

LEGAL NOTICE NO 40/1998
THE FISHERY PRODUCT REGULATIONS

PART I
Preliminary

Art.1 Short Title

These Regulations may be cited as "the Fishery Product Regulations-Legal Notice No 40/1998"

Art.2 Definitions

For the purpose of these Regulations:

- (a) "marketing" means the first offer for sale and/or the first sale, on national territory, for human consumption;
- (b) "lot" means a quantity of fishery products of a given species which have been subjected to the same treatment on sea and may have come from the same fishing grounds and the same vessel;
- (c) "fishing grounds" shall be interpreted as the customary name given by the fishing industry to the place in which fishery product has been taken;
- (d) "presentation" means the form in which the fish is marketed, such as whole, gutted, and headless;
- (e) "visible parasite" means a parasite or a group of parasites which has a dimension, colour or texture which is clearly distinguishable from fish tissues; and
- (f) "visual inspection" means a non destructive examination of fish or fishing products without optical means of magnifying and under good light conditions for human vision, including if necessary, candling.

Part II
Placing on the market of fishery products

Chapter 1: Fishing vessels

Art. 3 General Hygiene Conditions Applicable to Fishery Products on Board of all Fishing Vessels

(1) Conditions concerning construction and equipment:

- (a) The sections of vessels or the containers reserved for the storage of fishery products must not contain objects or products liable to transmit harmful properties or abnormal characteristics of the foodstuffs. These sections or containers must be designed as to allow them to be cleaned easily and to ensure that melt water cannot remain in contact with fishery products;
- (b) Equipment used for gutting, heading and the removal of fins, and containers and equipment in contact with the fishery products, must be made of or coated with a material which is water proof, resistant to decay, smooth and easy to clean and disinfect. When used they must be completely clean.

(2) Conditions concerning use and maintenance:

- (a) when used, the section of vessels or the containers reserved for the storage of fishery product must be completely cleaned and, in particular, must not be capable of being contaminated by the fuel used for the propulsion of the vessel or bilge water;
- (b) after the fishery products have been unloaded, the containers, equipment and sections of vessels which are directly in contact with the fishery products must be cleaned with drinking water or clean water:

(3) Conditions concerning handling and storage of fishing products on board:

- (a) as soon as they are taken on board, the fishery products must be products protected from contamination and from the effects of the sun or any other source of heat. When they are washed, the water used must be either fresh water complying with the parameters set out in the Potable Water Regulation enforced in the State of Eritrea or clean sea water, so as not to impair their quality or wholesomeness;
- (b) the fishery products shall be handled and stored in such a way as to prevent bruising. The use of spiked instruments shall be tolerated for the moving of large fish or fish, which might injure the handler, provided the flesh of these products, is not damaged;
- (c) fishery products other than those kept alive must undergo cold treatment as soon as possible after loading;
- (d) ice used for chilling of products must be made from drinking water or clean seawater. Before use it must be stored under conditions which prevents its contamination; and

- (e) where fish is headed and/or gutted on board, such operation must be carried out hygienically and the products must be washed immediately and thoroughly with drinking water or clean sea water. The viscera and parts, which may pose a threat to public health, must be removed and set apart from products intended for human consumption. Livers and roes intended for human consumption must be refrigerated or frozen.

(4) Conditions concerning personnel.

Staff assigned to handling of fishery products shall be required to maintain a high standard of cleanliness for themselves and their clothes.

Art. 4 Other Hygiene Conditions

(A) Additional hygienic conditions applicable to the fishing vessels designed and equipped to preserve fishery products on board under satisfactory conditions for more than twenty four hours, other than those equipped for keeping fish, shellfish and mollusks alive without other means of conservation on board.

(1) Conditions concerning construction and equipment:

- (a) fishing vessels must be equipped with holds, tanks or containers for the storage of refrigerated or frozen fish products at the temperature laid down by this regulation. These holds shall be separated from the machinery space and the quarters reserved for the crew by partitions which are sufficiently impervious to prevent any contamination of the stored fishery products;
- (b) the inside surface of the holds, tanks or containers shall be water proof and easy to wash and disinfect. It shall consist of a smooth material or failing that, smooth paint maintained in good condition, not being capable of transmitting to the fishery products substances harmful to human health;
- (c) the holds shall be designed to ensure that melt water cannot remain in contact with the fishery products;
- (d) containers used for the storage of products must ensure their preservation under satisfactory conditions of hygiene and, in particular, allow drainage of water. When used they must be completely clean.

(2) Conditions concerning use and maintenance:

- (a) the working decks, the equipment and the holds, tanks and containers shall be cleaned each time they are used for this purpose. Disinfecting, the removal of insects or rat extermination shall be carried out whenever necessary;
- (b) cleaning products, disinfectants, insecticides and all potentially toxic substances shall be stored in locked premises or cupboards. Their use must not present any risk of contamination of the fishery products.

(3) Conditions concerning handling and storage of fishing products on board:

ice for chilling of fishery products must be used in such a way and in such quantities, so that by unloading of the fishery products, they have still the temperature of melting ice.

(4) Conditions concerning personnel:

ship owners or their representatives shall take all the measures necessary to prevent persons liable to contaminate fishery products from working on board handling them, until there is evidence that such persons can do so without risk.

B. Specific Hygiene conditions applicable to fishery products caught on board certain vessels:

1) Fishing vessels equipped for freezing fishery products on board:

If fishery products are frozen on board, this operation must be carried out in accordance with following conditions:

- (a) fishing vessels must have:
 - freezing equipment, sufficiently powerful:
 - to achieve or rapid reduction in temperature (-18°C);
 - to keep products in storage rooms (-18°C);
 - to freeze whole fish in line intended for canning (-9°C);
- (b) raw materials

Fresh products to be frozen must comply with the requirements of the conditions for fresh products laid down in Art. 9 chapter 4 of these Regulation: and

- (c) temperature recording devices in storage rooms must be located in a place where they can easily be read.

The temperature sensor of the recorder must be located in the area furthest away from the cold source, where the temperature in the storage room is the highest. Temperature charts must be available at least during the period in which the products are stored;

- (d) Brine:
where freezing in brine is used, the brine shall not be a source of contamination for the fish.
- (e) The Competent Authority shall, for control purposes keep up-to-date a list of vessels equipped in accordance with the requirements laid down in B (1) hereof.

(2) Fishing vessels equipped for chilling of fishery products in cooled seawater

Fishing vessels equipped for chilling of fishery products in cooled seawater (CSW) either chilled by ice or refrigerated sea water (RSW) by mechanical means shall comply with the following requirements:

- (a) tanks must be equipped with adequate sea water filling and drainage installations and must incorporate devices for achieving uniform temperature throughout the tanks;
- (b) tanks must have a means of recording temperature connected to temperature sensor positioned in the section of the tank where temperatures are highest:
- (c) the operation of the tank or container system must secure a chilling rate which ensures the mix of fish and seawater reaches 3°C at the most six hours after loading and 0°C at the most after sixteen hours;
- (d) after each unloading, the tanks circulation systems and containers must be completely emptied and thoroughly cleaned using drinking water or clean seawater and should only be filled with clean seawater; and
- (e) the date and the number of the tank must be clearly indicated on the temperature recordings, which must be kept available for the Competent Authority.

Chapter 2: Requirements during and after landing

Art. 5 Unloading of Fishery Products

- (1) Unloading and landing equipment must be constructed of material which is easy to clean and disinfect and must be kept in a good state of repair and cleanliness.
- (2) During unloading and landing, contamination of fishery products must be avoided. It must in particular be ensured that:
 - (a) unloading and landing operations proceed rapidly;
 - (b) fishery products are placed without unnecessary delay in a protected environment at the temperature required on the basis of the nature of the product and, where necessary, in ice in transport, storage or market facilities, or in a plant;
 - (c) equipment and handling practices that cause unnecessary damage to the edible parts of the fishery products are not authorised.
- (3) Parts of auction where fishery products are displayed for sale must:
 - (a) be covered and have walls which are easy to clean;
 - (b) have water-proof flooring which is to wash and disinfect and laid in such a way as to facilitate the drainage of water and have a hygienic waste water disposal system;
 - (c) be equipped with sanitary facilities with an appropriate number of wash basins and flush lavatories. Wash basins shall be supplied with materials for cleaning the hands and single use hand towels;
 - (d) be well lit to facilitate the inspection of fishery products provided for in chapter 5 of these Regulations;
 - (e) when they are used for display or storage of fishery products, not be used for other purposes; vehicles emitting exhaust fumes which may impair the quality of the fishery products must not be admitted to markets; crates must, after each sale, be cleaned and rinsed inside and outside with drinking water or clean sea water; where required, they must be disinfected.
 - (f) have displayed, in a prominent position, signs prohibiting smoking, spitting, eating or drinking.
 - (g) be closeable and be kept closed when the Competent Authority considers it necessary;

- (h) have facilities to provide adequate supplies of drinking water within the meaning of the potable water regulation or alternatively of clean sea water or sea water treated by an appropriate system, under pressure and in sufficient quantity. However, by way of exception, a supply of non-drinking water is permissible for steam production, fire - fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purpose and present no risk of contamination of the products. Non-drinking-water pipes must be clearly distinguished from those used for drinking water or clean sea water;
 - (i) have special watertight receptacles made of corrosion - resistant materials for fishery products which are unfit for human consumption;
 - (j) in so far as they do not have their own premises on the spot or in the immediate vicinity on the basis of the quantities displayed for sale, have, for the purpose of the Competent Authority, an adequately-equipped lockable room, and the equipment necessary for carrying out inspection.
- (4) After landing or, where appropriate, after first sale, fishery products must be transported without delay, under the conditions laid down in chapter 8, of these Regulations to their place of destination.
- (5) However, if the conditions laid down in sub-Article 4 hereof are not fulfilled, the markets in which fishery products may be stored before being displayed for sale or after being sold and pending transport to their place of destination must have sufficiently large cold rooms which satisfy the following conditions: they must have:
- (a) waterproof flooring which is easy to clean and disinfect and laid down in such a way as to facilitate the drainage of the water or provided with equipment to remove water;
 - (b) walls, which have, smooth surfaces and are easy to clean, durable and impermeable;
 - (c) ceilings or roof linings which are easy to clean;
 - (d) doors in durable materials which are easy to clean;
 - (e) adequate natural or artificial lighting; and
 - (f) where necessary a sufficiently powerful refrigeration plant to keep products at temperatures prescribed in these Regulation.

In such cases, fishery products must be stored at a temperature approaching that of melting ice.

Art. 6 General conditions of hygiene for auctions and markets in which Fishery Products are displayed for sale or stored

A-General conditions of hygiene

- (1) Floors, walls and partitions, ceilings or roof linings, equipment and instruments used for working on fishery products must be kept in a satisfactory state of cleanliness and repair, so that they do not constitute a source of contamination for the products.
- (2) Rodents, insects and any other vermin must be systematically exterminated in the premises or on the equipment. Rodenticides, insecticides, disinfectants and any other potentially toxic substances must be stored in premises of cupboards, which can be locked; their use must not present any risk of contamination of the products.
- (3) Working areas, instruments and working equipment must be used only for work on fishery products.
- (4) Drinking water, within the meaning of the Potable Water Regulation enforced in the State of Eritrea or clean seawater must be used for all purposes. However by way of an exception, non drinking water may be used for steam production, fire fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purposes and present no risk of contamination of the products.
- (5) Detergents, disinfectants and similar substances must be approved by the Competent Authority and used in such a way that they do not have adverse effects on the machinery, equipment and products.

B-General conditions of hygiene applicable to staff

- (1) The highest possible standard of cleanliness is required of staff. More specifically:
 - (a) staff must wear clean working clothes;

- (b) staff assigned to the handling and preparation of fishery products must be required to wash their hands at least each time work is resumed; wounds to the hands must be covered by a water proof dressing; and
 - (c) smoking, spitting, eating and drinking in work and storage premises of fishery products must be prohibited.
- (2) The employer shall take all the requisite measures to prevent persons liable to contaminate fishery products from working on and handling them, until there is evidence that such persons can do so without risk.
- (3) When recruited, any person working on and handling fishery products shall be required to prove, by a medical certificate, that there is no impediment to such employment.

Chapter 3: General Conditions for Plants on Land

Art. 7 General Conditions Relating to Premises and Equipment

Plant shall afford at least the following facilities:

- (1) working rooms of sufficient size for work to be carried out in a logical sequence and under adequate hygienic conditions. In general, following working rooms are needed:
- reception room;
 - storage room for raw material: fresh (0°C) or/and frozen (-18°C);
 - ice storage room;
 - processing room(s) (pending activities such as, smoking, salting, canning);
 - storage room for offal;
 - storage room for storage of chemicals;
 - dry room for packaging;
 - dry room for storage of packing material;
 - room for cleaning and disinfecting recipients and small equipment;
 - room for storage of cleaning utensils;
 - storage of finished products (0°C or/and -18°C)
 - social amenities and laundry;
 - room for laboratory; and
 - expedition room.

Their design and layout shall be such as to preclude contamination of the product and keep quite separate the clean and contaminated, the dry and wet parts of the building;

- (2) in areas where products are handled, prepared and processed:
- (a) waterproof flooring which is easy to clean and disinfect and laid down in such a way as to facilitate the drainage of the water or provided with equipment to remove water;
 - (b) walls which have smooth surfaces and are easy to clean, durable impermeable;
 - (c) ceilings or roof linings which are easy to clean;
 - (d) doors in durable materials which are easy to clean;
 - (e) adequate ventilation and, where necessary, good steam and water-vapour extraction facilities;
 - (f) adequate natural or artificial lighting;
 - (g) an adequate number of facilities for cleaning and disinfecting hands. In workrooms and lavatories taps must not be hand-operable. These facilities must be provided with single-use hand towels; and
 - (h) facilities for cleaning plant, equipment and utensils;
- (3) in cold rooms where fishery products are stored:
- (a) waterproof flooring which is easy to clean and disinfect and laid down in such a way as to facilitate the drainage of the water or provided with equipment to remove water;
 - (b) walls which have smooth surfaces and are easy to clean, durable and impermeable;
 - (c) ceilings or roof linings which are easy to clean;
 - (d) doors in durable materials which are easy to clean;
 - (e) adequate natural or artificial lighting; and
 - (f) where necessary a sufficiently powerful refrigeration plant to keep products at temperatures prescribed in these Regulations;

- (4) appropriate facilities for protection against pests such as insects, rodents, birds, etc.;
- (5) instruments and working equipment such as cutting tables, containers, conveyor belts and knives made of corrosion-resistant materials, easy to clean and disinfect;
- (6) special watertight, corrosion-resistant containers for fishery products not intended for human consumption and premises for the storage of such containers if they are not emptied at least at the end of each working day;
- (7) facilities to provide adequate supplies of drinking water within the meaning of the Potable Water Regulation enforced in the State of Eritrea or alternatively of clean sea water or sea water treated by an appropriate system, under pressure and in sufficient quantity. However, by way of exception, a supply of non-drinking water is permissible for steam production, fire-fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purposes and present no risk of contamination of the products. Non-drinking water pipes must be clearly distinguished from those used for drinking water or clean sea water;
- (8) hygienic waste water disposal system;
- (9) an adequate number of changing-rooms with smooth, water-proof, washable walls and floors, wash basins and flush lavatories. The latter may not open directly onto the workrooms. The wash basins must have materials for cleaning the hands and disposable towels; the wash basin taps must not be hand-operable;
- (10) if the volume of products treated requires regular or permanent presence, an adequately equipped lockable room for the exclusive use of the inspection service;
- (11) adequate facilities for cleaning and disinfecting means of transport. However, such facilities are not compulsory if there is a requirement for the means of transport to be cleaned and disinfected at facilities officially authorised by the Competent Authority; and
- (12) plants keeping live animals such as crustaceans and fish must have appropriate fittings ensuring the best survival conditions provided with water of a quality such that no harmful organisms or substances are transferred to the animals.

Art. 8 General Conditions of Hygiene

A-General conditions of hygiene applicable to premises and equipment

- (1) Floors, walls and partitions, ceilings or roof linings, equipment and instruments used for working on fishery products must be kept in a satisfactory state of cleanliness and repair, so that they do not constitute a source of contamination for the products.
- (2) Rodents, insects and any other vermin must be systematically exterminated in the premises or on the equipment; rodenticides, disinfectants and any other potentially toxic substances must be stored in premises or cupboards which can be locked; their use must not present any risk of contamination of the products.
- (3) Working areas, instruments and working equipment must be used only for work on fishery products. However, following authorisation by the Competent Authority they may be used at the same time or other times for work on other foodstuffs.
- (4) Drinking water, within the meaning of Potable Water Regulation enforced in the State of Eritrea or clean seawater must be used for all purposes. However, by way of an exception, non-drinking water may be used for steam production, fire-fighting and the cooling of refrigeration equipment, provided that the pipes installed for the purpose preclude the use of such water for other purposes and present no risk of contamination to the products.
- (5) Detergents, disinfectants and similar substances must be approved by the Competent Authority and used in such a way that they do not have adverse effects on the machinery, equipment and products.

B-General conditions of hygiene applicable to staff

- (1) The highest possible standard of cleanliness is required of staff. More specifically:
 - (a) staff must wear suitable clean working clothes and headgear which completely encloses the hair. This applies particularly to persons handling exposed fishery products;
 - (b) staff assigned to the handling and preparation of fishery products must be required to wash their hands at least each time work is resumed; wounds to hands must be covered by a waterproof dressing; and
 - (c) smoking, spitting, eating and drinking in work and storage premises of fishery products must be prohibited.
- (2) The employer shall take all the requisite measures to prevent persons liable to contaminate fishery products from working on and handling them, until there is evidence that such persons can do so without risk.
- (3) When recruited, any person working on and handling fishery products shall be required to prove, by a medical certificate, that there is no impediment to such employment.

Chapter 4: Special Conditions For Handling Fishery products on shore

Art. 9 Conditions for Fresh Products

- (1) Where chilled, unpacked products are not dispatched, prepared or processed immediately after reaching the establishment, they must be stored or displayed under ice in the establishment's cold room. Re-icing must be carried out as often as is necessary; the ice used, with or without salt, must be made from drinking water or clean sea water and be stored under hygienic conditions in receptacles provided for the purpose; such receptacles must be kept clean and in a good state of repair. Prepacked fresh products must be chilled with ice or mechanical refrigeration plant, creating similar temperature conditions.
- (2) If they are not carried out on board, operations such as heading and gutting must be carried out hygienically. The products must be washed thoroughly with drinking water or clean seawater immediately after such operations. First washing, gutting, filleting, skinning and packing must be done not on the same table surface but on different workplaces.
- (3) Operations such as filleting and slicing must be carried out in such a way as to avoid the contamination or spoilage of fillets and slices, and in a place other than that used for heading and gutting operations. Fillets and slices must not remain on worktables any longer than is necessary for their preparation and must be protected from contamination by appropriate packaging. Fillets and slices to be sold fresh must be chilled as quickly as possible after preparation.
- (4) Guts and parts that may constitute a danger to public health must be separated and removed from the vicinity of products intended for human consumption.
- (5) Containers used for the dispatch or storage of fresh fishery products must be designed in such a way as to ensure both their protection from contamination and their preservation under sufficiently hygienic conditions and, more particularly, they must provide adequate drainage of melt water.
- (6) Unless special facilities are provided for the continuous disposal of waste, the latter must be placed in leak-proof, covered containers that are easy to clean and disinfect. Waste must not be allowed to accumulate in working areas. It must be removed either continuously or as soon as the containers are full and at least at the end of each working day in the containers or to the premises for storage of such containers. The containers, receptacles and/or premises set aside for waste must always be thoroughly cleaned and, if appropriate, disinfected after use. Waste stored there must not constitute a source of contamination for the plant or of pollution of its surroundings.

Art. 10 Conditions for Frozen Products

- (1) Plants must have:
 - (a) freezing equipment sufficiently powerful to achieve a rapid reduction in the temperature so that the temperatures laid down in these Regulations can be obtained in the product;
 - (b) freezing equipment sufficiently powerful to keep products in storage rooms at a temperature not exceeding those laid down in these Regulation, whatever the ambient temperature may be.
- (2) Fresh products to be frozen or quick-frozen must comply with the requirements of Art. 9 of this Chapter.

- (3) Storage rooms must each have a temperature-recording device in a place where it can easily be read. The temperature sensor of the recorder must be located in the area furthest away from the cold source, i.e. where the temperature in the storage room is the highest.
- (4) Temperature charts must be available for inspection by the supervisory authorities at least during the period in which the products are stored.

Art. 11 Conditions for Thawing Products

Plants that carry out thawing operations must comply with the following requirements:

- (1) fishery products must be thawed under hygienic conditions; their contamination must be avoided and there must be adequate drainage for any melt water produced;
- (2) during thawing, the temperature of the products must not increase excessively;
- (3) after thawing, fishery products must be handled in accordance with the requirements of these Regulations. When they are prepared or processed, this operation must be carried out without delay. If they are put directly onto the market, particulars as to the thawed state of the fish must be clearly marked on the packaging.

Art. 12 General Conditions for Processed Products (canning, smoking, salting, cooking)

- (1) Fresh, frozen and thawed products used for processing must comply with the requirements of Art 9, 10 or 11 of this Chapter.
- (2) Where the processing treatment is carried out to inhibit the development of pathogenic microorganisms, or if it is a significant factor in the preservation of the product, this treatment must be scientifically recognised by the inspection service.
- (3) The person responsible for an establishment must keep a register of the processing carried out. Depending on the type of process employed, heating time and temperature, salt
- (4) content, pH, water content, etc., must be monitored and controlled. Records must be kept at least for the expected storage life of the products and be available to the inspection service.
- (5) For products which are preserved for a limited period by a treatment such as salting, smoking, drying or marinating, the appropriate conditions for storage must be clearly marked on the packaging.

Art. 13 Canning

In the case of fishery products which have been subjected to sterilisation in hermetically sealed containers:

- (1) the water used for the preparation of cans must be drinking water;
- (2) the process used for the heat treatment must be appropriate, having regard to such major criteria as the heating time, temperature, filling, size of containers, etc., a record of which must be kept; the heat treatment must be capable of destroying or inactivating pathogenic organisms and the spores of pathogenic micro-organisms. The heating equipment must be fitted with devices for verifying whether the containers have, in fact, undergone appropriate heat treatment. Drinking water must be used to cool containers after heat treatment, without prejudice to the presence of any chemical additives used in accordance with good technological practice to prevent corrosion of the equipment and containers;
- (3) further checks must be carried out at random by the manufacturer to ensure that the processed products have undergone appropriate heat treatment, <i>viz.</i>;
 - incubation tests: incubation must be carried out at 37°C for seven days or at 35°C for ten days, or at any other equivalent combination;
 - microbiological examination of contents and containers in the establishment's laboratory or in another approved laboratory;
- (4) samples must be taken of production each day at predetermined intervals, to ensure the efficacy of sealing or of any other method of hermetic closure. For that purpose, appropriate equipment must be available for the examination of cross-sections of the can-seams;
- (5) checks are carried out in order to ensure that containers are not damaged;
- (6) all containers which have undergone heat treatment under practically identical conditions during a same period of time must be given a batch identification mark.

Art. 14 Smoking

Smoking must be carried out in separate premises or a special place equipped, if necessary, with a ventilation system to prevent the smoke and heat from the combustion from affecting other premises or places where fishery products are prepared, processed or stored.

- (1) Materials used to produce smoke for the smoking of fish must be stored away from the place of smoking and must be used in such a way that they do not contaminate the products.
- (2) Materials used to produce smoke by burning wood that had been painted, varnished, glued or has undergone any chemical preservation treatment must be prohibited.
- (3) After smoking, products must be cooled rapidly to the temperature required for their preservation before being packaged.

Art. 15 Salting

- (1) Salting operations must take place in different premises and sufficiently removed from the premises where the other operations are carried out.
- (2) Salt used in the treatment of fishery products must be clean and stored in such a way as to preclude contamination. It must not be re-used.
- (3) Any container used for salting or brining must be constructed in such a way as to preclude contamination during the salting or brining process.
- (4) Containers or areas used for salting or brining must be cleaned before use.

Art. 16 Cooked Crustacean and Molluscan Shellfish Products

Crustaceans and molluscan shellfish must be cooked as follows:

- (1) any cooking must be followed by rapid cooling. Water used for this purpose must be drinking water or clean seawater. If no other method of preservation is used cooling must continue until the temperature approaching that of melting ice is reached;
- (2) shelling or shucking must be carried out under hygienic conditions avoiding the contamination of the product. Where such operations are done by hand, workers must pay particular attention to the washing of their hands and all working surfaces must be cleaned thoroughly. If machines are used, they must be cleaned at frequent intervals and disinfected after each working day;
- (3) after shelling or shucking cooked products must immediately be frozen or kept chilled at a temperature which will preclude the growth of pathogens, and be stored in appropriate premises; and
- (4) every manufacturer must carry out microbiological checks on his production at regular intervals, complying with the standards lay down in the Annexe No. 2 of these Regulations (Standard Analysis).

Art. 17 Mechanically Recovered Fish Flesh

The mechanical recovery of fish flesh must be carried out under the following conditions:

- (1) mechanical recovery of gutted fish must take place without undue delay after filleting, using raw materials free of guts. Where whole fish are used, they must be gutted and washed beforehand;
- (2) the machinery must be cleaned at frequent intervals at least every two hours;
- (3) after recovery mechanically recovered flesh must be frozen as quickly as possible or incorporated in a product intended for freezing or stabilising treatment.

Art. 18 Conditions Concerning Parasites

- (1) General conditions for the visual inspection:

- (a) during production and before they are released for human consumption; fish and fish products must be subject to a visual inspection for the purpose of detecting and removing any parasites that are visible;
- (b) visual inspection shall be performed on a representative number of samples;
- (c) the person in charge of on-shore plants, shall determine the scale and frequency of the inspections referred to sub-Article (1) (b) hereof by reference to the nature of the fishing products, their geographical origin and their use.

- (2) Visual Inspection of Eviscerated Fish

During production qualified persons on the abdominal cavity, livers and roes intended for human consumption must carry out the visual inspection of eviscerated fish. According to the system of gutting used, the visual inspection must be carried out:

- (a) in the case of manual evisceration, in a continuous manner by the operative 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 ten fish per batch.

(3) Visual inspection of fish fillets

The visual inspection of fish fillets or qualified persons during trimming after filleting must carry out fish spices or slicing must carry out the visual inspection of fish fillets or fish slices. 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 the Competent Authority in accordance with the provisions laid down in Article 10 of the Fishery Product Proclamation. Where candling of fillets is possible from a technical viewpoint, it must be included in the sampling plan.

(4) Measures to take place before release for consumption

(a) Fish or parts of fish which are obviously infested with parasites, and which are removed, must not be placed on the market for human consumption.

(b) The fish and fish products referred to in paragraph (c) hereof which are to be consumed as they are must, in addition, be subjected to freezing at a temperature of not more than -20°C in all parts of the product for not less than 24 hours. Products subjected to this freezing process must be either raw or finished.

(c) Fish and products subject to the condition in paragraph (b) hereof:

(i) fish to be consumed raw or almost raw, e.g. raw herring 'maatje';

(ii) the following species if they are to undergo a cold smoking process at which the internal temperature of the fish is less than 60° c:

- herring;

- mackerel;

- sprat;

- (wild) Atlantic and Pacific salmon;

- other species, if processed in this way (subject to ministerial circular letter).

(iii) marinated and/or salted herring where this process is insufficient to kill the larvae of the nematodes.

(d) Manufacturers must ensure that fish and fish products listed in paragraph (c) hereof or the raw materials for use in their manufacture are subjected to the treatment described in paragraph (b) hereof, prior to their release for consumption.

(e) The fishery products listed in paragraph (c) hereof must, when they are placed on the market, be accompanied by a document from the manufacturer stating the type of process they have undergone.

Chapter 5 : Health control and monitoring of production conditions

Art. 19 General Monitoring

Arrangements for checking and monitoring must be made by the competent authorities in order to establish whether the requirements laid down in these Regulations are complied with.

Such arrangements will include, in particular:

(1) a check on the fishing vessels, on the understanding that such a check may be carried out during the stay in port;

(2) a check on the conditions of landing and first sale;

(3) an inspection at regular intervals of plant to check, in particular:

(a) whether the conditions for approval are still fulfilled;

(b) whether the fishery products are handled correctly;

(c) the cleanliness of the premises, facilities and instruments and staff hygiene;

(d) whether identification marks are put on correctly;

(4) an inspection of the auction markets; and

(5) a check on storage and transport conditions.

Art. 20 Special Checks

All the following tests should be made under the requirements laid down in the Annex No. 3 attached to the present Regulations:

(1) Organoleptic Checks

Each batch of fishery products must be submitted for inspection and inspected by the Competent Authority at the time of landing or before first sale to check whether they are fit for human consumption. This inspection comprises an organoleptic check carried out individually or by sampling.

The organoleptic examination must be repeated after the first sale of fishery products, if it is found that the requirements of these Regulations have not been complied with or when considered necessary. After the first sale, fishery products must at least comply with the minimum freshness requirements of the aforementioned Annex No 3 of these Regulations.

If the organoleptic examination reveals that the fishery products are not fit for human consumption, measures must be taken to withdraw them from the market and denature in such a way that they can not be re-used for human consumption.

If the organoleptic examination reveals any doubt as to the freshness of the fishery products, use may be made of physical, chemical or other checks considered as necessary or microbiological analysis.

(2) Parasite Checks

Before they are released for human consumption, fish and fish products must be subject to a visual inspection, by way of sample, for the purpose of detecting any parasites that are visible.

Fish or parts of fish which are obviously infested with parasites, and which are removed, must not be placed on the market for human consumption.

(3) Chemical Checks

(a) samples must be taken and subjected to laboratory analysis for the control of the following parameters:

- (i) TVB-N (Total Volatile Basic Nitrogen) and TMA-N (Trimethylamine-Nitrogen)
- (ii) Histamine

Nine samples must be taken from each batch. These must fulfil the following requirements:

- The mean value must not exceed 100 ppm
- Two samples may have a value of more than 100 ppm but less than 200 ppm;
- No sample may have a value exceeding 200 ppm.

These limits apply only to fish species of the following families: *scombridae*, *clupeidae*, *engraulidae* and *coryphaenidae*. However fish belonging to these families which have undergone enzyme-ripening treatment in brine may have higher histamine levels but not more than twice the above values.

Examinations must be carried out in accordance with reliable, scientifically recognised methods, such as "high performance liquid chromatography" (HPLC).

(b) Contaminants present in the aquatic environment

Without prejudice to the laws to be proclaimed concerning water protection and management, and in particular those concerning pollution of the aquatic environment, fishery products must not contain in their edible parts contaminants present in the aquatic environment such as heavy metals and Organochlorinated substances at such a level that the calculated dietary intake exceeds the acceptable daily or weekly intake for humans.

A monitoring system must be established by the Competent Authority to check the level of contamination of fishery products

(c) Analysis methods, sampling plans and maximum limits for monitoring mercury in fishery products:

(i) the analysis method to be used in determining the total mercury content is the Atomic Absorption Spectrometry (AAS); and

(ii) the mean total mercury content, as determined by the analysis referred to in paragraph (i) hereof of the edible parts of the fishery products must not exceed 0.5ppm of fresh products (0.5 mg/kg of fresh weight). This average limit is, however, increased to 1 ppm of fresh products (1 mg/kg of fresh weight) for the edible parts of the following species:

- Sharks (all species);
- Tuna (*Thunnus* spp.);
- Little tuna (*Euthynnus* spp.);

- Bonito (*Sarda spp.*);
- Swordfish (*Xiphias gladius*);
- Sailfish (*Istiophorus platypterus*);
- Marlin (*Makaira spp.*); and
- Rays (*Raja spp.*).

(iii) sampling plans shall be laid down for fresh and frozen fishery products by the Competent Authority. These shall take into account, on the one hand, of the results obtained from national checks and, on the other hand, of the following factors:

A-Product type:

- (a) species listed in paragraph (ii) hereof;
- (b) other species.

B-The minimum number of samples to be taken per lot for each product category shall be:

-category (a) : 10 samples taken from 10 different individuals;

-category (b) : 5 five samples taken from 5 different individuals.

The analysis shall be carried out on the finely homogenised mixture of the samples so as to obtain the mean value of the mercury content.

In particular, in the case of fish of the species listed in paragraph (ii) hereof which are of various size, the sample taken must represent the size composition.

The sampling plans referring to in paragraph (iii) hereof and subsequent modification thereof shall be notified to the Inspection Service.

(4) Microbiological Analysis

Microbiological criteria, including sampling plans and methods of analysis, shall be laid down to protect public health (refer to Annex No 2 of these Regulations).

Chapter 6 : Packaging

Art. 21 Conditions for Packaging and Packing Materials

- (1) Packaging must be carried out under satisfactory conditions of hygiene, to preclude contamination of the fishery products.
- (2) packaging materials and products liable to enter into contact with fishery products must comply with all the rules of hygiene and in particular:
 - they must not be such as to impair the organoleptic characteristics of the fishery products;
 - they must not be capable of transmitting to the fishery products substances harmful to human health; and
 - they must be strong enough to protect the fishery products adequately.
- 3) With the exception of certain containers made of impervious, smooth and corrosion-resistant materials which are easy to clean and disinfect, which may be re-used after cleaning and disinfecting, packaging materials may not be re-used. Packaging materials used for fresh products held under ice must provide adequate drainage for melt water.
- 4) Unused packaging materials must be stored in premises away from the production area and protected from dust and contamination.

Chapter 7: Identification Marks

Art. 22 Traceability of the Finished Product

It must be possible to trace for inspection purposes the plant of dispatch of consignments of fishery products, by means of labelling and by the accompanying documents. For that purpose, the following information must appear on the packaging or, in the case of non-packaged products in the accompanying documents:

- (1) **country of dispatch, printed in Roman letters full capacity at least 20 mm high (i.e. ERITREA)**
- (2) **identification of the establishment (plant, auction or landing) by its official approval.**
 - scientific name of product and its trade name;
 - date of freezing;
 - presentation;

- freshness and size categories (if needed);
- net weight in kilograms of products in the package;
- date of grading and date of dispatch; and
- name and address of consignor.

All the letters and figures must be fully legible and grouped together on the packaging in a place where they are visible from the outside without any need to open the said packaging.

Chapter 8 : Storage and Transport

Art. 23 Storage and Transport Conditions

- (1) Fishery products must during storage and transport, be kept at the temperatures laid down in these Regulations, and, in particular:
 - fresh or thawed fishery products and cooked and chilled crustacean and molluscan shellfish products must be kept at the temperature of melting ice;
 - frozen fishery products must be kept at an even temperature of -18°C or less in parts of the product, allowing for the possibility of brief upward fluctuations of not more than 3°C, during transport; and
 - processed products must be kept at the temperature specified by the manufacturer.
- (2) Fishery products may not be stored or transported with other products, which may contaminate them or affect their hygiene, unless they are packed in such a way as to provide satisfactory protection.
- (3) Vehicles used for the transport of fishery products must be constructed and equipped in such a way that the temperature laid down in these Regulations can be maintained throughout the period of transport. If ice is used to chill the products, adequate drainage must be provided in order to ensure that water from melted ice does not stay in contact with the products. The inside surfaces of the means of transport must be finished in such a way that they do not adversely affect the fishery products. They must be easy and smooth to clean and disinfect.
- (4) Means of transport used for fishery products may not be used for transporting other products likely to impair or contaminate fishery products, except where the fishery products can be guaranteed uncontaminated as a result of such transport being thoroughly cleaned and disinfected.
- (5) Fishery products must not be transported in a vehicle or container which is not clean or which should have been disinfected.
- (6) The transport condition of fishery products to be placed on the market alive must not adversely affect the products.

PART III

QUALITY CONTROL AND SAFETY ASSURANCE

Art. 24 Quality Control and Safety Assurance

- (1) Whereas quality is made and not inspected, a quality control and safety assurance system is put in place respecting this principle.
- (2) (a) A quality control system is installed in each plant for preparation and processing of fishery products. The quality control must cover the following practices:
 - good plant practices;
 - good manufacturing practices;
 - good raw materials practices;
 - good cleaning and disinfecting practices;
 - good personal hygiene practices;
 - good waste disposal practices;
 - good pest-control practices;
 - good storage practices; and
 - good transport practices.

Each processor should have a written quality control and safety assurance manual, in which these good practices mentioned under (a) herein are described and that it is specific to each location where fish and fishery products are produced.

(b) Each chapter of the manual covering specific good practices mentioned in under (a) above has the following structure:

Step 1 : Quality policy

= appointments with regards to the trend of the organization;

Step 2 : Authority and responsibility concerning the different areas

= appointments with regards to the design of the organizations;

Step 3 : Procedures

= appointments with regards to the control of interfaces in the organizations to favorise a perfect coordination between sections;

Step 4 : Process control

= Appointments with regards to process control to obtain a perfect coordination within sectors:

1/ Flow chart;

2/ Control chart;

3/ Instruction;

4/ Specifications;

5/ Registrations; and

6/ Training.

(3) (a) A safety assurance program (HACCP - Hazard Analysis Critical Control Points) has to be implemented if the hazard analysis reveals that processors have food safety hazards that they might control.

(b) The way to implement HACCP system is laid down in the Fishery Product HACCP Regulations Legal Notice No 41/1998.

PART IV

COMPETENT AUTHORITY

Art. 25 Designation of the Competent Authority

In application of the Article 4 of the Fishery Product Proclamation No 105/1998, the Ministry of Fisheries delegates to the Fisheries Resources Management Department, and within this Department to the Fish Inspection & Quality Control Division the power to enforce the present regulations.

Art. 26 Organigram of the Ministry of Fisheries (refer to Annex NO 4)

Art. 27 Responsibilities and Authorities:

Fish Inspection and Quality Control Division

The Division shall:

(a) be responsible for good monitoring and regular control at all levels of the sector;

(b) be responsible for arranging and implementation of training programmes and awareness creation programmes at national level;

(c) implement training sessions for professionals involved in harvesting, processing, and marketing of sea food products;

(d) be responsible for implementation of information services to disseminate information to exporters on standards, technical regulations and certification requirements in target markets including eco-labelling. (HACCP principles, ISO 9002 etc.);

(e) have advisory role in the local market and give:

(i) advice to fishermen for the preservation of fish onboard fishing boats;

(ii) advice to local fish traders for sanitary conditions for curing and marketing activities;

(f) observe the local fish market and identify training needs for professionals of the fish market sector in order to improve the quality;

- (g) have legal powers to enforce technical regulations, national standards, sanitary regulations to all sectors involved;
- (h) collaborate with authorities in importing countries to create confidence in Eritrean products and upgrade the quality control system to minimise the need for extensive sampling;
- (i) be responsible for issuing certificates and maintaining other technical information relevant to certification;
- (j) have overall supervision of the quality control units and sub-units; and
- (k) be responsible to other duties and functions assigned by the Head of the Department.

(1) Quality Development Unit

The Quality Development Unit shall:

- (a) develop data base requirements for quality control activities;
- (b) develop national standards and sanitary regulations in relation to HACCP principle and other codex;
- (c) establish necessary analysis and processing methodologies adapted to various marine products which can be sold to the international markets; and
- (d) organise and set up of quality control programmes for various sectors (i.e. from harvest to market).

The Standards Sub Unit shall:

- (a) establish, develop and improve national standards, sanitary regulations and technical regulations;
- (b) establish quality control programmes and evaluate quality control programmes set up by processors;
- (c) give information on changes of standard regulations from importing countries; and
- (d) provide training to fish inspectors, quality controllers, processors, traders on implementation of HACCP principles.

The Laboratories Service Sub Unit shall:

- (a) establish the testing procedures and operations;
- (b) conduct testing and perform analysis on:
 - microbiological level;
 - chemical level;
 - toxicological level;
 - contamination;
 - food additives; and
 - water quality;
- (c) collaborate with other related laboratory services; and
- (d) keep records on analytical results and give recommendations.

(2) Quality Control Unit

The Quality Control Unit shall:

- (a) ensure quality control programmes are implemented and collaborate with international agencies and import authorities in inspection works;
- (b) undertake administrative training programmes for fish inspectors and quality controllers;
- (c) ensure fish inspection, plant inspection and preshipment inspection programmes are implemented;
- (d) keep data of mis-conduct and misbehaviour committed by the processors and mete out appropriate punishment needed; and
- (e) give recommendation on issues of certification.

The Quality Control and Fish Inspection Sub Unit shall:

- (a) monitor factors affecting environment, hygiene, handling at landing sites and harvest areas and product quality;
- (b) conduct inspection of fish handling facilities and fish at landing sites/harvest areas and product;
- (c) conduct inspection on hygiene, sanitation and product quality; and
- (d) give recommendations on any closure of fish shops or landing site.

The Plant Inspection and Preshipment Inspection Sub Unit shall:

- (a) implement safety inspection of export product;
- (b) carry out plant inspection based on the national legislation;
- (c) ensure that the information on samples is relevant to the information stated by the exporter;
- (d) keep and maintain sampling records; and

(e) conduct inspection of packing materials and storage of export products.

PART V

APPROVAL

Art. 28 Approval of Processing Plant

In application of Art. 10 of the Fishery Product Proclamation No 105/1998, the following approval procedure for plants is installed:

- (1) Before the owner starts to build or rebuild a plant, a registered letter has to be sent to the Inspection Service to inform the head of the inspection service about the
 - activities carried out in the plant; and
 - lay out of the plant and the product flow established in a product flow chart and on the ground plan.
- (2) After receiving this letter the Head of the Inspection Service will send, within 14 days an invitation to the owner to discuss the demand.
- (3) Once the Head of the Inspection Service agrees with the proposition of the owner, the Head of the Inspection Service will approve the plan. He will sign the plan for approval and will legalise his signature by an official stamp of the Inspection Service.
- (4) After finishing the building and the installation of the plant, another registered letter has to be sent by the owner to the Inspection Service for an audit to the plant. After the audit, the Head of the Inspection Service will send a letter within 14 days to the owner of the plant. This letter will confirm the approval of the plant or will give recommendations to adapt the equipment or the installations.
- (5) After approval, the plant receives its plant-number.

PART VI IMPORTATION

Art. 29 Specific Import Conditions

Specific import conditions may be laid down to protect public health of the inhabitants in Eritrea without prejudice to the possibility that imported products may be exported.

PART VII EXPORTATION

Art. 30 Exported Products

Exported products must comply with the requirements laid down in these Regulations.

PART VIII FINAL PROVISIONS

Art. 31 Entry into Force

These Regulations shall enter into force as of the date of their publication in the Gazette of Eritrean Laws.

Done at Asmara, this 25th day of May, 1998
Petros Solomon,
Minister of Fisheries.

ANNEX NO 1
HEALTH CERTIFICATE

1. General Provisions

This annex lays down the description of the Health Certificate as referred in Article 13 of the Fishery Product Proclamation No 105/1998.

2. Health certificate

- (1) Consignment of fishery products exported from the Territory of the State of Eritrea shall come from an agreed establishment inspected by the competent authority and shall be accompanied by a numbered original health certificate attesting that the health conditions of production, handling, processing, packaging and identification of the products are complying with the Fishery Product Regulation.
- (2) The model of this certificate is laid down in No 3 of the present annex
- (3) The health certificate shall consist of a single sheet of paper and shall be drawn up in English, and, if necessary, into one of the languages of the country of destination.
- (4) The health certificate shall bear the name, designation and signature of the official inspector as well as the official seal of the competent authority, all of which shall be in a colour different from that of the other printings on the certificate.

3. Model of health certificate

HEALTH CERTIFICATE
For fishery products intended for export to the European Community

Country of dispatch : STATE of ERITREA
Competent authority¹ : MINISTRY of FISHERIES
Inspection Body : FISH INSPECTION and QUALITY CONTROL DIVISION
Reference number of health certificate MoF/FIQCD/ /97

I. Details identifying the fishery products

Description:

- Species (scientific name) :
- State² or type of processing:
- Type of packaging :
- Number of packages :,
- Net weight :
- Temperature required during storage and transport :

II. Provenance of the fishery products

Address(es) and number(s) of preparation or processing establishment(s) authorized for export by the competent authority :

.....
.....

III. Destination of the fishery products

The fishery products are to be dispatched

from :

(place of dispatch)

to :

(country and place of destination)

by the following means of transport:

Name and address of the consignor :

¹ Name and address

² Live intended for direct human consumption, prepared, processed, etc

.....
Name of the consignee and address at place of destination:
.....

IV. Health Attestation

The undersigned official inspector hereby certifies that :

- (1) The fishery products described above have been handled, prepared or processed, identified, stored and transported under conditions at least equivalent to those laid down in council directive 91/493 EEC of 22 July 1991 laying down the health conditions for the production and placing of the market of fishery products.
- (2) In addition, in the case of frozen or processed bivalve molluscs, the latter have been gathered in production area subject to conditions at least equivalent to those laid down in council directive 91/492 EEC of 15 July 1991 laying down the health conditions for the production and placing of the market of live bivalve molluscs.

Issued at.....

on.....
(date)

.....
(Signature of the official inspector)

(Name in capitals, capacity and qualification)

ANNEX NO 2

STANDARD ANALYSIS

MICROBIOLOGICAL RECOMMENDED CRITERIA

1. General provisions

The following annex set up the sampling, interpretation of standards, and recommended value to be applied in microbiological analysis of fishery products under Article 20 of the Fishery Product Regulations Legal Notice No 40/1998:

2. Sampling for laboratory and taking methodology

(1) Sampling for laboratory

The size of a sample for laboratory for a product of the same nature shall be, if possible, a minimum of five units, obtaining five results.

In order to conduct complete analyses, the laboratory shall receive around 500 grams of the product, that is five sample of 100 grams each.

(2) Taking methodology

The taking of sample for the preparation of the analysis should be made in the deep area of the flesh for fish and in the superficial zones for the transformed product such as filets. In case of microbiological analysis following food intoxication, sampling should be made on both superficial and deep areas of the product

3. Result Interpretation

(1) Three Class Plan

Principle

This plan is so called because the results of the interpreted exams on this base allow to define three classes of contamination :

the one below or equal to the m criteria,

the one comprised between the m criteria and the threshold M ,

the one above the threshold M .

Where :

m is the criteria fixed under the present annex. All results equal or below $3m$ are to be considered as satisfactory,

M is the limit threshold for acceptability, above which the results are to be considered as not acceptable.

The value for M are set at :

$$M = 10 m$$

n is the number of units of the sampling,

c is the number of units of the sampling giving value comprised between $3m$ and M .

Particle use for a plan: $n=5$ $c=2$ or $c/n=2/5$

✓ The quality of the batch is considered to be :

a) satisfactory where all the observed values are $\leq 3 m$; or

b) acceptable where two or less values observed are between $3 m$ and M (c/n is $\leq 2/5$ or $c \leq 2$).

✓ The quality of the batch is considered to be not acceptable:

a) in all cases where the values are above M .

b) where c/n is greater than $2/5$ ($c > 2$)

(2) Two Class Plan

This plan is so called because the results of the exams, interpreted on this base can only determine two contamination classes :

"Absence in.." : the result is considered satisfactory; or

"Presence in ..." : the result is considered not satisfactory. The product shall be retrieved from commercialisation.

(3) Particularities of frozen products

Freezing of sampling can induce a reduction more or less important according to the product of the number of bacteria used as test for freshness assessment as defined in the present.

Freezing a sample of a chilled product might induce contentious (chilled sample judged not acceptable, while a sample from the same batch, is judged acceptable after being frozen.). To avoid such disparity, sample must be handled as follow, when they are to be frozen and hold as it before their analyses :

- a) Freezing should be as early as possible in order to reach minus 18°C as fast as possible.
- b) Storage and transportation should be made at -18°C. Storage should not exceed one month.
- c) Thawing should be made under ambient atmosphere at a temperature of 20°C in the shortest possible time (less than 3 hours) until the consistence of the product allows the necessary taking for analysis (Temperature around 0°C).

(4) Analytic tolerance

It has to be kept in mind that the value of the microbiological counting methodology is not absolute, whatever cultured media are used. It is usually admitted that analytic variability can reach 1/2 log. with solid media and 1 log. with liquid media.

4. Microbiological requirements

To be recognised as suitable for human consumption, fishery products shall satisfy the following microbiological criteria, and checked according to the standard procedures. In addition, the product should be free of micro-organisms or toxins dangerous for public health.

5. Application field

The present microbiological criteria are to be used by official and private laboratories chosen by the plant managers when hygienic conditions under which are realised the reception, the process, the packaging, the storage and the transport of fishery products are to undergo compulsory controls.

Art. 6 Microbiological criteria for fishery products (m value)

Designation	Indicator organism		Organisms indicating poor hygien								Pathgens
	Micro-organisms Aerobic (per gram)		Faecal Coliformes (per gram)		E. coli (per gram)		Staphylococcus aureus 46°C/g		Anaerobic sulfitoreduct ors 46°C (per gram)		Salmonella Shigella V.cholera
	m	c/n	m	c/n	m	C/n	m	c/n	m	c/n	Abs in 25 gr
Fish fillets (fresh and frozen)	10 ⁵	2/5	10	3/5	10	3/5	100	3/5	10	3/5	Abs in 25 gr
Crustaceans raw	10 ⁵	2/5	10	3/5	10	3/5	100	3/5	10	3/5	Abs in 25 gr
Crustaceans cooked whole	10 ⁴	2/5	10	2/5	10	1/5	100	2/5	10	1/5	Abs in 25 gr
Crustaceans cooked shelled	5.10 ⁴	2/5	10	3/5	10	1/5	100	3/5	10	2/5	Abs in 25 gr
Crabmeat	10 ⁵	3/5	10	3/5	10	1/5	100	3/5	10	1/5	Abs in 25 gr

Annex No 3
STANDARD ANALYSIS
ORGANOLEPTIC CHECK

General Provisions

- (1) This annex lays down common marketing standards as referred to in Article 20 of the Fishery Product Regulations Legal Notice No 40/1998.
- (2) The criteria for fish that is unfit for human consumption are set out in the "not admitted" category in tables of this annex.

2. Freshness Categories

- (1) Fishery products may be marketed only if they meet the requirements of this standard for the freshness categories.
- (2) Common marketing standards are laid down for the following products:
 - (a) Saltwater fish (all bony species);
 - (b) Selachii (cartilageneous fish);
 - (c) Cephalopods (cuttlefish, squids, octopus.); and
 - (d) Crustaceans (shrimps, lobsters, crabs..)
- (3) The freshness category of each lot shall be determined on the basis of the freshness of the product and a number of additional requirements.
- (4) Freshness shall be defined by reference to the special ratings for different types of products set out in the following tables.
- (5) On the basis of ratings referred to in (3) herein, products as specified in (2) herein shall be classified by lot in one of the following freshness categories:
 - (a) Extra, A, B in the case of fish, selachii, cephalopods;
 - (b) Extra, or A in the case of shrimps.

3. Lot Categories

Each lot must contain products of the same degree of freshness. A small lot need not, however, be of uniform freshness; if it is not, the lot shall be placed in the lowest freshness category represented therein.

4. Product categories

- (1) Fish, selachii, and cephalopods placed by lot in freshness category Extra must be free of pressure marks, injuries, blemishes and bad discoloration.
- (2) Fish, selachii, and cephalopods placed by lot in freshness category A must be free of blemishes and bad discoloration. A very small proportion with slight pressure marks and superficial injuries shall be tolerated.
- (3) For fish, selachii, and cephalopods placed by lot in freshness category B, a small proportion with more serious pressure marks and superficial injuries shall be tolerated. Fish must be free of blemishes and bad discoloration.

When products are being classified by freshness category, without prejudice to the health rules applicable, the presence of visible parasites and their possible effect on the quality of the product shall also be taken into consideration, allowance being made for the type of product and its presentation.

5. Packaging Marks

Products as referred to in 2 (a) herein may be marketed only if they are presented in packages according to Article 22 of the Fishery Product Regulations Legal Notice No 40/1998.

6. Freshness Rating Tables

(1) White Bony Fish

Criteria	Freshness Category			
	Extra	A	B	Not permitted ¹
Skin	Bright, iridescent pigment (save for redfish) or opalescent. No discoloration	Pigmentation bright but not lustrous	Pigmentation in the process of becoming discoloured and dull	Dull pigmentation ²
Skin mucus	Aqueous, transparent	Slightly cloudy	Milky	Yellowish grey, opaque
Eye	Convex (bulging); black, bright pupil, transparent cornea	Convex and slightly sunken, black dull pupil, slightly opalescent cornea.	Flat, opalescent cornea, opaque pupil	Concave in the center, grey pupil, milky cornea ²
Gills	Bright colour, no mucus	Less coloured, transparent mucus	Brown/grey, becoming discoloured, thick opaque mucus	Yellowish, milky mucus ²
Peritoneum (gutted fish)	Smooth, bright, difficult to detach from flesh	Slightly dull, can be detached from flesh	Speckled, comes away easily from flesh	Does not stick ²
Smell of gills and abdominal cavity	Seaweedy	No smell of seaweed	Fermented, slightly sour	Sour ²
Flesh	Firm and elastic, smooth surface ³	Less elastic	Slightly soft (flaccid), less elastic, waxy (velvety) and dull surface	Soft (flaccid) ² , scales easily detached from skin, surface rather wrinkled

(2) Bluefish

Albacore or Longfinned tuna, Bigeye tuna, Mackerel.

Criteria	Freshness Category			
	Extra	A	B	Not permitted ⁴
Skin	Bright pigmentation, bright shining iridescent colours	Loss of lustre and shine, duller colours, less	Dull, lustreless, insipid colours, skin creased when fish curved	Very dull pigmentation ⁵

¹ Unfit for human consumption.

² Or in a more advanced state of decay.

³ Fresh fish prior to the onset of rigor mortis will not be firm and elastic but will still be graded in category Extra.

⁴ Unfit for human consumption.

⁵ Or in a more advanced state of decay.

	Clear distinction between dorsal and central surfaces	difference between surface		
Skin mucus	Aqueous, transparent	Slightly cloudy	Milky	Yellowish grey, opaque ⁵
Consistency of flesh	Very firm, rigid	Fairly rigid, firm	Slightly soft	Soft (Flaccid) 5
Gills covers	Silvery	Silvery, slightly red or brown	Brownish and extensive seepage of blood from vessels	Yellowish 5
Eye	Convex (bulging); blue black, bright pupil, transparent "eyelid"	Convex and slightly sunken, dark pupil, slightly opalescent cornea.	Flat, blurred pupil, blood seepage around the eye	Concave in the center, grey pupil, milky cornea ⁵
Smell of gills	Fresh seaweedy, pungent, iodine	No smell of seaweed, neutral smell	Slightly sulphureous fatty smell, rancid bacon cuttings, or rotten fruit	Rotten sour 5

(3) Selachii

Criteria	Freshness Category			
	Extra	A	B	Not permitted ¹
Eye	Convex, very and iridescent, small pupils	Convex and slightly sunken, loss of brightness and iridescent, oval pupils	Flat, dull	Concave yellowish ²
Appearance	In rigor mortis or partially in rigor, small quantity of clear mucus present on skin	Beyond rigor stage, no mucus on skin and especially in mouth and gill openings	Some mucus in mouth and on gill openings, slightly flattened jaw	Large quantity of mucus in mouth and gill openings ²
Smell	Seaweed smell	No smell or very slight stale but not an ammonia smell	Slight ammonia, sour	Pungent ammonia smell ²

¹ Unfit for human consumption

² Or in a more advanced state of decay.

(4) Cephalopods

Criteria	Freshness Category		
	Extra	A	B
Skin	Bright pigmentation, skin sticks to flesh	Dull pigmentation, skin sticks to flesh	Discoloured, easily detached from flesh
Flesh	Very firm, pearly white	Firm, Chalky white	Slightly soft, pinkie white or slightly yellowish
Tentacles	Resistant to removal	Resistant to removal	More easily removed
Smell	Fresh, seaweed	Slightly or no smell	Ink smell

5. Crustaceans

(a) Shrimps

Criteria	Freshness Category	
	Extra	A
Minimum requirements	Surface of the shell : moist and shiny, Flesh must be free from any foreign odour, shrimp must be free from sand, mucus or other foreign matter. Cephalothorax must stay attached to the body	The same as for extra
Shell	No melanosis, no red legs, Hepatopancreas intact	Red legs, hepatopancreas opened
Smell	Fresh seaweed, Slightly sweet smell	No smell of seaweed, acidulous

(b) Lobster

Criteria	Freshness Category		
	Extra	A	B
Shell	Bright pigmentation, no discoloration, Cephalothorax holds on the body	Dull pigmentation	Discoloured, Cephalothorax easily detached from tail
Flesh	Translucide	No longer translucent but not discoloured	Opaque and dull in appearance
Eye and gills	Shiny black eyes, pink gills	Eyes dull and grey/black, gills greyish	Gill dark grey
Smell	Characteristic mild shellfish smell	Loss of characteristic shell fish smell. No ammonia smell	Slightly sour