 and - 2 °C temperature in the core of the product. The transport and storage of superchilled fishery products must not exceed 5 days

2. Containers and the storage areas in vehicles must be kept clean and maintained in good condition to protect FFA products from contamination and, where necessary, designed and constructed to permit adequate cleaning and/or disinfection.
3. Vehicles and/or containers must not be used for transporting non-food materials where this may result in contamination. However, where vehicles and/or containers are used for transporting anything:
 - (i) in addition to FFA products or for transporting different foods at the same time, the products must be effectively separated, as necessary.
 - (ii) other than foodstuffs or for transporting different foodstuffs, there must be effective cleaning between loads to avoid the risk of contamination.
4. FFA products must be placed and protected in vehicles and/or containers in a way that minimizes the risk of contamination.
5. If fishery products are kept under ice, melt water must not remain in contact with the products.
6. Where necessary, vehicles and/or containers must be capable of maintaining FFA products at the temperatures specified in Chapter II, Section VIII, Part A.2 and allow those temperatures to be monitored.

However, Chapter II, Section VIII, Part A.2 need not be met when frozen FFA products are transported from a cold store to an approved establishment, to be thawed on arrival for the purposes of preparation and/or processing, providing the travel time is short and DA-BFAR so permits.
7. Fish and shellfish to be exported live must be transported in a way that does not adversely affect food safety or their viability.

SECTION X

FOOD WASTE AND OTHER REFUSE MATERIALS

1. Food waste, non-edible by-products and other refuse must be.
 - (a) removed from rooms where food is present as quickly as possible, to avoid their accumulation.
 - (b) deposited in closable containers of an appropriate construction, kept in sound condition, easy to clean and, where necessary, to disinfect. FABO

may use other types of containers or evacuation systems if he can demonstrate to DA-BFAR that they are appropriate.

2. FABO must make adequate provision for the storage and disposal of food waste, non-edible by-products, and other refuse. Refuse stores must be designed and managed such that they can be kept clean and, as far as possible, free of animals and pests.
3. All waste must be removed from the site in a hygienic way and must not constitute a direct or indirect source of contamination.

SECTION XI PERSONAL HYGIENE

1. Every person working in a food-handling area must maintain a high degree of personal cleanliness and wear suitable, clean and, where necessary, protective clothing.
2. No person suffering from or being a carrier of a disease likely to be transmitted through food or afflicted, for example, with infected wounds, skin infections, sores or diarrhea may handle food or enter any food-handling area in any capacity if there is any likelihood of direct or indirect contamination.
3. Any person so affected and employed in, or working on the site of, a FFA business and who is likely to come into contact with food must immediately report their illness or symptoms, and if possible, their causes, to the FABO.

SECTION XII TRAINING

1. FABO must comply with relevant requirements of Philippine law concerning training programs for persons working in the FFA sector.
2. FABO must ensure that food handlers are instructed and/or trained in food hygiene matters commensurate with their work activity, and appropriately supervised.
3. Staff responsible for preparation, development, and maintenance of the relevant HACCP procedures, and for performing control, monitoring, and verification of the effectiveness of their implementation and the application of relevant good practice guides must receive adequate and appropriate training covering, but not limited to:
 - a) application of the basic principles of HACCP.
 - b) prerequisite requirements to HACCP such as GAqP, GMP, GHP and SSOP.

- c) other relevant subject matter on food safety assurance; and
- d) an understanding of relevant national and international legislation on food hygiene and safety.

CHAPTER III

SPECIFIC REQUIREMENTS CONCERNING FISH AND FISHERY/AQUATIC PRODUCTS

This Chapter does not apply to bivalve molluscs, echinoderms, tunicates, and marine gastropods when exported live.

However, with the exception of Sections I and II, this Chapter does apply to bivalve molluscs, echinoderms, tunicates and marine gastropods when exported as, or as part of, processed products, in which case they must have been obtained in accordance with Sections II to V, and IX of Chapter IV of this Code of Practice.

This Chapter applies in addition to the general requirements for the construction and operation of establishments, including vessels, set out in Chapters I and II, respectively.

Requirements for food contact materials and surfaces set out in Chapter II apply to all vessels.

SECTION I

REQUIREMENTS FOR VESSELS

1. Vessels used to harvest fishery products from their environment, or to handle or process them after harvesting, and reefer vessels comply with the structural and equipment requirements laid down in Part I.
2. Operations carried out on board vessels must comply with the hygiene requirements listed below.

PART I. STRUCTURAL AND EQUIPMENT REQUIREMENTS FOR VESSELS

A. Requirements for all Vessels

1. Vessels must be designed and constructed so as not to cause contamination of fishery products with bilge-water, sewage, smoke, fuel, oil, grease or other objectionable substances.

2. Hold, tanks or containers shall be used only for
 - a) Storage, cooling and freezing of unprotected fishery products
 - b) Storage of unprotected fishery products destined for the production of feeds
 - c) Storage of ice and brine

All vessels holds, tanks and containers intended for storing, cooling and freezing fish and fishery products shall not be used for other purposes.

3. Water intake must be situated in a position that avoids contamination of the water supply.

B. Requirements for Vessels Intended to Preserve Fresh Products for more than 24 hours

1. Vessels designed and equipped to preserve products for more than 24 hours must be equipped with storage holds, tanks or containers, capable of operating at the temperature of melting ice.
2. Storage holds must be separated from the engine compartment and crew quarters by partitions that are sufficient to prevent contamination. Such holds must enable storage of products under satisfactory hygienic conditions and, where necessary, ensure that melt water does not contaminate the product.
3. Where FFA products are chilled in cold clean seawater, a uniform temperature throughout the tanks must be achieved at a chilling rate that ensures that the mix of fish and clean seawater reaches not more than 3°C six hours after loading and not more than 0°C after 16 hours.
4. Where FFA products are chilled in clean ice slurry, tanks must be made of impervious materials, easy to clean and well insulated such that the mix of fish, ice and clean sea water reaches not more than 3°C six hours after loading and is maintained at 0°C.
5. In all cases, the temperature must be monitored and, where necessary, recorded. All temperature monitoring equipment must undergo regular annual internal and external calibration.

C. Requirements for Freezer Vessels (ZV)

1. Freezer vessels must have freezing equipment with sufficient capacity to freeze as quickly as possible in a continuous process and with thermal arrest period as short as possible, so as to achieve a core temperature of not more than -18°C.

2. Freezer vessel must have refrigeration equipment with sufficient capacity
 - a) To maintain fishery products in the storage holds at not more than -18°C
 - b) storage holds must not be used for freezing unless conditions laid down in point 1 are fulfilled.
 - c) storage holds must be equipped with a temperature-recording device in a place where it can be easily read. The temperature sensor of the temperature recording device must be situated in the warmest area of the hold.
3. All temperature monitoring equipment must be subjected to a regular annual internal and external calibration.

D. Requirements for Factory Vessels and Reefer Vessel

1. Factory and Reefer vessels must have at least:
 - a) a receiving area that is reserved for taking FFA products on board, easy to clean and designed to protect the products from any source of contamination, the sun or the elements, and to allow each successive catch to be separated.
 - b) a hygienic system for conveying FFA products from the receiving area to the work area.
 - c) work areas that are large enough for the hygienic preparation and processing of FA products, easy to clean and disinfect and designed and arranged in such a way as to prevent any contamination of the products.
 - d) hand-washing facility for use by staff engaged in handling exposed FFA products, with taps designed to prevent the spread of contamination.
 - e) a place for storing packaging materials, separate from product preparation and processing areas.
 - f) storage areas for the finished products, large enough and designed to be easy to clean. If a waste-processing unit operates on board, a separate hold must be designated for the storage of such waste.
 - g) special equipment for disposing of waste or products that are unfit for human consumption directly into the sea or, where circumstances so require, into a watertight tank reserved for that purpose. If waste is stored and processed on

board with a view to its sanitation, separate areas must be allocated for that purpose.

- h) a water intake situated in a position that avoids contamination of the water supply.
- 2. However, factory vessels on which crustaceans and molluscs are cooked, chilled, and wrapped, need not meet the requirements of point 1 if no other form of handling or processing takes place on board.
- 3. Factory vessels that freeze FFA products must have equipment that complied with the requirements for freezer vessels laid down in Part 1C.2 of this Order.
- 4. Reefer vessels transporting and / or storing frozen fishery products in bulk must have refrigerating equipment that complied with the requirements for freezer vessels to maintain the temperature of the fishery products as laid down in Part 1C.2 of this Order.

PART II. HYGIENE REQUIREMENTS FOR VESSELS

Fishing vessels must satisfy the basic hygiene requirements laid down in relevant provisions of the Implementing Rules and Regulation of RA 8550 as amended by RA 10654 and, where relevant, any additional international requirements:

- 1. Parts of vessels or containers set aside for the storage of FFA products must be maintained in good condition and kept clean. In particular, they must not be contaminated by fuel or bilge water.
- 2. As soon as possible after they are taken on board, FFA products must be protected from contamination and from the effects of the sun or any other source of heat. Water used for washing must be either potable water or, where appropriate, clean seawater.
- 3. FFA products must be handled and stored so as to prevent bruising. Handlers may use spiked instruments to move large fish or fish which might injure them, provided they do not damage the flesh.
- 4. FFA products other than those kept alive must undergo chilling as soon as possible after loading. However, when this is not possible, they must be landed as soon as possible.
- 5. Ice used to chill fishery products must be made from potable water or clean seawater.
- 6. Where fish are headed and/or gutted on board, such operations must be carried out hygienically as soon as possible after capture, and the fishery products must be washed immediately. The viscera and parts that may constitute a danger to public health must

be removed as soon as possible and kept apart from fishery products intended for human consumption. Livers and roes intended for human consumption must be refrigerated or preserved under ice, at a temperature approaching that of melting ice, or be frozen.

7. Where freezing in brine of the whole fish intended for canning is practiced, a temperature of not more than -9°C must be achieved for the fishery products. Even if it is subsequently frozen at a temperature of -18°C , the whole fish initially frozen in brine at a temperature of not more than -9°C must be destined for canning. The brine must not be a source of contamination for the fish.

PART III. REQUIREMENTS DURING AND AFTER LANDING

1. Vessel operators responsible for the unloading and landing of FFA products in government and or private landing sites must be subject to Official Control by DA-BFAR and must:
 - a) ensure that unloading and landing equipment that comes into contact with FFA products meets the requirements of Chapter II, Section III, above; and
 - b) avoid contamination of FFA products during unloading and landing, in particular by:
 - i. carrying out unloading and landing operations rapidly;
 - ii. placing FFA products without delay in a protected environment at the temperature specified in Chapter II, Section VIII, Part A; and
 - iii. not using equipment or practices that cause unnecessary damage to edible parts of FFA products.
2. FABO responsible for auction and wholesale markets or parts thereof where FFA products are displayed for sale must meet the following requirements:
 - a) there must be lockable facilities for the refrigerated storage of detained FFA products and separate lockable facilities for the storage of products declared unfit for human consumption;
 - b) if DA-BFAR so requires, there must be an adequately-equipped lockable facility or, where needed, a room for the exclusive use of DA-BFAR;
 - c) at the time of display or storage of FFA products:
 - i. the premises must not be used for other purposes;

- ii. vehicles emitting exhaust fumes likely to impair the quality of fishery products must not have access to the premises;
 - iii. persons having access to the premises must not introduce other animals; and
 - iv. the premises must be well lit to facilitate Official Controls.
3. When chilling was not possible on board the vessel, fresh fishery products, other than those kept alive, must undergo chilling as soon as possible after landing and be stored between 0°C.

SECTION II REQUIREMENTS FOR ESTABLISHMENTS AND VESSELS HANDLING FFA PRODUCTS

FABO must ensure that the construction, maintenance and operation of all premises, and the conduct and management of all personnel, comply with the requirements of Chapters I and II, as appropriate.

FABO must also comply with the following additional requirements, where relevant, in establishments handling FFA products.

PART I. REQUIREMENTS FOR FRESH FFA PRODUCTS

1. Unpackaged, chilled products that are not dispatched, prepared or processed immediately after landing or delivery must be stored under ice in appropriate facilities and re-iced as often as necessary.
2. Packaged fresh fishery products must be chilled to, and maintained at melting ice (0°C).
3. Operations such as heading and gutting must be carried out hygienically. Gutting, when technically and commercially feasible, must be carried out as soon as possible after catching or landing. The products must be washed thoroughly and immediately with potable water or, on board vessels, clean seawater.
4. Operations such as filleting and cutting must be carried out so as to avoid contamination or spoilage. Fillets and slices must not remain on working tables for longer than necessary for their preparation; they must be wrapped and, where necessary, packaged and chilled as soon as possible after preparation.
5. Containers used for the dispatch or storage of unpackaged prepared fresh FFA products stored under ice must ensure that melt water is drained and does not remain in contact with any fishery products.

6. Whole and gutted fresh products may be transported and stored in cooled water on board vessels. They may also continue to be transported in cooled water after landing, until they arrive at the first establishment on land for further processing.

PART II. REQUIREMENTS FOR FROZEN PRODUCTS

1. Establishments on land that freeze or store FFA products must have freezing or refrigeration equipment, adapted to the activity carried out, that satisfy the requirements for freezer vessels with sufficient capacity to:
 - (a) lower the temperature of the products rapidly to achieve a core temperature of - 18°C or colder
 - (b) maintain the storage of FFA products at -18°C or colder.
2. Storage areas must be equipped with a temperature-recording device in a place where it can be easily read, with the temperature sensor situated in the warmest part of the storage area.
3. All temperature monitoring equipment must be subjected to a regular annual internal and external calibration.

PART III.

REQUIREMENTS FOR MECHANICALLY SEPARATED FISHERY PRODUCTS

FABO manufacturing mechanically separated products must comply with the following requirements.

1. Raw materials:
 - (a) only whole fish and bones obtained from filleting may be used;
 - (b) all raw materials must be free from intestinal material.
2. Manufacturing process:
 - (a) mechanical separation must take place without undue delay after filleting;
 - (b) if whole fish are used, they must be gutted and washed beforehand;

- (c) after production, mechanically separated fishery products must be frozen as quickly as possible or incorporated in a product intended for freezing or subjected to a stabilizing treatment.

PART IV. REQUIREMENTS CONCERNING PARASITES

For the purposes of this Part:

'Candling' means, in respect of flat fish or fish fillets, holding up fish to a light in a darkened room to detect parasites.

'Visible parasite' means a parasite or a group of parasites of a size, colour or texture that is clearly distinguishable from fish tissues.

'Visual inspection' means non- destructive examination of FFA products, with or without optical magnification and under good light conditions for human vision including, if necessary, candling.

1. FFA products which are obviously infested with parasites must not be released for local or export.
2. FABO must carry out checks at all stages during the production and handling of FFA products on shore and on board vessels to detect parasites in fish and FFA products.
3. Visual inspection must be performed on a representative number of samples. The person in charge of establishment on land and qualified persons on board factory vessel must also determine the scale and frequency of the inspections by reference to the type of fishery products, their geographical origin and their use. During production, visual inspection of eviscerated fish must be carried out by qualified persons on the abdominal cavity and livers and roes intended for human consumption.

Visual inspection must be carried out depending on the gutting procedure:

- (a) in the case of manual evisceration, in a continuous manner by the handler at the time of evisceration and washing;
 - (b) in the case of mechanical evisceration, by sampling carried out on a representative number of samples, being not less than 10 fish per batch.
4. Visual inspection of fillet and slices must be carried out during trimming and after filleting or slicing. Where an individual examination is not possible because of the size of the fillets or the filleting operations, a sampling plan must be drawn up and kept

available for DA-BFAR. Where candling of fillets is necessary from a technical viewpoint, it must be included in the sampling plan.

5. FABO must not place in the market the fishery products that are derived from finfish or cephalopods molluscs as follows:

- (a) fishery products intended to be consumed raw : or

- (b) marinated , salted and any other treated fishery products, if the treatment is insufficient to kill the viable parasite;

FABO must ensure that the fishery product undergo freezing treatment to kill viable parasites that may be a risk to the health of the consumer.

6. For parasites other than trematodes the freezing treatment must consist of lowering the temperature in all parts of the products to at least :

- (a) -20°C for less than 24 hours; or

- (b) -35°C for less than 15 hours

7. FABO need not carry out the freezing treatment for fishery products described in point 5:

- (a) that have undergone, or are intended to undergo before consumption a heat treatment that kills the viable parasite. In the case of parasites other than trematodes

- (b) the product is heated to a core temperature of 60°C or more for at least one minute;

- (c) that have been preserved as fishery products for a sufficiently long period to kill the viable parasites;

- (d) from wild catches, provided that:

- i. there are epidemiological data available indicating that the fishing grounds or harvest area do not present a health hazard with regard to the presence of parasites; and

- ii. the DA-BFAR so authorizes;

- (e) derived from fish farming , cultured from embryos and have been fed exclusively on a diet that cannot contain viable parasites that present a health hazard , and one of the following requirements is complied with:

- i. have been exclusively reared in an environment that is free from viable parasites; or
 - ii. the FABO verifies through procedures, approved by the DA-BFAR, that the fishery products do not represent a health hazard with regard to the presence of viable parasites.
8. (a) When placing on the market, except when supplied to the final consumer, fishery products describe in point 5 must be accompanied by a document issued by the FABO performing the freezing treatment, stating the type of freezing treatment that the products have undergone.

(b) Before placing on the market fishery products referred to in point 7.c and 7.d which have not undergone the freezing treatment or which are not intended to undergo before consumption a treatment that kills viable parasites that present a health hazard, a FABO must ensure that the fishery products originate from a fishing ground or fish farming which complies with the specific conditions referred to in one of those points. This provision may be met by information in the commercial document or by any other information accompanying the fishery products.

PART V.
REQUIREMENTS FOR FISH OIL FOR HUMAN CONSUMPTION

FABO must ensure that raw materials used in the preparation of fish oil for human consumption are:

- a) obtained from fishery products that are fit for human consumption;
- b) from establishments, including vessels, approved by DA-BFAR in accordance with this Order;
- c) transported and stored until processing in hygienic conditions;
- d) chill as soon as possible and remain at the temperature of melting ice
the food business operator may refrain from chilling the fishery products when whole fishery products are used directly in the preparation of fish oil for human consumption, and the raw material is processed within 36 hours after loading, provided that the freshness criteria are met.
- e) intended to produce crude fish oil is subjected to a treatment including, where relevant, heating, pressing, separation, centrifugation, processing, refining and purification steps before being placed on the market for the final consumer;

- f) both are raw materials and the production process comply with the requirements applying to fish oil intended for human consumption;
- g) produce and store fish oil for human consumption, and those that are not intended for human consumption in the same establishment such as fish oil and fish meal for animal feed and industrial purpose.

PART VI. REQUIREMENTS FOR PROCESSED FFA PRODUCTS

FABO cooking crustaceans and molluscs must comply with the following requirements:

1. Cooked products must be rapidly cooled immediately after cooking, using potable water or, on board vessels, clean water. If no preservation other than chilling is used, cooling must continue until the product reaches 0°C.
2. Shelling or shucking must be carried out hygienically, avoiding contamination of the product. Where such operations are done by hand, workers must pay particular attention to washing their hands.
3. After shelling or shucking, cooked products must be frozen or chilled as soon as possible to the temperatures laid down in Chapter II, Section VIII, Part A.

PART VII. HEALTH STANDARDS FOR FFA PRODUCTS

In addition to meeting the hygiene requirements of this Code of Practice, FABO must ensure that FFA products meet the appropriate health standards of importing countries based on the following criteria applicable for FFA products.

- a) Organoleptic Properties of Fishery Products
- b) Histamine
- c) Total Volatile Nitrogen
- d) Toxins Harmful to Human Health
- e) Microbiological
- f) Heavy Metals
- g) Dioxins
- h) Benzo(a)pyrene

DA- BFAR official control shall follow the importing countries detection limit MRL or maximum levels as required.

FABO must also ensure that Live Bivalve Molluscs meet the additional and specific criteria set out in Chapter IV, Section V.

CHAPTER IV SPECIFIC REQUIREMENTS for LIVE BIVALVE MOLLUSCS

SCOPE

1. This Chapter applies to live bivalve molluscs. With the exception of the provisions on purification, it also applies to live echinoderms, tunicates and marine gastropods.

For the purpose of this Chapter, “intermediary operator” means a food business operator, including traders, other than the first supplier, with or without premises, who carries out its activities between production areas, relaying areas or any establishments

2. Sections I to VIII apply to animals harvested from production areas that the DA-BFAR has classified in accordance with FAO No. 228, Series of 2008, “The Code of Good Practice for the Organisation and Implementation of Official Controls Protocols Intended for the Local or Export Market and Imported Fish and Fishery / Aquatic Products”), and its implementing Code of Practice.
3. Section IX applies to *Pectinidae* harvested outside the classified areas.
4. Sections V, VI, VIII and IX, and Section VII, point 3, will apply at the point of retail sale for export.
5. The requirements of this Chapter supplement those laid down in Chapters I and II above:
 - (a) In the case of operations that take place before live bivalve molluscs arrive at a dispatch or purification centre, they supplement the requirements of Chapter I;
 - (b) In the case of other operations, they supplement the requirements of Chapter II.

DEFINITIONS

For the purpose of this Chapter, the terms and phrases defined below apply and have legal effect as if they were integral to FAO No. ____, Series of ____:

Conditioning - the storage of live bivalve molluscs coming from class A production areas, purification centres or dispatch centres in tanks or any other installation containing clean seawater, or in natural sites, to remove sand, mud or slime, to preserve or to improve organoleptic qualities and to ensure that they are in a good state of vitality before wrapping or packaging.

Dispatch centre - any on-shore or off-shore establishment for the reception, conditioning, washing, cleaning, grading, wrapping and packaging of live bivalve molluscs fit for human consumption.

Gatherer - any natural or legal person who collects live bivalve molluscs by any means from a harvesting area for the purpose of handling and placing on the market.

Live bivalve molluscs - unless otherwise stated, includes live echinoderms, tunicates and marine gastropods.

Marine biotoxins - poisonous substances accumulated by bivalve molluscs, in particular, as a result of feeding on plankton containing toxins.

Pectinidae - member of a family of over 30 genera of bivalves, which may swim by expelling water from their shell in a series of snapping motions (such as the genus *Aequipecten* and *Pecten*, e.g. scallops) or may be attached to a substrate (such as *Chlamys*).

Production area - any sea, estuarine or lagoon area, containing either natural beds of bivalve molluscs or sites used for the cultivation of bivalve molluscs, and from which live bivalve molluscs are taken.

Purification centre - an establishment with tanks fed by clean seawater in which live bivalve molluscs are placed for the time necessary to reduce contamination to make them fit for human consumption.

Relaying - the transfer of live bivalve molluscs to sea, lagoon or estuarine areas for the time necessary to reduce contamination to make them fit for human consumption. This does not include the specific operation of transferring bivalve molluscs to areas more suitable for further growth or fattening.

Relaying area - any sea, estuarine or lagoon area with boundaries clearly marked and indicated by buoys, posts or any other fixed means, and used exclusively for the natural purification of live bivalve molluscs.

Self-cleaning - soaking live shellfish in clean seawater for 12 hours or more to remove dirt, mud and sand.

SECTION I GENERAL REQUIREMENTS

1. Live bivalve molluscs may not be exported other than via a dispatch centre, where an identification mark must be applied in accordance with Article 7 and Chapter V.

2. FABO may accept batches of live bivalve molluscs only if the documentary requirements set out in points 3 to 7 have been met.
3. Whenever a FABO moves a batch of live bivalve molluscs between production areas, relaying areas or any establishments, a registration document must accompany the batch.
4. When live bivalve molluscs products are exported, the registration document must be in the official language of the country to which the product will be exported and contain at least the information specified below:
 - (a) in the case of a batch of live bivalve molluscs sent from a production area, the registration document must contain at least the following:
 - (i) gatherer's identity and address;
 - (ii) date of harvesting;
 - (iii) location of production area described in as precise detail as practicable, or by a code number;
 - (iv) health status of the production area;
 - (v) shellfish species and quantity; and
 - (vi) destination of the batch;
 - (b) in the case of a batch of live bivalve molluscs sent from a relaying area, the registration document must contain at least the information referred to in paragraph 4.a.i and the following:
 - (i) location of the relaying area; and
 - (ii) duration of relaying;
 - (c) in the case of a batch of live bivalve molluscs sent from a purification centre, the registration document must contain at least the information referred to in paragraph 4.a and the following:
 - (i) address of the purification centre;
 - (ii) duration of purification; and
 - (iii) dates on which the batch entered and left the purification centre.

- (d) where a batch of live bivalve molluscs is sent by an intermediary operator, a new registration document, filled-in by the intermediary operator, must accompany the batch. The registration document must contain at least the information referred to in point (a), (b) and (c) of this Order with the following information:
- (i) the name and address of the intermediary operator
 - (ii) in the case of conditioning or in the case of re-immersion for storing purpose, the date of starting, the date of end and the place of the conditioning or the re-immersion;
 - (iii) if a conditioning in a natural site was carried out, the intermediary operator must confirm that the natural site where the conditioning took place was classified at the time of conditioning as a Class A production area open for harvest;
 - (iv) if a re-immersion in natural site was carried out, the intermediary operator must confirm that the natural site where the re-immersion took place was classified at the time of re-immersion with the same classification of the production area where the live bivalve molluscs were harvested.
 - (v) if a re-immersion was carried out in an establishment, the intermediary operator must confirm that the establishment was approved at the time of the re-immersion. The re-immersion shall not cause additional contamination to the live bivalve molluscs,
 - (vi) in the case of grouping, the species, the date when the grouping started, the date of the end of the grouping, the status of the area where the live bivalve molluscs were harvested, and the batch of the grouping, that always consists of the same species, captured on the same date, and in the same production area.
5. FABO sending batches of live bivalve molluscs must complete the relevant sections of the registration document so that they are easy to read and cannot be altered. FABO receiving batches must either date-stamp the document on receipt of the batch or record the date in an alternative manner.
6. FABO must keep a copy of the registration document relating to each batch sent and received for at least twelve months after its dispatch or receipt (or such longer period as DA-BFAR may specify).
7. However, registration documents are not necessary if:

- (a) the staff gathering live bivalve molluscs also operate the dispatch centre, purification centre, relaying area or processing establishment receiving the live bivalve molluscs; only DA-BFAR supervises all the establishments concerned; and
 - (b) DA-BFAR so permits.
8. Intermediary operator must be:
- (a) registered with the CA as a food business carrying out primary production as referred to in Article 4(2)(a) if they do not have premises or if they have premises where they only handle, wash and store at ambient temperature live bivalve molluscs, without grouping nor conditioning, or
 - (b) approved by the CA as a FABO in accordance with Article 4(2) if, in addition to carrying out the activities referred to in point (a), they have a cold store or they group or split batches of live bivalve molluscs or they carry out conditioning or re-immersion.
9. Intermediary operators may receive live bivalve molluscs from production areas classified as A, B or C, from relaying areas or from other intermediary operators. Intermediary operators can send live bivalve molluscs:
- (a) from Class A production areas dispatch centres or another intermediary operator;
 - (b) from Class B production areas only to purification centres, processing establishments or to another intermediary operator;
 - (c) from Class C production areas to processing establishments or to another intermediary operator with premises

SECTION II

HYGIENE REQUIREMENTS FOR PRODUCTION AND HARVESTING

The requirements in this Section must apply without prejudice to the general requirements of Republic Act No 8550, Philippine Fisheries Code of 1998, and Fisheries Administrative Order No 209, Series of 2001 (Guideline on the Production, Harvesting, Handling and Transportation of Shellfish for Implementation of the Local Government), as applied to the harvesting, production, preparation and processing of live bivalve molluscs for domestic or export-markets.

PART A. Requirements for Production Areas

1. Gatherers may only harvest live bivalve molluscs from production areas with fixed locations and boundaries that DA-BFAR has classified, where appropriate in cooperation with FABO, as being of class A, B or C in accordance with the FAO No 228,

Series of 2008, "The Code of Good Practice for the Organisation and Implementation of Official Controls Protocols" and its implementing Code of Practice.

2. FABO may export live bivalve molluscs collected from Class A production areas only if they meet the health requirements of Section V.
3. FABO may export live bivalve molluscs collected from Class B production areas only after treatment in a purification centre, or after relaying, in all cases in accordance with the relevant provisions of this Chapter.
4. FABO may export live bivalve molluscs collected from Class C production areas only after relaying over a long period in accordance with Part C of this Section.
5. After purification or relaying, live bivalve molluscs from Class B or C production areas must meet all of the requirements of Section V. However, live bivalve molluscs from such areas that have not been submitted for purification or relaying may be sent to a processing establishment, where they must undergo treatment to eliminate pathogenic micro-organisms (where appropriate, after removal of sand, mud or slime in the same or another establishment).

The permitted treatment methods are:

- (a) sterilisation in hermetically sealed containers; and
- (b) heat treatments involving:
 - (i) immersion in boiling water for the period required to raise the internal temperature of the mollusc flesh to not less than 90°C and holding at this temperature for not less than 90 seconds;
 - (ii) cooking for three to five minutes in an enclosed space where the temperature is between 120°C and 160°C and the pressure is between 2 and 5 kg/cm², followed by shelling and freezing of the flesh to a core temperature of -20°C; and
 - (iii) steaming under pressure in an enclosed space satisfying the requirements relating to cooking time and the internal temperature of the mollusc flesh mentioned under (i). Validated methodology must be used; procedures based on the HACCP principles must be in place to verify the uniform distribution of heat.
6. FABO must not export live bivalve molluscs from areas that DA-BFAR has not classified, or which are unsuitable for health reasons. FABO must take account of any relevant information concerning the suitability of an area for production and harvesting, including information obtained from own-checks and DA-BFAR, and must use this

information, particularly that related to environmental and weather conditions, to determine the appropriate treatment to apply to harvested batches.

PART B. Requirements for Harvesting and Handling

FABO harvesting live bivalve molluscs, or handling them immediately after harvesting, must comply with the following requirements:

1. Harvesting techniques and further handling must not cause additional contamination or excessive damage to the shells or tissues of the live bivalve molluscs or result in changes significantly affecting their suitability for treatment by purification, processing or relaying. FABO must in particular:
 - (a) adequately protect live bivalve molluscs from crushing, abrasion or vibration;
 - (b) not expose live bivalve molluscs to extreme temperatures;
 - (c) not re-immerses live bivalve molluscs in water that could cause additional contamination; and
 - (d) if carrying out conditioning in natural sites, use only areas classified by DA-BFAR as Class A.
2. Means of transport must permit adequate drainage, be equipped to ensure the best survival conditions possible and provide efficient protection against contamination.

PART C. Requirements for Relaying Live Bivalve Molluscs

FABO relaying live bivalve molluscs must comply with the following requirements:

1. FABO may use only those areas that DA-BFAR has approved for relaying live bivalve molluscs. Buoys, poles or other fixed means must clearly identify the boundaries of the sites. There must be a minimum distance between relaying areas, and also between relaying areas and production areas, so as to minimise any risk of the spread of contamination.
2. Conditions for relaying must ensure optimal conditions for purification. In particular, FABO must:
 - (a) use techniques for handling live bivalve molluscs intended for relaying that permit the resumption of filter-feeding activity after immersion in natural waters;

- (b) immerse live bivalve molluscs in seawater at the relaying area for an appropriate period, fixed depending on the water temperature; this period must be at least two months unless DA-BFAR agrees to a shorter period on the basis of the FABO's risk analysis;
 - (c) ensure sufficient separation of sites within a relaying area to prevent mixing of batches; the 'all in, all out' system must be used, so that a new batch cannot be brought in before the whole of the previous batch has been removed; and
 - (d) not relay live bivalve molluscs at a density that prevents purification.
3. FABO managing relaying areas must keep permanent records of the source of live bivalve molluscs, relaying periods, relaying areas used and the subsequent destination of the batch after relaying, for inspection by DA-BFAR.

SECTION III STRUCTURAL REQUIREMENTS FOR PURIFICATION AND DISPATCH CENTRES

1. The location of premises on land must not be subject to flooding by ordinary high tides or run-off from surrounding areas.
2. Tanks and water storage containers must:
 - (a) have smooth, durable, impermeable and easy to clean internal surfaces;
 - (b) be constructed to allow complete draining of water;
 - (c) have any water intake situated in a position that avoids contamination of the water supply.
3. In addition, in purification centres, purification tanks must be suitable for the volume and type of products to be purified.

SECTION IV HYGIENE REQUIREMENTS FOR PURIFICATION AND DISPATCH CENTRES

PART A. Requirements for Purification Centres

FABO purifying live bivalve molluscs must comply with the following requirements:

1. Before purification commences, live bivalve molluscs must be free of mud and accumulated debris and washed if necessary, using clean water.
2. Operation of the purification system must allow live bivalve molluscs rapidly to resume and to maintain filter-feeding activity, to eliminate sewage contamination, not to become re-contaminated and to be able to remain alive in a suitable condition after purification for wrapping, storage and transport.
3. The quantity of live bivalve molluscs to be purified must not exceed the capacity of the purification centre. They must be continuously purified for a period sufficient for them to meet the health standards set out in Section V.
4. If a purification tank contains several batches of live bivalve molluscs, they must be of the same species and the length of the treatment must be based on the time required by the batch needing the longest period of purification.
5. Containers used to hold live bivalve molluscs in purification systems must be constructed to allow clean seawater to flow through. The depth of layers of live bivalve molluscs must not impede the opening of shells during purification.
6. No crustaceans, fish or other marine species may be kept in a purification tank in which live bivalve molluscs are undergoing purification.
7. Every package containing purified live bivalve molluscs sent to a dispatch centre must be provided with a label certifying that all molluscs have been purified.

PART B. Requirements for Dispatch Centres

FABO operating dispatch centres must comply with the following requirements:

1. Handling of live bivalve molluscs, particularly conditioning, calibration, wrapping and packing, must not contaminate the product or affect the viability of the molluscs.
2. Before dispatch, the shells of live bivalve molluscs must be washed thoroughly with clean water.
3. Live bivalve molluscs must come from:
 - (a) a class A production area;
 - (b) a relaying area;
 - (c) a purification centre; or

- (d) another dispatch centre.
4. Points 1, 2, and 3(a) and (b) also apply to dispatch centres situated on board vessels and the molluscs handled therein.

SECTION V HEALTH STANDARDS

FABO must ensure that exported live bivalve molluscs meet the following standards:

1. They have organoleptic characteristics associated with freshness and viability, including shells free of dirt, an adequate response to percussion and normal amounts of intra-valvular liquid.
2. They must meet Philippine National Standards for microbiological criteria:
 - Salmonella*: absent in 25g, based on $n = 5$; $c = 0$
 - E. coli*: 230 MPN/100g of flesh and intra-valvular liquid, based on $n = 1$; $c = 0$
3. They must not contain marine biotoxins in total quantities (measured in the whole body or any part edible separately) that exceed the following:
 - (a) paralytic shellfish poison (PSP): 800 micrograms of saxitoxin equivalents diHCL per kilogram ($\mu\text{g}/\text{kg}$);
 - (b) amnesic shellfish poison (ASP): 20 milligrams of domoic acid per kilogram (mg/kg);
 - (c) okadaic acid, dinophysistoxins together: 160 micrograms of okadaic acid equivalents per kilogram ($\mu\text{g}/\text{kg}$);
 - (d) yessotoxins: 1 milligram of yessotoxin equivalent per kilogram (mg/kg); and
 - (e) azaspiracids: 160 micrograms of azaspiracid equivalents per kilogram ($\mu\text{g}/\text{kg}$).

The methods to be used by DA- BFAR to check compliance with specified limits and, where appropriate, by FABO, are defined in Chapter XI of "The Code of Good Practice for the Organisation and Implementation of Official Controls Protocols Intended for the Local or Export Market and Imported Fish and Fishery / Aquatic Products"

**SECTION VI
WRAPPING AND PACKAGING**

1. Oysters must be wrapped or packaged with the concave shell downwards.
2. Individual consumer-size packages of live bivalve molluscs must be closed and remain closed after leaving the dispatch centre.

**SECTION VII
IDENTIFICATION MARKING AND LABELLING**

1. The label, including the identification mark, must be waterproof.
2. In addition to the general requirements for identification marks contained in Chapter V, the following information must be shown on the label:
 - (a) species of bivalve mollusc (common name and scientific name);
 - (b) date of packaging, comprising at least the day and the month; and
 - (c) date of minimum durability.
3. However, the date of minimum durability may be replaced by the statement “these animals must be alive when sold”.

**SECTION VIII
OTHER REQUIREMENTS**

1. FABO storing, transporting and exporting live bivalve molluscs must ensure that the products are kept at a temperature that does not adversely affect food safety or their viability.
2. Live bivalve molluscs must not be re-immersed in, or sprayed with, water after they have been packaged and left the dispatch centre.

**SECTION IX
SPECIFIC REQUIREMENTS FOR *PECTINIDAE*, MARINE GASTROPODS AND
HOLOTHUROIDEA WHICH ARE NOT FILTER FEEDERS HARVESTED OUTSIDE
CLASSIFIED PRODUCTION AREAS**

FABO harvesting *pectinidae*, *marine gastropods* and *holothuroidea* which are not filter feeders, outside classified production areas or handling such *pectinidae*, and/or such *marine gastropods* and/or *holothuroidea* must comply with the following requirements:

1. *Pectinidae*, *marine gastropods* and *holothuroidea* which are not filter feeders, must not be placed on the market unless they are harvested and handled in accordance with Part B of Section II and meet the standards laid down in Section V, as demonstrated by a system of own-checks by the FABO operating a fish auction, a dispatch centre or a processing establishment. .
2. In addition point 1, where data from official monitoring programmes enable DA-BFAR to classify fishing grounds - where appropriate, in cooperation with FABO - the provisions of Part A of Section II apply by analogy to *pectinidae*.
3. *Pectinidae*, *marine gastropods* and *holothuroidea* which are not filter feeders, must not be placed on the market for human consumption otherwise than via fish auction a dispatch centre or processing establishment. When they handle *pectinidae* and / or such *marine gastropods*, and/or *holothuroidea* FABO operating such establishments must inform the DA-BFAR and , as regards dispatch centres, comply with the relevant requirements of Section III and IV
4. FABO handling *pectinidae*, *marine gastropods* and *holothuroidea* which are not filter feeders, must comply with the following requirements:
 - (a) with the documentation requirements of points 3 to 7 of Section I, where applicable. In this case, the registration document must clearly indicate the location of the area, indicating the system used to describe the coordinates, where the live *pectinidae* and/or live *marine gastropods* and/or live *holothuroidea* were harvested; or
 - (b) with the requirements of point 2 of Section VI concerning the closing of all packages of live *pectinidae*, live *marine gastropods* and live *holothuroidea* dispatched for retail sale and Section VII concerning identification marking and labelling requirements

CHAPTER V

Identification Marking

FABO must ensure that FFA products intended for local or export market have an Identification Mark (“*Mark*”) applied in accordance with the following provisions, and those of FAO No __ Series of __, ““The Code of Good Practice for the Organisation and Implementation of Official Controls Protocols”” and its Implementing Code of Practice.

1. Application of the Mark

- (a) the mark must be applied before the product leaves the establishment;
- (b) however, if packaging and/or wrapping is removed, or the product is further processed in another establishment, a new mark must be applied to indicate the approval number of the second establishment where these operations take place.

2. Form of the Mark

- (a) the mark must be legible and indelible, and the characters easily decipherable. It must be clearly displayed to facilitate control procedures by Competent Authorities;
- (b) the mark must indicate
 - (i) the approval number of the establishment;
 - (ii) the origin as the Philippines, which may appear in full or abbreviated to PH, in accordance with ISO standard 3166-1-alpha-2 code elements.

3. Method of Marking

- (a) the mark may be applied directly to, or be printed on a label fixed to, the product, the wrapping or the packaging. It may also be an irremovable tag made of a resistant material;
- (b) when the mark is printed on the packaging or applied to a label fixed on the packaging, it must be done such that the mark is destroyed when the packaging is opened, except when the process of opening destroys the packaging. When wrapping provides the same protection as packaging, the mark may be affixed to the wrapping;
- (c) when FFA products are placed in transport containers or large packages and are intended for further handling, processing, wrapping or packaging in another establishment, the mark may be applied to the external surface of the container or packaging;
- (d) when FFA products are carried in bulk, a mark is not necessary if accompanying documentation contains the information specified in point 2(b);
- (e) when FFA products are placed in a package destined for direct supply to the final consumer, the mark may be applied to the exterior of that package only.

CHAPTER VI
FOOD AND AGRICULTURE ORGANISATION FISHERY CATCH AREAS

Catch area	Identification of the area (1)
North-West Atlantic	FAO area 21
North-East Atlantic (2)	FAO area 27
Baltic Sea	FAO area 27.III d
Central-Western Atlantic	FAO area 31
Central-Eastern Atlantic	FAO area 34
South-West Atlantic	FAO area 41
South-East Atlantic	FAO area 47
Mediterranean Sea	FAO areas 37.1, 37.2 and 37.3
Black Sea	FAO area 37.4
Indian Ocean	FAO areas 51 and 57
Pacific Ocean	FAO areas 61, 67, 71, 77, 81 and 87
Antarctic	FAO areas 48, 58 and 88

(1) FAO yearbook. Fishery statistics. Catches. Vol. 86/1. 2000.

(2) Excluding the Baltic Sea.

CHAPTER VII
Philippine National Standards for Drinking Water

Microbiological parameters

parameter			
Chemical s			
Parameter	Parametric value	Unit	Notes
Escherichia coli (E. coli)	0		
Enterococci	0		
Acrylamide	0.1	µg/l	Note 1
Antimony	5	µg/l	
Arsenic	10	µg/l	
Benzene	1	µg/l	
Benzo(a)pyrene	0.01	µg/l	
Boron	1	mg/l	
Bromate	10	µg/l	Note 2
Cadmium	5	µg/l	
Chromium	50	µg/l	
Copper	2	mg/l	Note 3
Cyanide	50	µg/l	
1,2-dichloroethane	3	µg/l	
Epichlorohydrin	0.1	µg/l	Note 1
Fluoride	1.5	mg/l	
Lead	10	µg/l	Notes 3 and 4
Mercury	1	µg/l	
Nickel	20	µg/l	Note 3
Nitrate	50	mg/l	Note 5
Nitrite	0.5	mg/l	Note 5
Pesticides	0.1	µg/l	Notes 6 and 7
Pesticides — Total	0.5	µg/l	Notes 6 and 8
Polycyclic aromatic Hydrocarbons	0.1	µg/l	Sum of concentrations of specified compounds; Note 9
Selenium	10	µg/l	
Tetrachloroethene and Trichloroethene	10	µg/l	Sum of concentrations of specified parameters
Trihalomethanes — Total	100	µg/l	Sum of concentrations of

			specified compounds; Note 10
Vinyl chloride	0.5	µg/l	Note 1

Note 1: The value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

Note 2: Where possible, without compromising disinfection, a lower value should be sought. Between 2003 and 2008 the level is 25 µg/l; thereafter, the level is 10 µg/l.

Note 3: The value applies to a sample of water intended for human consumption, obtained by an adequate sampling method at the tap and taken so as to be representative of a weekly average value ingested by consumers.

Note 4: Between 2003 and 2013, the value is 25 µg/l; thereafter, the value will be 10 µg/l.

Note 5: The total level of [nitrate (mg/l) \leq 50] + [nitrite (mg/l) \leq 3] must be \leq 1; the level of nitrites, ex water treatment works, must not exceed 0.10 mg/l.

Note 6:

'Pesticides' means:

o organic insecticides, o organic herbicides, o organic fungicides, o organic nematocides, o organic acaricides, o organic algicides,
o organic rodenticides o organic slimicides,
o related products (*inter alia*, growth regulators)
and their relevant metabolites, degradation and reaction products.

However, only those pesticides which are likely to be present in a given supply need be monitored.

Note 7: The value applies to each individual pesticide. In the case of aldrin, dieldrin, heptachlor and heptachlor epoxide the value is 0.03 µg/l.

Note 8: 'Pesticides - Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure.

Note 9: The specified compounds are:

o benzo(b)fluoranthene, o benzo(k)fluoranthene, o benzo(ghi)perylene,
o indeno(1,2,3-cd)pyrene.

Note 10: Where possible, without compromising disinfection, lower values should be sought. The specified compounds are: chloroform, bromoform, dibromochloromethane, bromodichloromethane. The level for total THMs until the end of 2008 is 150. Thereafter, it will be 100 µg/l.