



Sultanate of Oman

Ministry of Agriculture & Fisheries Wealth

Fishery Quality Control Regulation

12 / 2009



**Department of
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Ministry of Agriculture & Fisheries Wealth

Fishery Quality Control Regulation 12/2009

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HM Sultan Qaboos Bin Said
Sultan of Oman



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Ministerial Decision No.12/2009

Issuing Fishery Quality Control Regulation

- Based upon the marine fishing and protection of living aquatic resources law issued by the royal decree no.53/81 And
- The veterinary quarantine law issued by the royal decree no.45/2004 And
- The executive regulation of the marine fishing and protection of living aquatic resources law issued by the ministerial decision no.4/94 And
- The ministerial decision no.121/98 Pertaining to the conditions specifications of equipped commercial fishing vessels for preserving and handling fish and fish products and
- The ministerial decision no.136/98 Issuing quality control regulation for omani fishery export and
- The decision of the minister of commerce and industry no. 74/2000 Regarding demonstrative data and food safety and
- The ministerial decision no.7/2001 Regarding control measures for manufacturing, selling, purchasing and importing fishing boats and vessels and
- The ministerial decision no.29/2004 Issuing the regulation and conditions and specifications of the living aquatic resources transportation and marketing vehicles and
- The decisions of the minister of commerce and industry with regard to omani and gulf standard specifications pertaining to food safety, and
- As per the public interest requirement, it is decreed as follows:

Article (1) The provisions of the attached regulation shall be applied with regard to fishery quality control.

Article (2) The above mentioned ministerial decision no. 136/98 And all that violate or contradict with the rules of the attached regulation shall be deemed cancelled.

Article (3) The institutions, companies and individuals operating in the field of fish and fishery products preparation, handling, processing, marketing, transportation, exporting and importing shall adapt their situations according to the rules of this regulation within a period of two years from the date it becomes effective.

Article (4) This decision shall be published in the official gazette and shall have effect as from the succeeding day to its publication date.

Mohamed bin Ali Al Qatabi
Minister of Fisheries Wealth

Issued on 18 safar 1430 h

Coinciding with: 14 february 2009

Chapter One

Definitions

Article (1)

In application of the provisions of this regulation, the following words and expressions shall have the corresponding meaning unless the context otherwise requires.

The Ministry:	Ministry of Fisheries Wealth.
The competent Authority:	The Directorate General of Fisheries Research
Fish:	All sea or freshwater living aquatic resources including fish eggs and excluding the mammals, turtles and frogs .
Fishery Products:	Fish and fish parts prepared or processed for human consumption
Chilled Fish:	Fish chilled by using ice or cool air or saline water to a temperature approaching that of melting ice between zero to 4°C
Frozen Fish:	Fish the central body of which reaches a temperature of – 18° C or lower in the thickest portion of the flesh.
Fresh Fish:	Fish which has not undergone any treatment for preservation purpose except chilling.
Prepared fish:	Fish exposed to the cleaning process or anatomy by gutting or heading or cutting the parts or mincing.
Processed fish:	Fish which undergone a chemical or physical process such as smoking, salting, dehydrating or marinating whether chilled or frozen
Suitable Fish:	Fish free of any bio or chemical or physical or radio hazardous.
Packing:	Placement of fish products in insulation substance which is not harmful to the consumer safety for preventing their contact with the packing material.
Labelling Card:	The data to be placed on the production package after processing as indicated in article 41 of this regulation.



Sample:	The quantity or number and weight of fish and fishery products which is taken from the batch for inspection in the laboratory and determination of compliance with the permitted levels indicated in the attached annexes.
Sample unit:	Single fish or whole package of the packed fish.
Batch:	A homogeneous limited quantity of fishery product of the same fish species that may be subjected to the same treatment which shall be caught from the same fishing ground.
Consignment:	Quantity of fish and fishery products exported or imported at one time under special contract or same bill of lading and consisting of one batch or more.
Mean of transport:	Vessels, boats, vehicles, airplanes, sea, road, air transport means and other transport means.
Pests:	The diseases which are transmitted through parasites, insects, rodents and birds.
Standard specifications:	Any standard specification endorsed by the Ministry of commerce and industry related to fish and fishery products.
Aquaculture products:	Fishery bred under controlled areas for the purpose of supplying them and their parts to the markets as food stuff.
Preservation:	Adopted methods for the purpose of stopping or slowing down the spoilage factors arising from bioactivity and chemical reactions during the preservation period.
Establishment:	Includes individuals – institutions companies and premises where fish and fishery products are prepared, processed, chilled, frozen, packed or stored.
Marketing of fishery products:	Transportation and displaying of fishery products in the markets for sale or distribution which shall be subjected to health inspection in accordance with the law and this regulation excluding retail sales and direct transport to the local markets in terms of small quantities by fishermen or retailers or consumers.
Exports:	The shipping or transport of fishery products to other countries.



- Clean sea water:** Seawater or water which is free from microbiological contamination and objectionable substances or toxic planktons or with such quantities that may not adversely affect the quality of fishery products which shall be used as per the conditions of this regulation.
- Potable water:** Fresh or desalination water which meet the Omani standard specification with regard to potable water.
- Factory vessel:** Any vessel on board which the operations of processing, preparation, mincing, shelling, packaging or cutting of fish and fishery products are conducted.
- License:** The license issued by the competent authority in the Ministry to the establishment operating in the field of fish and fishery products arranging, preparations, handling or marketing, fish and fishery products transportation vehicles.
- Quality control certificate:** Certificate issued by the competent authority to the establishment adhered to comply with the provisions of this regulation and which qualifies it to export or import and may be granted to the fishing vessels and fish processing plants, fish and fishery products transportation means.
- Inspection:** Entry and inspection of the establishment and the processing steps and final products, the related documents to ensure their compliance with the regulation requirements and the preparation of the necessary reports and the inspection may occur unexpectedly or periodically.
- Audit:** Periodical assessment of the establishment, equipment, production operations and the related documents for determining the extent of their compliance with the pertaining plans and the achievement of the required results according to the prevailing codes and regulations.
- Production batch number:** The symbols and numbers placed on the batches which determine the type, place and date of catch of the product to enable the tracing of its origin according to the attached Annex No. ʏ



Additives:	Any substance to be added for the preservation of the fishery products or improvement of their commercial appearance in accordance with the indicated limits in the Omani standard specifications.
Transparency:	Publicity of the decisions, procedures and informations related to the production, transportation, preparation, export, import of fish and fishery products.
Traceability:	Ability to know the origin of the fish and fishery products, their methods and stages of preparation through the records and labelling card
Inspector:	Authorized official to carry out legal apprehension for the enforcement of the rules of this regulation.
Risks:	Possibility of the availability of adverse impact as a result of the consumption of fishery products on human health which includes biological or chemical or physical risks.
Hazard Analysis and Critical Control Point (HACCP):	A system used for analyzing the contamination sources and risks arising from any biological, chemical or physical factors which may harm food safety and the assessment of such risks with the purpose to control them.
Health Certificate:	Certificate issued by the supervising veterinary of the veterinary quarantines attached to the Directorate General of Animal Wealth in the Ministry of Agriculture which is issued to the exported animal consignments according to the basic principles of office international DES Epizooties (OIE).
Health certificate application form:	The form issued by the competent authority which includes the details of the exported fish and fishery products consignments.

Chapter two

General Rules

- Article (2)** The objective of this regulation is to achieve the safety and quality of fish and fishery products to protect the consumer health.
- Article (3)** The provisions of this regulation shall apply to all fish and fishery products whether prepared for local consumption, exported or imported.
- Article (4)** The enforcement of the provisions of this regulation shall be structured on scientific bases and declared results and according to transparent procedures unless in the cases of temporary emergencies which are assessed by the competent authority.
- Article (5)** Each establishment operating in the field of fish and fishery products preparation, processing, handling, marketing or transportation shall be registered with the competent authority and obtain the required license.
- Article (6)**
1. Any establishment operating in the field of fish and fishery products export or import shall be registered with the competent authority and obtain quality control certificate.
 2. For obtaining quality control certificate the following conditions shall be met:
 - (a) Obtainment of the required license from the competent authority in the Ministry and the other necessary licenses from the other authorities.
 - (b) The establishment, equipment and transportation means shall be in conformity with the specifications and conditions stipulated in this regulation.
 - (c) Preparation and application of the Hazard Analysis and Critical Control Point (HACCP) system approved by the competent authority in all production and processing stages in accordance with the guidelines indicated in Annex No: (8) or any other system determined by the competent authority.
 - (d) The Preparation, Processing, Packing, Wrapping of fish and fishery products shall be in consistency with the applied methods and equipment which protect their safety and eligibility for consumer health.
 - (e) The chilled



- and frozen fish and fishery products shall be preserved under the specified temperature in this regulation.
- (f) Particular attention shall be exerted to the personal hygiene and health of the establishment employees.
- (g) Payment of the imposed fees.

Article (7) Registration of Establishments for QCC Certificates

- (1) Establishment shall adhere to register itself and submit an application for obtaining quality control certificate according to the designated forms for this purpose.
- (2) The competent authority shall visit the establishment site and inspect it to ensure its compliance with the requirements of this regulation. If the establishment satisfies the basic infrastructure and equipment requirements, it may be granted conditional approval for three months for the completion of other requirements and it may be extended for a similar period. The final approval shall be granted only after field visit to be carried out during the conditional approval period and after ensuring the completion of the entire requirements and the commencement of production including the preparation and application of the Hazard Analysis and Critical Control Point (HACCP) system or any other system determined by the competent authority.



Article (8) The exported fish and fishery products shall satisfy conditions in the stipulated following agreements and systems:

- (1) International or bilateral agreements in which the sultanate is a party.
- (2) The import system of the state to which the products are exported or its unequivocal consent to such export.

Article (9) Mandatory power of competent authority:

- (1) Approval and issuance of quality control certificate to the companies and establishments and the Fishing and Processing Vessels, fish and fishery products and the transportation means which meet the provisions of this regulation while mentioning the activities practiced by the establishment in accordance with the endorsed procedures, forms and collection of the imposed fees. The quality control certificate shall be renewed annually and amended in case a new activity is added.
- (2) Preparation of a list indicating the names of the approved establishments which obtained quality control certificate and allocation of designated numbers for them and introduction of any required amendment to the list.
- (3) Monitoring and inspection of the establishments on periodical bases in order to ensure their compliance with the provisions of this regulation. If it is found out through the inspection and monitoring that the establishment is not complying with these provisions, the competent authorities shall take the necessary required actions.
- (4) Visiting and inspection of the establishment to ensure the safety and quality of the Fish and fishery products.
- (5) Determination of the laboratories which will be authorised for analyzing the samples of fish and fishery products, potable water, additives and other analysis.
- (6) Inspection of major landing points, the establishments, fishing



boats, vessels, factory vessels, ice plants, transportation means, the equipment used for the preparation, processing of fish and fishery products to safeguard their compliance with the stipulated conditions in the endorsed regulations and preparation of the reports related to the inspection operations.

- (7) Ensuring the adhere of the establishment to the adaptation of its situation in conformity with the indicated remarks in the inspection reports.
- (8) Preparation of the registration application forms for obtaining quality control certificate and application form for health certificate for intended export consignments.
- (9) Checking the conditions of the fish and fishery products through conducting the required analysis to the respective samples to find out the extent of their conformity with the necessary specifications and conditions.
- (10) Audit of the establishment to ensure the compliance with the provisions of this regulation and preparation of the required reports pertaining the appropriate directives which the establishment shall follow.
- (11) Training and qualifying its employees each according to his area of competence.
- (12) Temporary suspension of the establishment activity in accordance with the stipulated procedures in article (13) of this regulation.
- (13) Recommendation of the extension of suspension of the establishment activity and the withdrawal of the license or the quality control certificate.



Article (10) Mandatory power of the Inspector:

- (1) Entry and inspection of the company, major landing sites, the establishments, the fishing boats, vessels, factory vessels, ice plants, equipment and transportation means used for the preparation and processing of fish and fishery products to ensure their conformity with the indicated conditions in this regulation and the endorsed codes and the preparation of the reports related to the inspection operations and follow up of the corrective procedures.
- (2) Conducting of Sensory Evaluation to the fish and fishery products and to hold in custody the spoilt ones in the establishment premises on its own account and to inform the authorities for taking the necessary action as they may consider appropriate according to the applied regulations.
- (3) Taking the samples of the fish and fishery products the safety of which is doubtful for conducting the required laboratory analysis and informing the establishment with the results of the analysis and the necessary procedures.
- (4) Recommendations to the competent authority with regard to the suspension of the establishment activity or withdrawal of the quality control certificate on temporary bases in the cases where such actions are permitted.

Article (11) Obligations of the establishment:

The establishment which obtains a license shall adhere to the following:

- (1) Hold records which indicate the landing sites and the types and quantities and dates of fish purchase or any other details according to the forms determined by the competent authority.
- (2) Registration of fish and fishery products preparation, processing, operations and the additives.
- (3) Taking samples of the used water in accordance with the Omani standard specification related to the methods of potable and



mineral water inspection and testing (Annex No: 5 Table No: 5.1) in order to conduct microbiology analysis in one of the laboratories to be determined by the competent authority once each six months and once each one year with regard to the chemical analysis. As for the chemical and microbiological analysis of well water samples, they shall be conducted once each three months. The use of such water shall be suspended by a recommendation from the authorities if it is not in conformity with the specifications.

- (4) Taking samples of its production (Annex No: 5 Table No: 5.2) for analysis in one of the laboratories to be determined by the competent authority in accordance with the approved plan by the competent authority.
- (5) Adherence to the use of potable water which is in conformity with the Omani Standard Specification for the treatment of fish and fishery products.
- (6) Keeping the above mentioned records and documents for a period not to be less than two years from the registration date or the date of the documents issuing.
- (7) Notification of the competent authority immediately if any state rejects export consignment from the establishment while indicating the reasons of such rejection.
- (8) Refrain from introducing any amendments or additions to the premises and production lines or any additions to the fish and fishery products without obtaining a written approval from the competent authority.
- (9) Qualifying and training its employees with regard to food safety.
- (10) Cooperation with the competent authority and provision of the required assistance for the enforcement of effective monitoring.
- (11) Enabling the inspector to enter the establishment and inspect the fishery and the related equipment to the production.
- (12) Provision and presentation of the records and documents pertaining to fish and fishery products to the competent officials of the Ministry.



Article (12) The monitoring of the establishment shall include the inspection of the following:

- (1) Design and maintenance of the premises and equipment.
- (2) Goodhygienepracticesbeforeandduringandaftertheoperation.
- (3) Application of the Hazard Analysis and Critical Control Point (HACCP) system or any other system as determined by the competent authority.
- (4) Placement of labelling card on fish and fishery products and packages.

Article (13) The required procedures for suspension of the establishment activity:

First:

Temporary suspension of the establishment activity:

- (1) The establishment shall be granted two weeks grace period for correcting its situation in case of repetition of written remarks regarding its activity.
- (2) In case the establishment fails to carry out the required correction within another week after the first grace period the competent authority shall suspend the establishment activity for a period not exceeding 30 days.
- (3) Iftheestablishment fails to execute the correction during the suspension period and does not respond to the directives issued to it the case shall be forwarded to the Undersecretary of the Ministry for considering the extension of the suspension period to other further 30 days.

Second:

Withdrawal of the license or quality control certificate on temporary basis:

- (1) The Undersecretary of the Ministry may withdraw the



license or the Quality Control Certificate on temporary basis for a period not exceeding 6 Months in case of the repetition of the establishment activity suspension for more than three times during a period of 12 Months, and the Undersecretary may return the license or quality control certificate during the temporary suspension period in accordance with the recommendation of the competent authority.

Third:

Final withdrawal of the License and Quality Control Certificate:

The Minister may withdraw the License or the Quality Control Certificate on final bases in the following cases:

- (1) Elapse of temporary suspension period without the establishment correcting its situation or giving an acceptable justification for that. The Minister may reconsider the withdrawal Decision or extending the period by an application from the issuance of the decision.
- (2) Cancellation of the commercial registration of the establishment or changing of its activity in the fish and fishery products field. The establishment against which the withdrawal decision of license or the Quality Control Certificate is issued may appeal to the Minister within 15 days from the receipt of the decision and the Minister's decision in this regard shall be final.

Article (14)

The attached annexes to this Regulation No: 1, 2, 3, 4, 5, 6, 7, 8 shall be completing and inseparable part of this regulation.

Chapter Three

General conditions, procedures, control measures for the safety, quality control of fish and fishery products

- Article (15)** This chapter provisions shall be applied to the fishery families and products indicate in Annex No: 1 and the imported fishery families and products which are not referred to in this annex in addition to the application of chapter two provisions.
- Article (16) General conditions for the safety and quality control of fish and fishery products are:**
- (1) The levels of the contaminant compounds and elements in fish and fishery products shall not exceed the specified limits in the standard specifications as indicated below:
 - (a) Histamine, total volatile base nitrogen, heavy metals and chemical contaminants as per the limits indicated in Annex No: 2.
 - (b) Microbiological: as per the limits indicated in Annex No: 3.
 - (c) Radiation Residual Substances in food: as per the limits indicated in Annex No: 6a.
 - (d) Pesticides Residue in food: as per the limits indicated in Annex No: 6b.
 - (e) Veterinary Drugs Residue in food: as per the levels indicated in Annexes No: 2 and 6b.
 - (2) The permitted additives to be added shall be in accordance with the indicated levels in Annexes No: 2 and 6b.
 - (3) The water used in the preparation and processing of fish and fishery products shall be potable water and complying with the Omani Standard Specification.

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- (4) The ice used in the preparation and processing of fish and fishery products shall be in compliance with the standard Omani Specification regarding the ice prepared for human consumption.
 - (5) The premises shall be provided with refrigeration or freezing units which serve the required purpose.
 - (6) The fish and fishery products shall be transported and stored in accordance with the Omani Standards specification related to the general conditions for food transportation and storage.
 - (7) The boxes used for the transportation and storage process of fish and fishery products shall be made of a healthy suitable material and easy to clean and does not lead to the contamination of the fish and fishery products.
 - (8) The exported and imported fish and fishery products shall be of Excellent or First Class freshness only according to Annex No: 4 and it shall not be permitted to export or import any lower class than that.
 - (9) The fish and fishery products which contain biotoxins shall not be prepared or processed.
 - (10) The marketed fish and fishery products shall not be from the following poisonous families.
 - TETRAODONTIDAE.
 - MOLIDAE.
 - DIODONTIDAE
 - CANTHIGASTERIDAE
 - GEMPYLIDAE



Article (17) Inspection and Checking procedures:

- (1) The inspection and checking the premises conducted upon ice boxes, Fish and fishery products preparation, handling, transportation operations, and also checking and verifying records and the results of the tests according to the programs which safeguard safety and quality control and health requirements as per the Hazard Analysis and Critical Control Point (HACCP) system or any other system to be determined by the competent authority.
- (2) The inspector shall withdraw samples of used water in accordance with the Omani Standard Specification related to the methods of inspection and testing of potable, mineral and well water according to Annex No: 5, Table 5.1 and Annex No: 6 in order to carry out the chemical and microbiological analysis in one of the laboratories to be determined by the competent authority, and keeping the results of the inspection on the records. Such use of the water shall be suspended by a recommendation from the authorities if it is not in conformity with the specifications.
- (3) The inspector shall withdraw samples of the establishment products according to Annex No: 5, Table 5.2 and Annex No: 6 and analyze them in one of the endorsed laboratories and keep the results of the analysis on the records.
- (4) The reports of the results of the laboratory analysis shall be issued by the competent authority or any other party to be determined by such authority.
- (5) The competent authority may use an appropriate and recognised international inspection system with the purpose to reduce the dependence on the certificates of final products.

Article (18) Control measures of the preparation of samples and their transportation:

- (1) The preparation of samples for each production batch shall be carried out according to the Omani Standard specification related to the preparation of packed food samples.

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- (2) A distinguished mark shall be placed on each fish and fishery products batch produced by one operation.
 - (3) The sample unit of fish and fishery products shall be taken from the net weight of the related consignment randomly and compared with the acceptance number determined for each unit.
 - (4) The rejected samples shall not be mixed with the packed and accepted fish and fishery products.

Article (19) Control Measures of Rejected sample unit or batch:

The sample unit or batch shall be rejected in any one of the following cases:

- (1) If it is found out that the fish and fishery products condition makes them not suitable for human consumption.
- (2) If the analysis results exceed the indicated levels of the compounds and contaminants in the Annexes No: 2, 3, and 6.
- (3) If the weight or contents of the package is less than the dis closed weight.
- (4) If the labels are placed with incomplete information or in a manner violating this regulation.
- (5) If they contain additives not stipulated in the Annexes No: 2.6b.

Chapter Four

Additional conditions related to chilled fish and fishery products

Article (20) The chilled fish and fishery products shall be prepared and displayed in clean and hygiene packages in any one of the following forms:

- Whole.
- Headed, gutted or gilled.
- In parts (parts of meat slices with or without skin and fins or similar parts).

Article (21) The chilled fish and fishery products shall demonstrate the following characteristics:

- Eyes: bright, moist and clean.
- Gills: free from slime, clean and with red colour.
- Meat texture: firm, tender, of good colour and rubber like when pressed.
- Smell: fresh seaweed.
- Gut cavity: clean and smooth.
- If skinned: the product shall be free of the residual skin and scales.
- It shall be free of parasites, damages and flawless according to indicated conditions in Article 77.

Article (22) The sample unit and batch of chilled fish and fishery product shall be deemed defective in any one of the following cases:

- (1) If it's chilling temperature is more than 4°C or less than 0°C.
- (2) If any one of its parts is characterized by:
 - Abnormal odour (free of seaweed smell).
 - Colour: abnormal (pale).
 - Slime: excessive.
 - Meat texture: not tender and soft.

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- Eyes: dull and sunken.
 - The blood surrounding the spine: dark red or brown or violet colour with unpleasant odour.
 - Gut cavity: not properly cleaned.
 - General appearance: unfit.
 - If skinned: with residual skin or scales.
 - Gills: excessive slime with pale colour.

Article (23)

The fish and fishery products shall be chilled and stored in accordance with the following conditions:

- (1) Between 0°C and 4°C.
- (2) The equipment used for producing the ice used for chilling shall be valid for operation through out the chilling storage or transportation process and the ice shall be made available in satisfactory quantities.
- (3) The storage rooms and transportation boxes and vehicles shall be clean and meet the required hygiene and technical factors.
- (4) The fish and fishery products shall be transported and stored in appropriate hygiene and easily cleaned boxes which will not cause product contamination. They shall be piled up horizontally in an order with alternating ice layers in between.

Chapter Five

Additional conditions for the frozen fish and fishery products

- Article (24)** **The temperature of the frozen fish shall not exceed – 18°C.**
- Article (25)** **The frozen fish and fishery products shall be prepared and demonstrated in packages or loose in the following forms:**
- Whole.
 - Headed, gutted and others.
 - Fillet
 - Any form to be determined by the competent authority.
- Article (26)** **The following physical characteristics shall be reflected by the frozen fish and fishery products:**
- (1) Suitable appearance and fitness for human consumption
 - (2) Free from parasites, damage and flaws according to the conditions stipulated in Article No: 77.
- Article (27)** **The sample unit and batch of frozen fish and fishery products shall be considered defective in any one of the following cases:**
- (1) If its temperature exceeded -18°C.
 - (2) If any of its parts is characterized by:
 - Abnormal odour (free of seaweed smell)
 - General appearance: dry with serious physical damages or parasites or flaws.
- Article (28)** **The frozen fish and fishery products shall be transported and stored according to the following conditions:**
- (1) The temperature shall be -18°C or less.
 - (2) The fish and fishery products shall be of high quality and processed under hygienic appropriate conditions.
 - (3) Packed and handled after glazing and not exposed to dehydration.



Chapter Six

Additional conditions for chilled and frozen crustaceans

- Article (29)** Provisions of this chapter shall be applied to the indicated crustaceans' species in the Annex No: 1 and any other imported species not mentioned in this annex in addition to the application of the provisions of chapter two and three.
- Article (30)** **The temperature of the chilled and frozen crustaceans shall be as follows:**
- (1) Chilled: between 0°C and 4°C.
 - (2) Frozen: temperature of, -18°C or less.
- Article (31)** **The chilled and frozen crustaceans cooked or uncooked shall be prepared and presented in packages in any one of the following forms:**
- Whole.
 - Divided into two equal halves after the removal of viscera.
 - Tails and shells after the removal of the head.
 - Flesh without shell.
- Article (32)** **Chilled and frozen crustaceans shall demonstrate the following physical characteristics:**
- With suitable odour, flavour, colour and fit for human consumption.
 - Uncooked flesh: white or pink and not translucent.
 - Shells: firm shall not be damaged or soft.

In case of cooked crustaceans, the cooking shall be at temperature ranging between 120°C to 160°C for a period 3-5 minutes and at pressure of 2-5 kg/cm² followed by chilling and freezing until a temperature of -20°C is reached in the flesh.



Article (33) A sample unit and batch of crustaceans shall be considered defective in any one of the following cases:

- (1) If the temperature of chilling is not ranging between 0°C and 4°C.
- (2) If not the frozen crustacean temperature exceeded, -18°C or lacked dehydration translucence.
- (3) If the percentage of damages or cracking in the shells exceeded 5%.
- (4) If the weight of the shells, blood and viscera or shell fragments exceed 2% of the sample weight.
- (5) If contamination levels exceed the stipulated limits in Annexes No: 2, 3 and 6.

Article (34) The handling, transportation and storage of crustaceans shall be performed under appropriate hygienic standards according to the following conditions:

- (1) Chilled: at temperature ranging between 0°C to 4°C.
- (2) Frozen: at a temperature of, -18°C or less.



Chapter Seven

Potable water inspection and testing methods

- Article (35)** The potable water inspection and testing methods shall be performed in accordance with the Omani Standard specification indicated in Annexes No: 5,6.
- Article (36)** The analysis and testing reports shall be issued indicating the name of the test, the origin of the applied method and the test result and the limit stipulated in the specification.
- Article (37)** The accredited laboratories may use any one of the analysis methods which are not mentioned in the above noted Omani Standard Specifications if it is realized that such method is more accurate and appropriate to the available equipment and that shall be indicated in the test report.

Chapter Eight

General conditions for the displaying and marketing of fish and fishery products

- Article (38)** The provisions of this chapter shall be applied to all types of local fishery families and fishery products and exported and imported fish and fishery products which are displayed for marketing.
- Article (39)** The packages of each batch shall be of one type of fish, fishery products and identical in terms of freshness and size and shall be prepared, processed and packed by the same methods and conditions as indicated in this regulation and also captured from the same fishing ground.
- Article (40)** The fish and fishery products shall be classified according to the freshness grades indicated in Annex No: 4.



Article (41)

A clear and easily understood Labelling Card shall be placed on each package written in font size of 20 showing the following information:

- The scientific name of the product and common or commercial name.
- Country of origin and flag.
- Product form.
- Freshness category.
- Validity period.
- Size category.
- Net weight of the package contents.
- Date of grading and dispatch.
- Additives if any.
- Name and address of producing establishment.
- Number of the production batch.
- Preservation method.

Chapter Nine

Hygienic conditions for the production and marketing of fish and fishery products

Article (42) The fish and fishery products caught from their natural environment shall comply with the following hygienic conditions:

- (1) Caught and prepared, headed, gutted and finned whether chilled or frozen on board the vessel shall be done according to the prevailing hygienic conditions.
- (2) Shall be prepared in factory vessels registered with the competent authority.
- (3) Shall be handled during and after the landing process according to the provisions of Chapter Ten.
- (4) Shall be prepared, packed, processed, manufactured, thawed or stored in hygienic manner in approved establishments according to the provisions of Article 44 and Chapter Eleven. The authorities without prejudice to the provisions of chapter ten may authorize the movement of fishery products to the containers in order to deliver them to the approved establishment directly or to the registered auction yards or to the wholesale markets for inspection.
- (5) Shall be subject to inspection in accordance with the provisions of chapter thirteen.
- (6) Shall be packed in appropriate manner.
- (7) The production batch number shall be placed on them.



Article (43) Without violating the prevailing hygienic conditions with regard to the aquaculture farms, the marketing of fishery aquaculture products shall observe the following conditions:

1. They shall be handled under appropriate hygienic conditions without being exposed to contamination or clay. In case they are not prepared directly after fishing they shall be kept in chilled form.
2. They shall comply with the stipulated requirements in Article No: 42, items 4,5,6 and 7.
3. The live fishery products shall be displayed in the markets in an appropriate hygienic manner at all times.

Article (44) The establishment shall follow the entire necessary conditions specified for all production stages of fish and fishery products according to the provisions of this regulation and shall apply its own monitoring systems as per the following:

- (1) Conditions to follow on production stages fish and fishery products:
 - (a) Determination of critical points in the establishment according to the adopted processing operations.
 - (b) Determined and application of critical points inspection and monitoring systems.
 - (c) Registration of important points on unchangeable or difficult to erase records and presenting them to the competent authority as required. As for the various inspections and tests reports the establishment shall keep them for a period of two years.
- (2) The appropriate actions shall be taken under official supervision if the above mentioned inspection results reveal the existence of health hazards.

Article (45) The fish shall be marketed in auction yards and wholesale markets. The competent authority shall coordinate with the concerned authorities for approving and registering such yards and markets.



Chapter Ten

The requirements during and after the landing process of fish and fishery products

- Article (46)**
- (1) Fish and fishery products unloading and landing equipment shall be made of materials which are easy to clean and disinfect and must be kept in a good condition of maintenance and cleanliness.
 - (2) The contamination of fish and fishery products during the landing and unloading process shall be avoided and particularly it shall be adhered to the following:
 - (a) The landing and unloading process shall be completed as soon as possible.
 - (b) Fish and fishery products shall be placed without any delay in protected areas at appropriate temperature to their nature and keeping them in nice for transportation to the marketing places or storing them in the establishment.
 - (c) No damage shall be inflicted to the edible parts of the fish and fishery products because of the landing process and scratching.
- Article (47)** **Auction Yards and Wholesales Markets where fish and fishery products are displayed, shall meet the following requirements:**
- (1) Covered and have walls which are easy to clean.
 - (2) Provided with waterproof flooring which is easy to clean and disinfect and equipped with waste water drainage.
 - (3) Provided with sanitary facilities and satisfactory number of wash basins and toilets fitted with the necessary tools for hands cleaning and tissue papers.
 - (4) Equipped with adequate lighting of safe type.
 - (5) To be used only for the purpose of displaying and storing of



fish and fishery products. The presence of the vehicles and animals which may cause contamination to the fish and fishery products shall not be allowed.

- (6) To be cleaned regularly or at least after each sale and crates shall be cleaned, disinfected and washed inside and outside with potable water.
- (7) Prominent signs shall be placed indicating prohibition of smoking, spitting, eating and drinking.
- (8) To be closed and kept closed should the authorities consider it necessary
- (9) Have facilities for the provision of adequate water supplies.
- (10) The equipment used for handling, preservation, transportation of fish and fishery products shall be made of corrosion resistant materials.
- (11) Provision of places fitted with the necessary equipment when no places are available for the displayed products quantities for sale.
- (12) The fish and fishery products shall be transported to the intended destination without delay after landing or first sale.
- (13) Sale areas shall be separated from cutting and preparation areas in the markets.

- Article (48)**
- (1) In case the stipulated condition in item 12 of Article 47 is not fulfilled the markets where fish and fishery products are stored before or after displaying them for sale or transported to the intended destination shall have effective and large chilling rooms and storage rooms for the required ice for the preservation of the fish and fishery products.

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- (2) The whole sale markets which display fish and fishery products for the purpose of sale or storage shall be subjected to the stipulated conditions in Article 47.
 - (3) The general hygienic conditions indicated in chapter eleven shall apply to the fish and fishery products markets and the authorities shall execute the necessary amendments for adaptation with the stipulated provisions of this regulation.

Chapter Eleven

Conditions for establishment on land

Article (49) Premises and Equipments:

- (1) The premises and equipments shall have adequate work areas for performing the work under hygienic conditions. Their design and layout shall prevent the contamination of the fish and fishery products. The contaminated parts of the premises shall be kept totally separated from the clean ones.
- (2) The fish and fishery products handling, preparation and processing areas shall meet the following conditions:
 - (a) Non slippery and easy to clean and disinfect flooring provided with waste water drainage or water removal equipment.
 - (b) Walls with smooth surfaces easy to clean, durable and impermeable.
 - (c) Ceilings or surfaces easy to clean.
 - (d) Doors made of durable materials easy to clean (self closing doors)
 - (e) Adequate ventilation in the presence of vapour expulsion equipment.
 - (f) Adequate safe natural or artificial lighting.
 - (g) Adequate number of tools for hand washing and disinfection. The work rooms and toilets shall be provided with taps which are not manually operated and tissue papers.
 - (h) Facilities for cleaning the plant, equipment and utensils.
- (3) The chilling rooms where fish and fishery products are stored shall meet the following conditions and facilities:
 - (a) The provisions of the paragraphs a, b, c, d and f of the previous article.
 - (b) Effective refrigeration unit for the preservation of the

- 
- fish and fishery products at the required temperature. A self recording thermometer shall be used.
- (4) Appropriate facilities shall be provided for protection from the pests transmitted through the parasites, rodents, insects or birds.
 - (5) Work machinery and equipment such as cutting tables, containers, convey belts and knives shall be made of corrosion resistant materials easy to clean and disinfect.
 - (6) Anti-corrosion water proof containers shall be used for the fish and fishery products which are not eligible for human consumption and appropriate places shall be made available for the containers if they are not offloaded at the end of each working day.
 - (7) Facilities for the provision of potable water or clean seawater or treated seawater by suitable system under appropriate pressure and in sufficient quantity. Unpotable water maybe exceptionally used for the production of vapour and fire fighting and cooling of the refrigerators provided that such water shall not be used for other purposes and not causes contamination to the fish and fishery products and its related taps shall be clearly distinguished.
 - (8) Sanitary sewerage system shall be provided to the waste water.
 - (9) Adequate number of changing rooms shall be provided with non slippery walls and flooring and easy to clean and contain wash basins with hot and cold water and toilets not appearing directly to the work areas. The toilets shall be provided with the necessary tools for hand cleaning and tissue papers and the related taps shall not be manually operated ones.
 - (10) An equipped room shall be provided to be used for inspection services only if the quantity of the fish and fishery products require permanent or regular presence.
 - (11) Adequate facilities shall be made available for the cleaning and disinfection of the transportation means.
 - (12) The establishment which keeps live fish shall provide appropriate facilities for safeguarding the best conditions for the



survival of such fish, and to supply them with water of a quality which does not transmit micro-organisms and harmful substances to the fish and fishery products.

Article (50) General hygienic conditions applicable to the premises and equipments:

Floors, walls, partitions, ceilings, surfaces, equipments and machinery used for the production of fish and fishery products shall be kept in an appropriate, clean and maintenance accessible position which does not contact a contamination source to such products.

Article (51) The premises and equipments shall be inspected to ensure lack of existence of the rodents, insects and vermins. The insecticides, disinfectants and all toxic substances shall be kept in closed containers and their use shall not impose any contamination hazard to the fish and fishery products.

Article (52) The use of the work areas, machinery and equipments shall be confined to the production of fish and fishery products only.

Article (53) The potable water or clean seawater shall be used for all purposes and non potable water may be exceptionally used for the production of steam and fire fighting and cooling of the refrigerators provided that such water will not be used for other purposes and present no contamination hazard to the fish and fishery products.

Article (54) The detergents and disinfectants materials shall be approved by the authority and shall be used in a manner which does not form negative impacts to the machinery, equipment and fish and fishery products.

Article (55) General hygienic conditions applicable to the staff:

The hygienic conditions related to the staff shall be in accordance with the endorsed specification indicated in the attached Annex No: 6



Chapter Twelve

Conditions for handling fish and fishery products on shore

- Article (56)** **Conditions for chilled fish and fishery products:**
Unpacked chilled fish and fishery products which are not prepared or processed directly after reaching the establishment shall be stored or kept in ice in the refrigeration rooms of the establishment and shall be re-iced whenever it is necessary. The ice shall be made of potable water or clean seawater and kept in a clean receptacles specially provided for this purpose. The fresh fish and fishery products kept in ice shall be chilled in refrigerators at temperature ranging between 0°C to 4°C.
- Article (57)** The heading and gutting operations which are not carried out on board the vessels shall be executed in a hygienic manner. The products shall be washed thoroughly with potable water or clean seawater immediately after finishing the operations.
- Article (58)** The operations such as filleting and slicing shall be carried out in a manner which does not cause contamination or spoilage to the products and in places other than those used for the operations of heading and the fillets and slices shall not remain on cutting tables for a period longer than actually required. Fillets and slices which are solid fresh shall be chilled as soon as possible after preparation.
- Article (59)** Guts and parts which cause general health hazard shall be separated and isolated from the place of intended fish and fishery products for human consumption.
- Article (60)** The design of the designated containers for the dispatch or storage of fresh fish and fishery products shall be arranged in a way which safeguard the protection of such products from contamination and preserve them under adequate hygienic conditions and particularly provide outlets for the drainage of melted water.
- Article (61)** The waste shall be placed in leak proof covered containers which are easy to clean and disinfect if special facilities are not provided for the disposal of the waste.
The waste shall not be allowed to accumulate in work areas and shall



be continuously removed or at least as soon as the containers are full or at the end of each working day. The containers, receptacles and premises designated for the waste shall be washed in a form which does not constitute contamination source to the establishment or its surroundings.

Article (62) Conditions for frozen fish and fishery products

The following shall be made available in the plants:

- (1) Highly powerful freezing equipment capable of rapid freezing for achieving the specified temperature for fish and fishery products in this regulation.
- (2) Highly efficient freezing equipment for the preservation of fish and fishery products in the cold stores at a temperature which does not exceed the specified temperatures in this regulation. For whole fish frozen in brine and intended for canning, higher temperature than that laid down in this regulation may be considered provided that it shall not exceed -9°C.

Article (63) Fresh fish and fishery products intended for immediate freezing shall comply with the indicated requirements in the above mentioned article.

Article (64) Temperature Control Devices shall be provided to stores and placed in positions easy to read and at the furthest away from the cold sources (such as the locations where the temperature is the highest). Temperature charts shall be made available at least during the storage of the product.

Article (65) Conditions for thawing ice from the fish and fishery products

The establishment which carries out thawing operations shall satisfy the following requirements:

- (1) The thawing shall be practiced under hygienic conditions for avoiding contamination of fish and fishery products and drainage system shall be made available for the melted water provided that the product temperature will not increase rapidly during the thawing.
- (2) The fish and fishery products handling after thawing shall be carried out in accordance with the requirements of this regulation.

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- (3) When the fish and fishery products are prepared or processed these operations must be carried out without delay. If they are marketed directly the details of the thawing shall be indicated on the package.

Article (66) Conditions for the processed fish and fishery products:

When processing operation is carried out for preventing the development of micro-organism diseases or for protecting the fish and fishery products or in case of their preservation, the treatments shall be scientifically recognized and the establishment owner shall register the processing operations which are executed, and also observe to monitor the processing operation, control of heating time, temperature degree, salt contents, pH, and water content in addition to the keeping of the related records for at least two years.

Article (67)

- (1) The validity period shall be clearly indicated on the package with respect to the fish and fishery products which are preserved for a limited period through salting, smoking, drying or marinating in saline water.
- (2) The required tests shall be carried out to all fish and fishery products to safeguard their safety.
- (3) The production batch number shall be placed on the product for demonstrating the source of fish and fishery products.
- (4) The labelling card shall be fixed on the final product.

Article (68)

Canning

In case of fish and fishery products which are subjected to canning operation (sterilization in hermetically sealed cans) it shall be adhered to the following:

- (1) Potable water shall be used for the preparation of canned products.
- (2) The process used for thermal treatment shall be appropriate with regard to major criterions (such as heating time, temperature, filling and size of the cans...etc) for which a record must be



kept. The thermal treatment shall be capable of destroying or inactivating pathogenic organisms and the spores of pathogenic micro-organisms. The heating equipment shall be fitted with the required devices for verifying whether the cans have undergone appropriate thermal treatment or not. It shall be also observed to use potable water for cooling the cans after thermal treatment without prejudice to the presence of any chemical additives used in accordance with the appropriate technical practices for preventing corrosion of the equipment and cans.

- (3) Random additional inspections shall be carried out by the establishment to ensure that the processed products undergone the appropriate thermal treatment process as follows:
 - (a) Incubation tests: to be executed at 37°C for seven days or at 35°C for ten days or at any other equivalent combination or in any other laboratories determined by the competent authority.
 - (b) The microbiological, chemical and physical analysis and the nutritional composition analysis of the contents of the can in any laboratory determined by the competent authority.
- (4) Samples shall be taken on daily basis of the production at predetermined distant intervals to ensure the efficacy of the sealing. Appropriate equipment shall be made available for examining of cross sections of the cans.
- (5) Visual inspection shall be carried out to ensure that the cans are not spoiled.
- (6) Labelling Card shall be fixed on all cans subjected to thermal treatment.

Article (69) Smoking

The smoking process of fish and fishery products shall be carried out in designated places equipped with a ventilation system for preventing the smoke or heat from moving to other areas where fish and fishery products are prepared, processed and stored.



Article (70) Materials used for the production of the smoke must be stored away from the smoking areas and shall be used in a manner which does not spoil the fish and fishery products.

Article (71) It shall be prohibited to use the utilized materials in the production of smoke through burning coloured or painted wood or treated with glue or subjected to chemical preservation process.

Article (72) Fish and fishery products shall be cooled rapidly after smoking for achieving the required temperature for their preservation before packing.

Article (73) Salting

Salting operation shall be executed by using clean salt for the treatment of fish and fishery products. The salt shall be kept in a manner which does not cause any contamination to such products and it shall not be reused. The salting process must be carried out in different places which are away from the places where other operations are executed.

Article (74) The receptacles and equipment used in fish and fishery products salting shall be made of materials which prevent their contamination. These receptacles and equipment shall be cleared before being used for salting.

Article (75) Cooked Crustaceans and Shellfish

The crustaceans and shellfish shall be cooked as follows:

- (1) Rapid cooling shall follow immediately for the cooling process using potable water or clean seawater for this purpose. If no other preservation method is used, the cooling must continue until the temperature approaches that of melting ice.
- (2) Shelling process shall be carried out under hygienic conditions to prevent the spoilage of the products and after washing all surfaces of the used equipment and hands. If machines are used they shall be cleaned and disinfected after each working day. The cooked products shall be immediately frozen or kept chilled at a temperature which will prevent the growth of pathogens and preserved in appropriate premises.
- (3) The establishment shall carry out microbiological and chemical analysis as indicated in Annexes No: 2, 3, and 6 for the products which are produced at distant intervals for satisfying the required criterions.



Article (76) Mechanically recovered fish flesh
The mechanical recovery of fish flesh shall be carried out as follows:

- (1) Mechanical recovery of gutted fish flesh shall be done rapidly immediately after the cutting to slices. When whole fish are used, they must be gutted and washed in advance.
- (2) The machinery and equipment used at distant intervals or at least every two hours shall be cleaned.
- (3) After recovery the recovered flesh shall be frozen immediately or combined with a product intended for freezing.

Article (77) Conditions related to parasites

During production and before releasing fish and fishery products for human consumption they shall be exposed to visual examination for detecting any parasites. It shall be prohibited to place on the market or export or import fish and fishery products infested with harmful parasites to the consumer even if they are removed.

Article (78) The fish and fishery products (raw or final material) infested with harmless parasites to human consumption indicated in Article 77 shall be frozen at a temperature not exceeding -20°C in all parts of the product for a period not less than 24 hours. Such fish and fishery products are as follows;

- (a) Fish to be consumed raw
- (b) Fish exposed to cold smoking process at which the internal temperature of fish is less than 60°C .
- (c) Marinated or salted fish where this process is insufficient to destroy the larvae of nematodes.

Article (79) The establishment shall ensure that the above mentioned fish and fishery products or the raw materials used in their plants are exposed to the stipulated treatment in this regulation before releasing for human consumption.

Article (80) The fresh, frozen and thawed fish and fishery products used in the processing shall satisfy the stipulated conditions in this regulation.

Chapter Thirteen

Hygienic conditions for monitoring the production of fish and fishery products

Article (81) The authorities shall take the necessary arrangements for the inspection and monitoring to ensure the compliance with the requirements of this regulation. Such arrangements include the following:

First:

General monitoring

- (1) Inspection of the fishing vessels during their stay at port
- (2) Verifying the conditions of landing and first sale
- (3) Inspection of establishments at regular intervals to ensure the following:
 - (a) Adherence to the stipulated conditions
 - (b) Fish and fishery products are treated in accordance with the provisions of this regulation
 - (c) Cleanliness of the surrounding area of the establishment facilities, machinery and the employee's hygiene.
 - (d) Placement of the production batch number in a proper manner
- (4) Inspection of fish sale markets and auction yards
- (5) Inspection of operations, storage, method and transportation conditions

Second:

Sensory evaluation

- (1) Each batch of fish and fishery products shall be inspected by the authorities on landing or before first sale to ensure their fitness for human consumption by sampling.

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- (2) The fish and fishery products which apply general criteria for meeting the sensory evaluation conditions and the extent of their adherence to the provisions of this regulation
 - (3) The evaluation shall be repeated after the first sale of fish and fishery products if it is revealed that the requirements of this regulation are not met or when considered necessary until fish and fishery products comply with freshness requirements stipulated in this regulation.
 - (4) If it is found out from the sensory evaluation results that the fishery products are not fit for human consumption they shall be withdrawn from the markets and disposed off. If the results of sensory evaluation reveal that there are doubts surrounding the freshness conditions, it shall be resorted to the chemical and biological analysis.

Third:

Parasites check

Fish and fishery products shall be exposed to visual examination and samples shall be taken for detecting the parasites before releasing the products for human consumption. The infested fish and fishery products with parasites shall not be marketed.

Fourth:

Chemical and biological analysis

- (1) Samples shall be taken and exposed to analysis in a laboratory for controlling the following criteria:
 - (a) Total volatile basic nitrogen: the levels of these criteria shall be determined for each category of species as indicated in Annex No. 2
 - (b) Histamine: Nine samples must be taken from each batch, and they must satisfy the following requirements:
 - The mean value must not exceed 100 ppm.
 - Two samples may have a value ranging between 100 ppm to 200 ppm
 - No sample may have a value exceeding 200 ppm.

These limits apply to the fish species indicated in Annex No: 2. However, the noted fish species which have been exposed to 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 recognized and acknowledged scientific methods or any other methods to be determined by the competent authority.

- (2) Heavy metals and contaminants:
Fish and fishery products (in the edible parts) shall not contain heavy metals and contaminants indicated in Annex No: 2.
- (3) Biological analysis (microbiological) of fish and fishery products shall not contain higher levels than those specified in Annex No: 3.
- (4) Any other required analysis to be determined by the competent authority

Fifth:

Packing

Packing process shall be carried out for preventing fish and fishery products contamination provided that the packing materials and the products which may be liable to contact with fish and fishery products shall be in consistency with the entire hygienic requirements and particularly ensuring that:

- (1) The sensory features of fish and fishery products are not impaired.
- (2) The materials must not be capable of transferring harmful substances to consumer's health to the fish and fishery products.
- (3) They shall be adequately durable for providing good protection to fish and fishery products.

The packing materials shall not be reused with the exception of the containers made of sealed smooth and anti-corrosion materials which are easy to clean and disinfect. Appropriate drainage network shall be made available for the disposal of melted water from the packing materials used for preserved products in ice. The packing materials which are not used shall be kept in places far away from the production sites and must be protected from contamination and dust.

Sixth:

Labelling Cards

The establishment which practice export or import of fish and fishery products consignments shall be traced by examining the attached Labelling Cards or documents. For this purpose, the label or document shall include dispatch country or country of origin and the number of quality control of the establishment or the registration number as for the auction yards or wholesale markets.

Chapter Fourteen

Violation and Penalties

Article (82) It shall be prohibited to violate the rules of this regulation, and the following shall be considered in breach of its provisions:

- (1) Handling, processing or marketing or exporting or importing fish and fishery products which are spoilt, hazardous or harmful to the consumer health or in violation of the conditions and rules of this regulation
- (2) Resistance of the competent authority or the inspector or the officials while enforcing the rules of this regulation.
- (3) Introduction of any amendment to the licenses or health certificate or quality control certificate or changing their contents or manipulation in their use.

Article (83)

Without prejudice to any other severe penalty, any one who violates the rules of this regulation shall be subject to penalty in accordance to the provisions of Marine Fishing and Protection of Living Aquatic Resources Law.

Annex (1)

Table (1_1) Names of Families and Species of Omani Commercial Fish

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
ACANTHURIDAE	Acanthurus spp.	-Bleekers surgeonfish -Sohal, Lined surgeonfish -Yellowfin surgeonfish, Bluesurgeon	فارسي . فرض فرض فرض
ALBULIDAE	Abula glossodonta	-Roundjaw bonefish, Indo Pacific bonefish	تر . فأر البحر
ARIIDAE	Arius sp	-Sea catfish	خن . جم
BELONIDAE	Tylosurus crocodiles crocodilus	-Hound needlefish, Crocodile needlefish , Giant longton	خرخور . حاكول مران
BOTHIDAE	Pseudorhombus spp	-Largetooth flounder -Malayan flounder	خبز البحر . خوفعة خبز البحر
CARANGIDAE	Alectis spp	-Threadfin mirrorfish, African pompano -Indian threadfish, Threadfish trevally	خيطة . خياط خيطة . خياط
	Alepes djedaba	-Shrimp scad	مزراقفة . قملوه جنيس
	Atule mate	-Yellowtail scad	جنيس . غرابية قصبة
	Carangoides spp.	-Longfin trevally, Longfin Cavalla -Orangespotted trevally -Coastal trevally, Bluefin Kingfish -Longnose trevally -Whitefin trevally	بيوض . دبس . صالة بطيخة . صال جاش صال . جاش صال . جاش صال . جاش
	Caranx sem	-Blacktip trevally	جشران . صال
	Trachinotus spp.	-Southern pompano, African pompano -Smallspotted dart, Baillons dart	طلاح . رحيسة طلاح . رحيسة . سين
CARACHARHINIDAE	Carchinus spp	-Bull shark -Hardnose shark -Blacktip reef shark -Sliteye shark	جرجور لخم جرجور جرجور
GERREIDAE	Gerres filamentosus	-Longrayed mojarra, Whipfin mojarra	بادح . رياشة
HAEMULIDAE	Diagramma pictum	-Painted sweetlips, painted rubberlip	خنائي . خشيم جبل
	Plectorhinchus spp.	-Lemon sweetlips, Dusky Rubberlip -Minstrel sweetlips	خنائي . سيط خنائي
	Pomadasys spp.	-Silver gunt, Javelin fish -Smallspotted grunter, Smallspotted grunt	جُرور جُرور

Continued Annex (1) Table(1-1)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
LETHRINIDAE	Lethrinus spp.	-Longnose emperor, Longface emperor -Redspot emperor -Yellowtailed emperor, Mahsena emperor -Saburbir emeror, Yellowbrow emperor -Smalltoothed emperor -Spangled emperor	خطام . شعري . سولي شعري . بادح شعري . خودير شعري شعري شعري . سولي شعري . خودير
LUTJANIDAE	Lutjanus spp.	-Mangrove red snapper, River snapper -Crimson snapper -Flame-coloured snapper -Bigeye snapper -Malabar redsnapper, Malaba redsnapper -Blubberlip snapper, Speckled snapper -Russells snapper, One-spot snap per -Humphead snapper, Blood snapper -Brwnstipe snapper	صلخون . حمراء . اصبيبي حمراء قلاية . نيسرة نيسرة . عكلاة حمراء . حمرة برطام . كهل . دفن قلاوة . نيسر . قلاية حمراء قلاية . قلاوة
	Pinjalo spp.	-Pinjalo snapper -Crimson jobfish, Bluespotted Jobfish	حمراء . نعيمى عندق . خباية
	Pristipomoides spp.	-Sharptooth jobfish, Sharptoothsnapper	عندق . حمام
MULLIDAE	Parupeneus Macronea	-Longbarbel goatfish, Banded goatfish	حدي . سلطان ابراهيم
PLOTOSIDAE	Plotosus lineatus	-Striped eel catfish	خن فارسي
PSETTODIDAE	Psettodes erumei	-Indian halibut, Indian Spiny turbot	كبش . كلب البحر. مديس . خبز البحر
SCIAENIDAE	Argyrosomus regius	-Meager	شماهي . اشخلي
	Atractoscion Aequidens	-Geelbeek croaker, Cape Salmon, teraglin	اشخلي . شماهي
	Otolithes ruber	-Tigertootherd croaker, longtootherd salmon	ينم . صارف . دبوش
SCOMBRIDAE	Acanthocybium solandri	-Wahoo, Kingfish	كنعد
	Auxis thazard	-Frigate tuna	تبانة . حقيبة
	Euthynnus affinis	-Kawakawa, Eastern little tuna	صده . شروة
	Katsuwonus pelamis	-Skipjack tuna	صده . حقيبة . شروة
	Rastrellinger faughni	-Island mackerel, Faughns mackerel	ضلاعة . كرفا
	Sarda orientalis	-Striped bonito, Oriental bonito	سقطانة . مرمرة
	Scomber japonicus	-Chub mackerel	باجة . قتمة . ضلعة
	Scomberomorus Commerson	-Kingfish, Spanish mackerel	كنعد
	Thunnus albacares	-Yellowfin tuna	جيدر
	Thunnus tonggol	-Longtail tuna	سهوة



Continued Annex (1) Table(1-1)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
SERRANIDAE	Epinephelus spp.	-Areolated grouper -Brownspotted grouper -Thornycheekgrouper, Spinycheekgrouper -Dotted grouper, BrokenLine grouper -Longteeth grouper -Whiteblotched grouper	هامور. سمان . غلفوق هامور . قطورة هامور هامور هامور هامور. برطام, سمان مشخالي
SIGANIDAE	Siganus spp.	-Streaked spinefoot, Streaked rabbitfish -Marbled spinefoot, Rivulated rabbitfish -Little spincfoot, Squaretail rabbitfish	صافي . ضيفي صافي صافي . سيسق
SOLEIDAE	Pardachirusmarmorats	-Finless sole, Moses sole	مديس . خوفعة
SYNODONTIDAE	Sauride spp.	-Greater lizardfish -Brushtooth Lizardfish	حاسوم. عقامة . كسور حاسوم . أبو لبن
TERAPONIDAE	Terapon jarbua	-Jarbua terapon, Tigerfish, Thornfish	برعم. جمجام. بام. صارور
TRICHIURIDAE	Trichiurus lepturus	-Largehead hairtail, Largead ribbonfish	خردويل

Continued Annex (1)

Table (1 _2) White Fish species

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
ACANTHURIDAE	Acanthurus spp.	-Bleekers surgeonfish -Shoal,Lined surgeronfish -Yellowfinsurgenonfish,Blue surgeon	فارسي . فرض فرض فرض
ALBULIDAE	Abula glossodonta	-Roundjaw bonfish, Indopacific bonfish	تر . فأر البحر
ARIIDAE	Arius sp.	-Sea catfish	خن . جم
BELONIDAE	Tylosurus crocodiles crocodilus	-Houndneedlefish,Crocodileneedlefish, Giant longton	خرخور . حاكول. مران
CARANGIDAE	Alectis spp.	-Threadfin mirrorfish,African pompano -Indian threadfish,Threadfish trevally	خيطة . خياط خيطة . خياط
	Alepes djedabe	-Shrimp scad	مزراققة. قملوه.جنيس
	Atule mate	-Yellowtail scad	جنيس.غرابية. قصبية
	Carangoides spp.	-Longfin trevally, longfinCavalla -Orangespotted trevally -Costal trevally,bluefinKingfish -Longnose trevally -Whitefin trevally	بيوض . ديس . صالة بطيخة . صال . جاش صال. جاش صال . جاش صال . جيش. جاش
	Caranx sem	-Blacktip trevally	جشران . صال
	Trachinotus spp.	-Southern pompano,African pompano -Smallspotted dart,Baillons dart	طلال . رحيسة طلال . رحيسة. سين
GERREIDAE	Gerres filamentosus	-Longrayed mojarra, Whipfin mojarra	بادج. رياشة
HAEMULIDAE	Diagramma pictum	-Painted sweetlips,Painted rubberlip	خنائي . خشيم جبل
	Plectorhinchus spp.	-Lemon sweetlips, Dusky Rubberlip -Minstrel sweetlips	خنائي. سيط خنائي
	Pomadasy spp.	-Silver grunt,Javelinfish -Smallspotted grunter,Smallspotted grunt	جُرور جُرور
LETHRINIDAE	Lethrinus spp.	-Longnose emperor,Longface emperor -Redspot emperor -Yellowtailed emperor,Mahsena emperor -Saburbir emperor, Yellowbrow emperor -Smalltoothed emperor -Spangled emperor	خطام. شعري. سولي شعري . بادج شعري . خودير شعري شعري . سولي شعري . خودير



Continued Anex1 table (1-2)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
LUTJANIDAE	Lutjanus spp.	-Mangrove red snapper,River snapper -Crimson snapper -Flame coloured snapper -Bigeye snapper -Malabar bloodssnapper,Malaba redsnapper -Blubberlip snapper,Speckled snapper -Russlls snapper,One-spot snapper, -Humphhead snapper,Blood snapper -Brownstripe snapper	صلخون , حمراء اصبيطي حمراء قلاية , نيسرة نيسرة, عكلاة حمراء , حمرة برطام , كهل , دفن قلاوة, نيسر, قلاية حمراء قلاية , قلاوة
	Pinjalo spp.	-Pinjalo snapper	حمراء , نعيمى
	Pristipomoides spp.	-Crimson jobfish,Bluespotted jobfish -Sharptooth jobfish,Sharptooth snapper	عندق , خباية عندق حمام
MULLIDAE	ParupeneusMacronea	-Longbartble goatfish,Banddot goatfish	حدي , سلطان ابراهيم
	Upeneus spp.	-Sulphur goatfish, YellowGoatfish -Freckled goatfish,Darkbank goatfish	حدي,سلطان ابراهيم ميرا دقون, ميرا
NEMIPTERIDAE	Nemipterus spp.	-Japanese threadfin bream -Redfilament threadfin bream -Redspine butterfly bream	عندق , غزوان عندق , غزوان عندق, غزوانن باسيح
	Parasclopsis erioomm	-Rosy dwarf monocle bream	عزوان , برم
	Scolopsis ghanam	-Arabin monocle bream	برايم , زراع
PLOTOSIDAE	Plotosus lineatus	-Striped eel catfish	خن فارسي
PSETTODIDAE	Psettodes erumei	-Indian halibut,IndianSpiny turbot	كبش , كلب البحر مديس,خبز البحر
SCIAENIDAE	Argyrosomus regius	-Meager	شماهي , اشخلي
	AtractoscionAequidens	-Geelbeck croaker,capeSalmon, Teraglin	اشخلي , شماهي
	Otolithes ruber	-Tigertoothed croaker, Longtoothed salmon	ينم , صارف , دبوش
SERRANIDAE	Epinephelus spp.	-Areolated grouper -Brownspotted grouper -Thorny cheek grouper,Spinycheck grouper -Dotted grouper,Brokenline grouper -Longteeth grouper -Whiteblotched grouper	هامور , شما غلفوق هامور , قطة هامور هامور هامور هامور, برطام, شما, مشخالي
SIGNIDAE	Siganus spp.	-Streaked spinefoot,Streaked rebbitfish -Marbled spinefoot,Rivulated rabbitfish -Little spinefoot,Squaretail rabbitfish	صافي , ضيفي صافي صافي , سيسيق
SOLEIDAE	PardachirusMarmoratus	-Finless sole,moses sole	مديس , خوفعة

Continued Anex 1 table (1-2)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
SPARIDAE	Acanthopagrus spp.	-Two-bar bream, Double-bar bream -Yellowfin bream -Soldier bream	فسكرة, ربابة, بنت النوخذة صبيطي
	Argyrops spp.	-King soldier bream, Long-spine bream	كوفر, شعع, فرانكي
	Cheimerius nufar	Santer bream, barred Silvery bream	كوفر, فرانكي
	Diplodus spp.	-Zebra seabream -White seabream, dassie, Onespot Pandora	شعع, ضعرة شعع, ضعرة
	Lithognathus mormyrus	-Striped seabream, Marmora	نزحة, حشيم
	Pagellus spp.	-Arabian panadora -Natal panadora	نزحة نزحة
	Rhabdosargus Sarba	-Goldlined seabream -Seabream, stumpnose	شعع, قابط شعع, تراحة
SYNODONTIDAE	Saurida spp	-Greater lizardfish -Brush-tooth lizardfish	حاسوم, عقامة, كسور حاسوم, أبو لبن
TERAPONIDAE	Terapon jarbua	-Jarbua terapon, Tigerfish Thornfish	برعم, جمجام, بام, صارور

Continued Annex (1)

Table (1_3) Blue fish

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
SCOMBRIDAE	Acanthocybium solandri	-Wahoo, kingfish	كنعد
	Auxis thazard	-Frigate tuna	تيانة. حقيبة
	Euthynnus affinis	-Kawakawa, Estern Little tuna	صده . شروة
	Katsuwonus pelamis	-Skipjack Tuna	صده. حقيبة. شروة
	Rastrellinger faughni	-Island mackerel, Faughn>s mackerel	ضلاعة. كرفا
	Sarda orientalis	-Striped bonito, Oriental bonito	سقطانة. مرمرة
	Scomber japonicus	-Chub mackerel	باقة. قتمة. ضلعة
	Scomberomorus Commerson	-Kingfish Spanish mackerel	كنعد
	Thunnus albacares	-Yellowfin tuna	جيدر
	Thunnus tonggol	-Longtail tuna	سهوه
ISTIOPHORIDAE	Istiophorus platypterus	Sailfish	سنسول
RRICHIURIDAE	Triehiurus lepturus	-Largeheadhairtail, Largehead ribbonfish	خردويل

Table (1_4) Selachii Species

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
CARCHARHINIDAE	Carchahinus spp	-Bull shark -Hardnose shark -Blacktip reef shark	جرجور

Table (1_5) Commercial invertebrate species of Omani water

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
PALINURIDAE	Panulirus spp.	-Painted spiny lobster	الشارخة الملونة
		-Scalloped spiny lobster	الشارخة الصخور
PENAEIDAE	Penacus indicus	-Indian white shrimp	الربيان الأبيض
PORTUNIDAE	Portunus pelagicus Scylla serrata	-Sand crab	السرطان الرملي
		-Mud, Mangrove crab	سرطان الطين
OCTOPODIDAE	Octopus aegina	-Sandbird octopus	الأخطبوط
SEPIIDAE	Sepia pharaonis	-Pharaoh cuttlefish	الحبار القاعي الكبير



ANNEX (2)

LIMITS OF COMPOUNDS AND ELEMENTS IN THE FISH AND FISHERY PRODUCTS

First: TOTAL VOLATILE BASIC NITROGEN (TVB – N)

- 1 Not to exceed 25 milligrams/100 grams of flesh for whitefish referred to in Annex 1 Table No: 1-2.
- 2 Not to exceed 30 milligrams/100 grams of flesh for bluefish referred to in Annex 1 Table No: 1-3
- 3 Not to exceed 35 milligrams/100grams of flesh for selachii referred to Annex 1 Table No: 1-4
- 4 Not to exceed 60 milligrams/100 grams of flesh for fish species used to directly extract edible fish oil

Second: HISTAMINE

In fish families indicated below or any species of families determined by the competent authorities.

Histamine limits in nine samples shall be as follows:

- 1 100 milligrams/kilogram in for each sample is a normal limit.
- 2 100 to 200 milligrams/kilogram in two samples only is acceptable.
- 3 No sample may have a value exceeding 200 milligrams/kilogram.

However, fish which have undergone enzyme ripening treatment in brine, histamine levels shall not be more than twice the above values.

Continued Annex (2)

Table (2_1) fish Species Required for Histamine Analysis

No.	FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME
1	POMATOMIDAE	Pomatomus saltarix	Bluefish	تقوه
2	CLUPEIDAE	Etrumeus teres	Round herring, Red-eye round herring	عومه
		Nematalosa nasus	Bloch's gizzard-shad	يوقا. جوف
		Sardinella albella (synonymy) Sardinella bulan Sardinella perforata	White sardinella	عومه
		Sardinella longiceps	Indian oil sardine, Indian oil sardinella	عومه
		Coryphaena hippurus	Mahi mahi(Dolphinfish)	عنفلوص
4	SCOMBRIDAE	Acanthocybium solandri	Wahoo, King fish	كنعد
		Auxis thazard	Frigate tuna	تبانہ، حقیبہ
		Euthynnus affinis	Kawakawa, Eastern little tuna	صدہ، شرورہ
		Rastrelliger kanagurta	Indian Mackerel	ضلاعہ
		Katsuwonus pelamis	Skipjack tuna	صدہ، شرورہ، حقیبہ
		Rastrelliger faughni	Island mackerel, Faughn>s mackerel	ضلاعہ، ضلاعہ
		Sarda orientalis	Striped bonito, Oriental bonito	سقطانہ، مرمرہ
		Scomber japonicus	Chub mackerel	باجہ، قتمہ، ضلاعہ
		Scomberomorus commerson	Kingfish, Spanish mackerel	کنعد
		Thunnus albacares	Yellowfin tuna	جیڈر
		Thunnus tonggol	Longtail tuna	سہوہ
5	ENGRAULIDAE	Stolephorus heterolobus	Shorthead anchovy	بریہ
		Encrasicholina punctifer	Buccaneer anchovy	بریہ
6	SCOMBRESOSIDAE			

Continued Annex (2) Third: Heavy Metals

Table (2_2), Maximum Limits for Total Mercury (Hg) in Fish Species¹

Type of Fish Maximum level		Maximum level (mg/kg)
Muscle meat of fish excluding those listed below		0.50
Angler fish	Lophius species	1.00
Atlantic catfish	Anarchichas lupus	
Bonito	Sarda Sarda	
Eel	Anguilla species	
Emperor, orange roughy, rosy soldier fish	Hoplostethus species	
Grenadier	Coryphaenoides rupestris	
Halibut	Hippoglossus hippoglossus	
Marlin	Makaira species	
Megrim	Lepidorhombus species	
Mullet	Mullus species	
Pike	Esox lucius	
Plain bonito	Orcynopsis unicolour	
Poor cod	Tricopterus minutes	
Portuguese dog fish	Centroscymnus coelolepis	
Rays	Raja species	
Red fish	Sebastes marinus, S. mentella, S. Viviparus	
Sail fish	Istiophorus platypterus	
Scabbard fish	Lepidopus caudatus, Aphanopus carbo	
Sea bream, Pandora	Pagellus species	
Shark	All species	
Snake mackerel or butter fish	Lepidocybium flavobrunneum, Ruvettus Pretiosus, Gempylus serpens	
Sturgeon	Acipenser species	
Swordfish	Xiphias gladius	
Tuna	Thunnus species, Euthynnus species, Katsuwonus pelamis	

¹(EU Regulation 1881/2006)

Table (2_3), Maximum Limits of Lead (Pb) in Fish Species¹

Type of Fish		Maximum level (mg/kg)
Muscle Meat of Fish		0.30
Crustaceans, excluding brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans	Nephropidae and Palinuridea	0.50
Bivalve molluscs		1.50
Cephalopods	Without viscera	1.00

¹(EU Regulation 1881/2006)



Continued Annex (2)

Table (2_4) Maximum Limits of Cadmium (Cd) in Fish Species¹

Type of Fish		Maximum level ((mg/kg)
Muscle meat of fish excluding those listed below		0.05
Anchovy	Engraulis species	0.10
Bonito	Sarda Sarda	
Common two banded seabream	Diplodus vulgaris	
Eel	Anguilla anguilla	
Grey mullet	Mugil labrosus labrosus	
Horse mackerel or scad	Trachurus species	
Louwer or luvar	Luvarus imperialis	
Sardine	Sardine pilchardus	
Sardinops	Sardinops species	
Tuna	Thunnus species, Euthynnus species, Katsuwonus oekanus	
Wedge sole	Dicologlossa cuneata	
XIPHIIDAE	Muscle meat of sword fish	0.30
Crustaceans , excluding brown meat of crab	Nephropidae and palinuridae	0.50
Bivalve molluscs		1.0
Cephalopods (without viscera)		1.0

¹(EU Regulation 1881/2006)

Inorganic Tin

Fish Species Table (2_5) Maximum Limits of Inorganic tin in Fish Species¹

Type of Product	Maximum level (mg/Kg)
wet weight (applied to canned products)	200

¹(EU Regulation 1881/2006)

Continued Annex (2)

Table (2_6) The Maximum Limits for Dioxin in Fish Species¹

Fish type or Product	Maximum levels Sum of dioxins and furans (WHO- PCDD/F-TEQ)	Maximum levels Sum of dioxins, furans and dioxin-like PCBs (WHO- (PCDD/F-PCB-TEQ)
Muscle meat of fish and fishery products	4.0 pg/g fresh weight	8.0 pg/g fresh weight
Muscle meat of eel and its products	4.0 pg/g fresh weight	12.0 pg/g fresh weight
Marine oil (fish body oil, fish liver oil and oils of other marine organisms intended for human consumption)	2.0 pg/g fat	10.0 pg/g fat

¹(EU Regulation 1881/2006)

(Polycyclic Aromatic Hydrocarbons (PAH))

Table (2_7) Maximum Limits for Polycyclic Aromatic Hydrocarbons (PAH) in Fish Species¹

Fish type or Product	Maximum levels (µg/kg wet weight)
Benzo(a)pyrene (PAH testing marker)	
Muscle meat of smoked fish and smoked fishery products, excluding bivalve molluscs	5.0
Muscle meat of fish, other than smoked fish	2.0
Crustaceans, Cephalopods, other than smoked	5.0
Bivalve molluscs	10.0

¹(EU Regulation 1881/2006)

Continued Annex (2)
Marine Bio-toxins

Table (2_8) Maximum Limits for marine biotoxins in Molluscs (Live Bivalves)²

Brotoxin Type	Maximum levels (µg/kg weight)
Paralytic shellfish poison (PSP)	800
Amnesic shellfish poison (ASP) (Domoic acid)	2×10 ⁴
Okadaic acid, dinophysistoxins and pectenotoxins together	160
Yessotoxins	1×10 ³
Azaspiracids	160

²(EU Regulation EC 853/2004)

Table (2_9a) Sampling Plan for Heavy Metals and contaminants

Number of incremental samples to be taken from the lot or subplot	
Weight of Batch (kg)	Minimum number of samples to be taken*
<50	3
50 to 500	5
>500	10

Table (2_9b), Sampling Plan for Heavy Metals and contaminants

Number of incremental samples to be taken from packages or units	
Number of packages or units in the lot/ sublot	Minimum number of Samples to be taken*
1 to 25	at least 1 package or unit
26 to 100	about 5%, at least 2 packages or unit
>100	about 5%, at maximum 10 packages or units

*The aggregate sample uniting all the incremental samples shall be at least one kilogram

Additives

Table (2_10), Maximum Limits for Additives in Fish and Fishery Products¹

Additives	Maximum level (mg/Kg)
Sulphites	Crustaceans and Cephalopods fresh, frozen and deep-frozen 150 mg/kg
	Crustaceans concerning the following families penaeidae, solenecidae, aristeidae
	150 mg/kg for < 80 units kg
	200 mg/kg for 80-120 units/kg
	300 mg/kg for > 120 units/kg
	50 mg/kg for cooked
Triphosphates	Maximum limits (expressed in P ₂ O ₅) phosphoric acid and phosphates (E 338, E 339, E 340, E 341, E 343, E 450, E 451, E 452,) single or in combination.
	Triphosphates (E 451) <ul style="list-style-type: none"> • Surumi: 1g/kg • Fish and fish crustacean Paste: 5g/kg
	<ul style="list-style-type: none"> • Surumi: 1g/kg • Fish and fish crustacean Paste: 5g/kg

¹(EU Regulation 1881/2006)

Veterinary Medicinal Residue

Table (2_11a,b) maximum residue limits of veterinary medicinal products in fish and fishery products³

Table (2_11a) Prohibited substances

Substance	MRPLs*
Stilbenes	Absent
Synthttic steroids	Absent
Chloramphenicol	0,3 µg/kg
Nitrofurans metabolites (Furazolidone, Furaladone, Nitrofurantoin, Nitrofurazone)	1 µg/kg
Sum of Malachite green and leucomalachite green	2 µg/kg

*MRPLs are defined as “minimum for which MRPLs have been defined

Table(2_11b) Substances for which MRLs have been defined

Substance	Species	Tissue	MRL (if applicable)
Sulphonamide group*	All	Muscle	Combined total residues of all substances within the sulfonamide group should not exceed 0.1 ppm.
Trimethoprim*	All	Muscle+	0.05 ppm
Amoxicillin	All	Muscle+	0.05 ppm
Ampicillin	All	Muscle+	0.05 ppm
Benzylpenicillin	All	Muscle+	0.05 ppm

³(EU Regulation 2377/90)

Continued Annex (2)

Continued Table (2.11b)

Substance	Species	Tissue	MRL (if applicable)
Cloxacillin	All	Muscle	0.3 ppm
Dicloxacillin	All	Muscle	0.3 ppm
Oxacillin	All	Muscle	0.3 ppm
Danofloxacin	All	Muscle+	0.1 ppm
Difloxacin	All	Muscle+	0.3 ppm
Enrofloxacin (sum of enrofloxacin and ciprofloxacin)	All	Muscle+	0.1 ppm
Flumequine	Fin fish	Muscle+	0.6 ppm
Oxolinic Acid	Fin fish	Muscle+	0.1 ppm
Sarafloxacin	Salmonidae	Muscle+	0.03 ppm
Erythromycin	All	Muscle+	0.2 ppm
Tilmicosin	All	Muscle+	0.05 ppm
Tylosin	All	Muscle	0.1 ppm
Florfenicol*	Fin fish	Muscle+	1 ppm
Chlortetracycline (sum of parent drug and its 4-epimer)	All	Muscle	0.1 ppm
Oxytetracycline* (sum of parent drug and its 4-epimer)	All	Muscle	0.1 ppm
Tetracycline	All	Muscle	0.1 ppm
Lincomycin	All	Muscle	0.1 ppm
Neomycin (including framycetin)	All	Muscle	0.5 ppm
Paromomycin	All	Muscle	0.5 ppm
Spectinomycin	All	Muscle	0.3 ppm
Azagly-nafarelin	Salmonidae	n/a	Not subject to MRL
Colistin	All	Muscle	0.15 ppm



Continued Annex (2)

Continued Table (2.11b)

Deltamethrin	Fin fish	Muscle+	0.01 ppm
Cypermethrin	Salmonidae	Muscle+	0.05 ppm
Diflubenzuron	Salmonidae	Muscle+	1 ppm
Teflubenzuron*	Salmonidae	Muscle+	0.5 ppm
Azamethipos	Salmonidae		Not subject to MRL
Emamectin	Salmonidae	Muscle+	0.1 ppm
Bronopol (for use only on farmed fertilised eggs)	Salmonidae		Not subject to MRL
Somatosalm	Salmon		Not subject to MRL
Tricaine mesilate* (for water-borne use only)	Fin fish		Not subject to MRL
Tosylchloramide sodium (for water-borne use only)	Fin fish		Not subject to MRL
Formaldehyde*	All		Not subject to MRL
Hydrogen Peroxide	All		Not subject to MRL

+ For finfish, this MRL relates to “muscle and skin in natural proportion”

Annex (3)

Table (3_1) Recommended
Microbiological Limits for sea Food

SI No.	Food category	Microorganism	Sampling plan		Limit		Analytical method
			n	c	m	M	
1	Frozen Fish (Fillet)	APC at 30°C/g	5	2	5x10 ⁴ cfu/g	10 ⁶	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100	ISO 4832
		E.coli at 44°C /g	5	2	1cfu/g	10cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
2	Refrigerated Fish (Fillet)	APC at 30°C/g	5	2	10 ⁵ cfu/g	10 ⁶	ISO 4833
		Coliform at 37°C/g	5	0	10cfu/g		ISO 4832
		E.coli at 44°C /g	5	2	1cfu/g	10cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
3	Raw crustacean)Fresh / Frozen)	APC at 30°C/g	5	2	5x 10 ⁵ cfu/g	10 ⁷ cfu/g	ISO 4833
	Whole Fish (Fresh / Frozen)	Coliform at 37°C/g	5	2	10 cfu/g	100 cfu/g	ISO 4832
		E.coli at 44°C /g	5	2	1cfu/g	10cfu/g	TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
4	- Crustacean,cooked (Frozen/Fresh)	APC at 30°C/g	5	2	5x 10 ⁵ cfu/g	10 ⁷ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100cfu/g	ISO 4832
	Shrimp cooked (Frozen/Fresh)	E.coli at 44°C /g	5	1	10cfu/g	100cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2
	(Fish cooked –(Frozen)	Anaerobic Sulphite reducing at 46°C/g					ISO 15213
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
	Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1	
	Listeria monocytogens/g	5	0	100cfu/g		EN/ISO11290-(2)	

Continued Annex (3) Table(3-1)

Sl No.	Food category	Microorganism	Sampling plan		Limit		Analytical method
			n	c	m	M	
5	Whole cooked crustaceans refrigerated except shrimp	APC at 30°C/g	5	2	10 cfu/g	10 ⁶ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100cfu/g	ISO 4832
	E.coli at 44°C /g	5	2	1cfu/g	10cfu/g	ISO TS 16649-3	
	Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2	
	Salmonella/25g	5	0	Absent		EN/ISO 6579	
	Vibrio cholera /25g		0	Absent		ISO/PRF TS 21872-1	
	Vibrio parahaemolyticus/25g		0	Absent		ISO/PRF TS 21872-1	
	Listeria monocytogens/g	5	0	100cfu/g		EN/ISO11290-(2)	
6	Cooked Shrimps-shelled Frozen /) (Refrigerated	APC at 30°C/g	5	2	5x10 ⁴ cfu/g	10 ⁵ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100cfu/g	ISO 4832
	E.coli at 44°C /g	5	2	1cfu/g	10fu/g	ISO TS 16649-3	
	Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2	
	Salmonella/25g	5	0	Absent		EN/ISO 6579	
	Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1	
	Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1	
	Listeria monocytogens/g	5	0	100cfu/g		EN/ISO11290-(2)	
7	Whole Shrimps (Frozen)	APC at 30°C/g	5	0	10 ⁶ cfu/g	10 ⁷ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100cfu/g	ISO 4832
	E.coli at 44°C /g	5	2	1cfu/g	10fu/g	ISO TS 16649-3	
	Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2	
	Salmonella/25g	5	0	Absent		EN/ISO 6579	
	Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1	
	Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1	
	Listeria monocytogens/g	5	0	100cfu/g		EN/ISO11290-(2)	
8	Raw mollusks (Frozen)	APC at 30°C/g	5	0	5x10 ⁴ cfu/g		ISO 4833
		Coliform at 37°C/g	5	0	10cfu/g		ISO 4832
	E.coli at 44°C /g	5	2	1cfu/g	10 ⁶ u/g	ISO TS 16649-3	
	Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2	
	Salmonella/25g	5	0	Absent		EN/ISO 6579	
	Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1	
	Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1	
	Listeria monocytogens/g	5	0	100 cfu/g		EN/ISO11290-(2)	

Continued Annex (3) Table(3-1)

SI No.	Food category	Microorganism	Sampling plan		Limit		Analytical method
			n	c	m	M	
9	Cooked Mollusks (Frozen)	APC at 30°C/g	5	2	5x10 ⁴ cfu/g	5x10 ⁵ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10cfu/g	100cfu/g	ISO 4832
		E.coli at 44°C /g	5	1	10cfu/g	100cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2/
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
		Listeria monocytogens/g	5	0	100 cfu/g		EN/ISO11290-(2)
10	Cooked Mollusks (Refrigerated)	APC at 30°C/g	5	2	10 ⁴ cfu/g	10 ⁶ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10 cfu/g	100 cfu/g	ISO 4832
		E.coli at 44 oC /g	5	2	1cfu/g	10cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100cfu/g	1000cfu/g	EN/ISO 6888-1 or 2
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
		Listeria monocytogens/g	5	0	100cfu/g		EN/ISO11290-(2)
11	Precooked Breaded Fish	APC at 30°C/g	5	2	5x10 ⁵ cfu/g	10 ⁷ cfu/g	ICMSF,1986
		Coliform at 37°C/g	5	2	10 cfu/g	100 cfu/g	ISO 4832
		E.coli at 44°C /g	5	2	1cfu/g	10cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	1	103cfu/g	10 ⁴ cfu/g	ICMSF,1986



Continued Annex (3) Table(3-1)

Sl No.	Food category	Microorganism	Sampling plan		Limit		Analytical method
			n	c	m	M	
12	Dried Fish	Coliform at 37°C/g	5	0	10 cfu/g		ISO 4832
		E.coli at 44°C /g	5	0	10 cfu/g		ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	0	100cfu/g		EN/ISO 6888-1 or 2
		Anaerobic Sulphite reducing at 46°C/g	5	0	10cfu/g		ISO 15213
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Yeast & Mold			10 cfu/g		ISO 7954:1990
13	Salmon smoked fillet and wrapped	APC at 30°C/g	5	2	10 ³ cfu/g	10 ⁶ cfu/g	ISO 4833
		Coliform at 37°C/g	5	2	10 cfu/g	100 cfu/g	ISO 4832
		E.coli at 44°C /	5	2	1 cfu/g	10 cfu/g	ISO TS 16649-3
		Staphylococcus coagulase +ve/g	5	2	100 cfu/g	1000 cfu/g	EN/ISO 6888-1 or 2/
		Anaerobic Sulphite reducing at 46°C/g	5	0	10 cfu/g		ISO 15213
		Salmonella/25g	5	0	Absent		EN/ISO 6579
		Vibrio cholera /25g	5	0	Absent		ISO/PRF TS 21872-1
		Vibrio parahaemolyticus/25g	5	0	Absent		ISO/PRF TS 21872-1
Listeria monocytogens/g	5	0	100 cfu/g		EN/ISO11290-(2)		

Not:

CFU colony forming unit

n = Number of representative sample units.

c = Maximum number of acceptable sample units with bacterial counts between m and M.

m = Minimum recommended bacterial counts for good quality products.

M = Maximum recommended bacterial counts for marginally acceptable quality products.

Plate counts below “m” are considered good quality. Plate counts between “m” and “M” are considered marginally acceptable quality, but can be accepted if the number of samples does not exceed “c.” Plate counts at or above “M” are considered unacceptable quality

Continue Annex (3)

Table (3_2) Recommended Microbiological Limits for water

Analytical method	CFU (Colony Forming Unit)	Microorganism
ISO 6222	100cfu/ml	Colony count 22 ^o c
ISO 6222	20cfu/ml	Colony count 37 ^o c
ISO 9308 -1 ISO 9308-2 ISO 9308-3	cfu/100ml 0	Coliform
ISO 9308 -1 ISO 9308-2 ISO 9308-3	cfu/100ml 0	(Escherichia coli (E.coli
ISO 6461 -1 ISO 6461-2	cfu/100ml 0	Clostridium Perfringens
ISO7899-1 ISO 7899-2	0cfu/100ml	Enterococci
ISO 12780	0cfu/250 ml	Pseudomonas aeruginosa
ISO6340	0cfu/250 ml	Salmonella
ISO 6461-1 ISO 6461-2	0cfu/250 ml	Enumeration of the spores of sulfite reducing (anaerobes (clostridia

* CFU colony forming unit

Annex (4)

FRESHNESS RATING

The following rating shall be applied on the under mentioned fish groups

1_ White fish: Annex(1), Table (1_2)

	Criteria			Not admitted
	Freshness category			
	Extra	A	B	
Skin	Bright Iridescent pigment(save for redfish) or opalescent ;no discolouration	Pigmentation bright but not lustrous	Pigmentation in the process of becoming discoloured and dull	Dull pigmentation
Skin mucus	Aqueous, transparent	Slightly cloudy	Milky	Yellowish grey, opaque mucus
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 centre; grey pupil; milky cornea
Gills	Bright colour; no mucus	less coloured; transparent mucus	brown/ grey becoming discoloured; thick opaque mucus	Yellowish; milky mucus
Peritoneum in 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
Smell of gills and :abdominal cavity in				
Whitefish other than plaice	Seaweed	No smell of seaweed; neutral smell	Fermented slightly sour	Sour
Flesh	Fresh oily peppery; earth smell	Oily; seaweedy or slightly sweetish	Oily; fermented; stale, slightly rancid	Sour
	Firm and elastic, smooth surface	Less elastic	Slightly soft (flaccid); less elastic (velvety) and dull surface	Soft (flaccid); Scales easily waxy detached from skin, Surface rather wrinkled

Continued Annex (4)

Extra criteria for headed anglerfish

Blood vessels (vental Muscles)	Sharp outline and bright red	Sharp outline; darkening of the blood	Diffuse and brown	Totally diffuse, brown and yellowing of the flesh
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2. Blue fish: Annex(1) Table (1-3)

	Criteria			Not admitted
	Freshness category			
	Extra	A	B	
Skin	Bright pigmentation, bright, shining iridescent colours; clear distinction between dorsal and central surfaces	Loss of luster and shine; duller colours; less difference between dorsal and ventral surfaces	Dull, lusterless, insipid colours; skin creased when fish curved	Very dull pigmentation; skin coming away from flesh
Skin mucus	Aqueous, transparent	Slightly cloudy	Milky	Yellowish grey, opaque mucus
Consistency of flesh	Very firm, rigid	Fairly rigid, firm	Slightly soft	(Soft (flaccid
Gill covers	silvery	Slivery, slightly red or brown	Brownish and extensive seepage of blood from vessels	yellowish
Eye	Convex, bulging, blue black bright pupil, transparent eyelid	Convex and slightly sunken, dark pupil, slightly opalescent cornea	Flat; blurred pupil; blood seepage around eye	Concave in the centre grey pupil; milky cornea
Gills	Uniformly dark red to purple no mucus	Less bright colour, paler at edges transparent mucus	Becoming thick discoloured opaque mucus	Yellowish; milky mucus
Smell of gills	Fresh seaweed, pungent; iodine	No smell or seaweed Neutral smell	Slightly sulphureous fatty smell, rancid bacon cuttings or rotten fruit	Rotten sour

3_ SELACHII (Dogfish, skate) Annex (1) Table (1. 4).

	Criteria			Not admitted
	Freshness category			
	Extra	A	B	
Eye	Convex, very bright and iridescent; small pupils	Convex and slightly sunken; loss of brightness and iridescence, oval pupils	Flat, dull yellowish	Concave
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 quantities of mucus in mouth and on gill openings
Smell	Seaweed smell	No smell or very slight stale but not an ammonia smell	Slight ammonia; sour	Pungent ammonia smell

Specific or additional criteria for skate

	Criteria			Not admitted
	Freshness category			
	Extra	A	B	
Skin	Bright, iridescent and skinny pigmentation aqueous mucus	Bright pigmentation in the process of becoming discoloured and dull, opaque mucus	Pigmentation in the process of becoming discoloured and dull, opaque mucus	Discolouration skin creased, thick mucus
Texture of the flesh	Firm and elastic	Firm	Soft	Flaccid
Aspect	Edge of the fins translucent and curved	Stiff fins	Soft	Drooping
Belly	White and shiny with a mauvish edge around	White and shiny with red patches limited to around the fins	White and dull, with numerous red or yellow patches	Yellow to greenish bellies red patches in the flesh itself

Continued Annex (4)

4_Cephlopods (cuttle fish &Mollusos)

	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; pinky white or slightly yellowing
Tentacles	Resistant to removal	Resistant to removal	More easily removed
Smell	Fresh; seaweed	Slightly or no smell	Ink smell

5_Crustaceas: Annex(1) Table(1_5)

1-Shrimp

	Criteria	
	Freshness category	
	Extra	A
Minimum requirements	Surface of shell: moist and shiny * Shrimps must fall out separately when transferred from one container to another * Flesh must be free from any foreign odour * Shrimp must be free from sand, mucus and other foreign bodies.	The same as for Extra category.
Appearance of: 1. Shrimp with shell	Clear reddish-pink in colour with small white flecks pectoral part of shell predominantly light in colour	Ranging in colour from slightly washed out reddish-pink to bluish-red with white flecks; pectoral part of shell should be light coloured tending towards grey
2. Deep-water prawn	Uniformly pink	Pink with possibility of start of blackening of head.
Flesh texture during and after shelling	Easy to remove the shell with flesh loss, technically unavoidable.	Easy to remove shell with slight flesh loss.
	Firm but not difficult to chew.	Less firm and difficult to chew.
Shrimp pieces.	Crosswise shrimp pieces maybe acceptable	Shrimp pieces maybe acceptable in few quantities.
Smell	Light sweet smell or fresh seaweed smell	Strong smell without seaweed smell.



Continued Annex (4)

2-Lobster

	Criteria		
	Freshness category		
	Extra	A	B
Shell	Pale pink colour to orange .red	Pale pink colour or pink to orange red, without black .spots	Slight colour spoilage with some black spots and grey colour and specially in shell .and between tail parts
Eye and gills	Shining black eyes and pinky gills	Pale eyes with black grey colour and grey gills	Black grey gills or with green .colour on back shell part
Smell	Distinguished light .crustaceans fish smell	Lack of distinguished crustaceans fish smell. No .ammonia smell	.Slight spoilage smell
Flesh tail	Translucent blue inclined .to white colour	Lack of translucency and .not the colour	Untranslucent and pale .appearance

Annex No:(5)

Test of Water, Fish and Fishery Products

Table no (5-1): Test for Drinking Water (Chemical and Microbiological)

Bo.	Test	Ref	Bo. Test Ref Method
1	Turbidity	OS/190	Turbidity measure
2	pH	OS/199/90	pH meter
3	Electrical conductivity		Electrometry
4	Chlorides	OS21/80	Titrimetry
5	Sulphates	OS21/80	Gravimetry
6	Silica		Atomic absorption
7	Calcium	ISO7980	Absorption Spectrophotometry
8	Magnesium	ISO7980	Atomic absorption
9	Sodium	STM	Atomic absorption
10	Potassium	STM	Atomic absorption
11	Aluminium	STM	Atomic absorption
12	Total hardness	OS19	Titrimetry
13	Dry residues		Burning
14	Dissolved oxygen	ISO5813	Oxygen meter
15	Nitrates	ISO3/7890	Spectrophotometry
16	Nitrites	ISO6777	Spectrophotometry
17	Ammonium	ISO5664	Spectrophotometry
18	Nitrogen	STM	Kjeldahl/Nitrogen method
19	Oxidizability	STM	Titrimetry
20	Hydrogen sulphate	STM	Spectrophotometry
21	Substance extractable in chloroform	STM	Extraction
22	Phenols	STM	Spectrophotometry
23	Surfactants	ISO7875	Absorption Spectrophotometry
24	Iron	STM	Atomic absorption
25	Manganese	STM	Atomic absorption
26	Copper	ISO8288	Atomic absorption
27	Zinc	ISO8288	Atomic absorption
28	Fluoride	STM	Spectrophotometry



Continued Annex 5 Table (5-1)

29	Suspended solids	119	Filtration and weighing
30	Residual chlorine	119	Titrimetry
31	Cadmium	OS200	Atomic absorption
32	Mercury	OS250	Atomic absorption
33	Lead	OS200	Atomic absorption
34	Phosphorus	STM	Spectrophotometry
35	Mineral oils	OS357	Spectrophotometry
36	Arsenate	OS200	Spectrophotometry
37	Cyanides	OS200	Spectrophotometry
38	Selenium	OS200	
39	Colour		
40	Odour		
41	Taste		
42	Carbon Dioxide		Acidimetry
43	Total organic carbon		Atomic absorption
44	Boron		Atomic absorption
45	Barium		Atomic absorption
46	Silver		Atomic absorption
47	Chromium		Atomic absorption
48	Nickel		Spectrophotometry
49	Antimony		
50	Vanadium		
51	Pesticides	ISO9308-1-2-3	
52	Sulphide reducing clostridia	ISO6461 1-2	
53	Total counts	ISO6222	
54	E. Coli	ISO9308-(1,2,3)	
55	Enterococci	ISO7899-(1,2)	
56	Pseudomonas aeruginosa	ISO12780	
57	Salmonella	ISO6340	
58	Clostridium perfringens	ISO6461-1,2	
59	Staphylococci		

Continued Annex (5)

Table (5-2):
Test for Fishery Products (Chemical and Microbiological)

Bo.	Test	Reference	Method
1	Visual Test	OS 627	
2	Total count	ISO 4833	
3	Escherichia coli	ISO/DIS1 6649-2	
4	Salmonella	ISO/DIS 6579	
5	Staphylococcus aureus	ISO 6888	
6	Coliform	ISO 7251	
7	V. Cholera	ISO/PDTS - 21872	
8	V.parahaemolyticus	ISO/PDTS - 21872	
9	Listeria Monoctogens	ISO 11290-1,2	
10	Sulphide reducing clostridia	ISO 15213	
11	Clostridium perfringens	ISO 6461-1,2	
12	Total nitrogen	OS 778	
13	Trimethylamine		
14	Histamine		HPLC
15	Mercury		AAS Reducing vaporization (Japanese method)
16	Lead		ICP
17	Cadmium		ICP
18	Radiational contamination	OS 482 – 483	
19	Pesticides		
20	Veterinary drugs residues	EC/657/2002	EC/23/96

Annex No: (6)

A : List of Omani standard specifications complimentary to the quality control regulation for Omani fishery

Specification No.	Name of specification.
61	Hygienic conditions in food factories and their employees.
8	Un bottled potable water.
484	Prepared ice for human consumption.
423	General requirements for transportation and storage of chilled and frozen food stuff.
58	Cards of packaged food stuff.
189	Methods of testing potable mineral water, part one, all samples
96	Sampling methods of packaged foods
104	Methods for determining metallic elements which contaminate food stuff.
778	Physical and chemical methods for testing fish, shell fish and their products.
627	Microbiological methods for testing meat, fish, shellfish and their products.
773	Frozen shrimp.
1066	Method of detecting radiation limits in food stuff.
190	Testing methods of potable and mineral water, 2nd part determination of physical properties.
199	Testing methods of potable and mineral water – part (3) – assessment of soluble solid substances and pH and residual chlorine.
200	Testing methods of potable and methods potable – part (4) – determination of cadmium, lead, cyanides, selenium and arsenic.
250	Testing methods of potable and mineral water – part (7) – assessment of mercury, chromium, silver and barium.
357	Testing methods of potable and mineral water – part (10) – assessment of mineral oils
453	Testing methods of potable and mineral water – Part (13) – assessment of radioactivity and concentration of some radioactive elements
478	Testing methods of potable and mineral water – Microbiological routine tests.
479	Testing methods of potable and mineral water – part (14) – assessment of some elements indicative of pollution
691	Testing methods of potable and mineral water – part (15) – non-routine microbiological tests
17	Potable water – assessment of the percentages of fluoride, nitrate and bromicide
18	Potable water – assessment of the percentages of total copper and iron
19	Potable water – assessment of the percentages of total hardness, calcium and magnesium
20	Potable water – assessment of the percentages of Manganese and Zink.
21	Potable water – assessment of the percentages of chloride and sulphate.
22	Potable water assessment for phenolic compounds (as phenol) contents



Continued Annex (6)

B. List of international specifications applied as Omani Standard Specifications:

Field	Legislation	International specification
Additive substances	Ministerial Decision No. 74/2000	Codex Standard No. 192/2006 “General Standard for Food Activities”
Pesticides residues in food	Ministerial Decision No. 74/2000	Codex Alimentarius pesticides residues in food – maximum residue limits
Veterinary drugs residues in food	Ministerial Decision No. 74/2000	AAS Reducing Vaporization (Japanese Method)

Annex (7)

Coding System

Coding should be in the following format

“Landing site code/Year- month code - date/Species code”

EXAMPLE: SUR/9 F 11/YT : Yellowfin tuna from Sur on 11th June 2009

SUR/9F11/YT

Table (7-1): Date Coding

YEAR	YEAR CODE	MONTH	MONTH CODE
2008	8	January	A
2009	9	February	B
2010	10	March	C
2011	11	April	D
2012	12	May	E
2013	13	June	F
2014	14	July	G
2015	15	August	H
2016	16	September	J
2017	17	October	K
2018	18	November	L
2019	19	December	M

Continued Annex (7)

Table (7-2): Landing Site Coding

REGION	LANDING SITE	CODE	REGION	LANDING SITE	CODE
Al-Sharqia	Sur	SUR	Al-Wusta	Sirab	SRB
	Ashkara	ASK		Khaluf	KLF
	Ras Qumaylah	RQM		Mahoudh	MHD
	Jaalan Buali	JLB		Duqum	DQM
	Ras Al-Had	HAD		Ras Madrakka	MDK
	Bander Al-Jadeed	JDD		Hitam	HTM
	Suwa	SUW		Khadra Al-Jazir	JZR
	Qroon	QRN		Al-Lukby	LKB
	Khuwaima	KHM		Soqurah	SQR
	Ruwais	RWS		Sharbatat	SBT
Dhofar	Al-Halaniai Island	HLN			
	Mirbat	MRB	Al-Batina	Saham	SHM
	Hask	HSK		Sohar	SHR
	Taqa	TAQ		Shinas	SNS
	Sadah	SDH		Lowa	LOW
	Shumaiya	SMY		Suwaiq	SWQ
	Salalah	SLL		Barka	BRK
	Dalkut	DLK		Khabora	KDH
Muscat	Quriat	QRT		Sawadi	SWD
	Muttrah	MTR			
	Azaiba	AZB	Masirah	Masirah Island	MAS
	Sidab	SDB			
	Seeb		Musandam	Ras Lima	RLM

Table(7-3) Processing coding

The following coding is optional; however may prove useful in further facilitating traceability in the company. The codes are placed in parentheses, e.g., (2T) for evening shift and lobster tails, behind the production code.

SHIFT	SHIFT CODE	PROCESSING	PROCESSING CODE
Day	1	Whole (lobster, cuttlefish, squid)	W
Evening	2	Tails (lobster)	T
Night	3	Fillets (cuttlefish, squid)	F
		Ring (cuttlefish, squid)	R
		Tube (cuttlefish, squid)	U

EXAMPLE: lobster tails processed in the evening shift.

SUR/9 F11/SL (2T)

Continued Annex (7)

Table (7-4): Species list and Coding

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
ACANTHURIDAE	Acanthurus bleekeri	-Bleekers surgeonfish	فارسي ، فرض	SF
	Acanthurus sohal	-Sohal, Lined surgeonfish	فرض	
	Acanthurus xanthopterus	-Yellowfin surgeonfish, Blue surgeon	فرض، فرضة	
	Zebrosoma xanthurum	-Yellowtail surgeonfish	فرضة ، ملزم	YSF
ALBULIDAE	Abula glossodonta	-Roundjaw bonefish, Indo-pacific bonefish	تر ، فأر البحر	BF
ARIIDAE	Arius sp.	Sea catfish	خين ، جم	CA
BELONIDAE	Ablennes hians	Barredneedlefish, flat needlefish	خرخور ، مسافا	NFI
	Tylosurus crocodiles crocodiles	Hound needlefish, Crocodile needlefish, Giant longtom	خرخور، حاكول، مران	
BOTHIDAE	Pseudorhombus arsiu	Large tooth flounder	خبز البحر، خوفعة	FL
	Pseudorhombus malayanus	Malayan flounder	خبز البحر	
CARANGIDAE	Alectis indicus	Indian threadfish, Threadfin trevally	خييط ، خياط	IT
	Alectis ciliaris	Threadfin mirrorfish, African pompano	خييط ، خياط	
	Alepes djedaba	Shrimp scad	مزرافة، قملوه ، جنيس	SS
	Atule mate	Yellowtail scad	جنيس، غرايية، قصعية	YS
	Carangoides caeruleopinnatus	Coastal trevally, Bluefin kingfish	صال ، جاش	TR
	Carangoides armatus	Longfin trevally, Longfin Cavalla	بيوض، دبس، صالة، ابو خياط	
	Carangoides chrysophrys	Longnose trevally	صال، جاش	
	Carangoides malabaricus	Malabar trevally	تمكاري، صال، جاش	
	Carangoides equula	Whitefin trevally	صال، جيش، جاش	
	Caranx sem	Blacktip trevally	جشران، صال	BT
	Caranx sexfasciatus	Bigeye trevally	صال، جاش	
	Decapterus macarellus	Mackarel scad	صيمه	MS
	Decapterus russelli	Indian scad	دهلا، صيمة، بليج	
	Elagatis bipinnulatus	Rainbow runner	يفأ، غزال، جودا	RR
Gnathanodon speciosus	Golden toothless trevally, golden trevally	صال، كندر، باكس، زرايدي	TRG	
Megalaspis cordyla	Torpedo scad, hardtail scad	ديايونام سراويل، تيتي	TS	
Naucrates doctor	pilotfish	رباعي، صيدة، غلصة	PIF	

Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
CARANGIDAE	<i>Scomberoides commersonia</i>	-Talung queenfish, largemouth queenfish	حبسة، زرب، لحلاح	QF
	<i>Scomberoides tol</i>	-Needlescaled queenfish	زرب، حبس، باشكل ضلعة	
	<i>Selar crumenophthalmus</i>	-Bigeye scad	صيمية، بالج	BSC
	<i>Selaroides leptolepis</i>	-Yellowstripe scad, yellowstripe trevall	صينة، جيش	YS
	<i>Seriola dumerili</i>	-Greater amberjack	حمامة، جب	GA
	<i>Seriolina nigrofasciata</i>	-Blackbanded trevally , Dusky yellowtail	قشران، فوطه، حمام غزالة	GAB
	<i>Trachinotus bailloni</i>	-Smallspotted dart, Baillons dart	طلاح، رحيسة، سبن	SP
	<i>Trachinotus africanus</i>	-Southern pompano, African Pompano	طلاح، رحيسة	
	<i>Trachinotus blochii</i>	-Snubnose pompano, Silver pompano	سين، رحيسة، طلاح	
	<i>Uraspis secunda</i>	-Cottonmouth jack	ديايوة، صال، جاش	MJ
	<i>Uraspis uraspis</i>	-Whitemouth jack	ديايوة	
CARCHARHINIDAE	<i>Carcharhinus leucas</i>	-Bull shark	جرجور	SH
	<i>Carcharhinus macloti</i>	-Hardnose shark	لخم، جرجور	
	<i>Carcharhinus melanopterus</i>	-Blacktip reef shark	جرجور	
	<i>Loxodon macrorhinus</i>	-Sliteye shark	جرجور	SHS
CHAETODONTIDAE	<i>Chaetodon auriga</i>	-Threadfin butterflyfish	يفيوف، جبل، مشط	TB
	<i>Chaetodon collare</i>	-Redtailed butterflyfish	مشط، أكعيصي	
	<i>Chaetodon gardneri</i>	-Gardener, s butterflyfish	مشط، يفيوف	
	<i>Chaetodon jayakari</i>	-Indian golden barred butterflyfish	مشط، يفيوف	
	<i>Chaetodon melapterus</i>	-Blackfinned melon butterflyfish	يفيوف عربي، مشط العروس	
	<i>Chaetodon nigropunctatu</i>	-Myster butterflyfish, dark butterfly fish	يفيوف عربي، مشط، مشط اسود النقاط	
	<i>Chaetodon vagabundus</i>	-Vagabond butterflyfish	مشط، مشط العروس	
	<i>Heniochus acuminatus</i>	-Pennant butterflyfish, Longfin bannerfish, Common bannerfish	مشط، مشط العروس	PB
	<i>Heniochus diphreutes</i>	-Schooling bannerfish, pennantfish	مشط، مشط العروس	
CLUPEDIAE	<i>Etrumeus teres</i>	Round herring, Red-eye round herrin	عومة	RH
	<i>Nematalosa nasus</i>	Bloch, s gizzard-ahad	يوافة، جواف	BG
	<i>Sardinella albella</i>	White sardinella	عومة	WS
	<i>Sardinella Longiceps</i>	Indian oil sardine, Indian oil sardinella	عومة	

Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
CORYPHAENIDAE	<i>Coryphaena hippuru</i>	- Common Dolphinfish	أنفلوس	DF
	<i>Coryphaena equiselis</i>	-Pompano dolphinish	أنفلوس	
EMMOLICHTYIDAE	<i>Erythodes schlegelu</i>	-Bonnetmouth, Japanese rubyfish	أصلي، بادح	BM
GERREIDAE	<i>Gerres acinace</i>	-Longtail silverbidy, longtail mojarr	بادح	LM
	<i>Gerres filamentosus</i>	-Longrayed mojarra, Whipfin mojarra	بادح، ريشة	
HAEMULIDAE	<i>Diagramma pictum</i>	-Painted sweetlips, Painted rubberlip	خنائي، خشيم جبل	PR
	<i>Plectorhinchus flavomaculat</i>	-Lemon sweetlips, Dusky rubberlip	خنائي، سبط	SL
	<i>Plectorhinchus gaterinus</i>	-Black spotted rubberlip, Black spotted sweetlips	خنائي، هلاللي، خشيم	
	<i>Plectorhinchus orientalis</i>	-Oriental sweetlips, oriental grunt	يميم، هلاللي، خشيم، فورش	
	<i>Plectorhinchus pictus</i>	-Trout sweetlips, Spotted grunt, Painted sweetlips	خنائي، فورش، سادة	
	<i>Plectorhinchus playfairi</i>	-Whitebarred rubberlip	خشيم، خنائي	
	<i>Plectorhinchus schotaf</i>	-Minstrel sweetlips	خنائي	
	<i>Plectorhinchus sordidus</i>	-Sordid rubberlips	خنائي	
	<i>Pomadasys argenteus</i>	-Silver grunt , Javelinfish	نجرور	SG
<i>Pomadasys commersonni</i>	-Smallspotted grunter, Smallspotted grunt	نجرور		
<i>Pomadasys kaakan</i>	-Javelin grunter , linedsilver grunter, Javelin grunt	نجرور، جوحان		
<i>Pomadasys opecularis</i>	-Smallspotted grunter, Smallspotted grunt	نجرور، جوحان		
<i>Pomadasys stridens</i>	-Striped piggy	نجرور، جمجم		
LETHRINIDAE	<i>Lethrinus elongtus</i>	-Longnose emperor, Longfaceemperor	خطام، شعري، سولي	EM
	<i>Lethrinus lentjan</i>	-Redspot emperor	شعري، بادح	
	<i>Lethrinus mahsena</i>	-Yellowtailed emperor, Mahsena emperor	شعري، خودير	
	<i>Lethrinu mahsenoides</i>	-Saburbir Emperor, Yellowbrow emperor	شعري	
	<i>Lethrinu microdon</i>	-Smalltoothed emperor	شعري، سولي	
	<i>Lethrinu nebulosus</i>	-Spangled emperor	شعري، خودير	

Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
LUTJANIDAE	<i>Lutjanus argentimaculatus</i>	-Mangrove red snapper, River snapper	صلخون، حمراء، اصببطيني، مال الخور	SN
	<i>Lutjanus bengalensis</i>	-Bengal snapper	قلاوة، قلاية	
	<i>Lutjanus coeruleolineatu</i>	-Blueline snapper	قلاوة، نيسر، قلاية	
	<i>Lethrinu ehrenbergii</i>	-Blackspot snapper	عكلاة، قلاية	
	<i>Lethrinu erythropterus</i>	-Crimson snapper	حمراء	
	<i>Lethrinu fulviflammus</i>	-Blackspot snapper, dory snapper, Spot snapper	قلاوة، نيسر، قلاية	
	<i>Lutjanus fulvus</i>	-Flame-coloured snapper	قلاية، نيسرة	
	<i>Lutjanus kasmira</i>	-Common bluestripe snapper, Bluebanded snapper	قلاية نيسر	
	<i>Lutjanus lutjanus</i>	-Bigeye snapper	نيسر، عكلاوة	
	<i>Lutjanus madras</i>	-Indian snapper	قلاوة، نيسر قلاية	
	<i>Lutjanus malabaricus.</i>	-Malabar bloodsnapper, Malabar redsnapper	حمراء، حمرة	
	<i>Lutjanus rivulatus</i>	-Blubberlip snapper, Speckled snapper, Blubberlip jobfish	برطام، كهل، دفن، خودير	
	<i>Lutjanus russelli</i>	-Russel,s snapper, One-spot snapper	قلاوة، نيسر، قلاية	
	<i>Lutjanus sanguineus</i>	-Humthead snapper, Bloodsnapper	حمراء	
	<i>Lutjanus vittus</i>	-Brownstripe snapper	قلاوة، قلاية	
Pinjalo pinjalo	-Pinjalo snapper	حمراء، نعيمي	PS	
<i>Pristipomoides filamentosus</i>	-Crimson jobfish, Bluespoted jobfish , Rosy jobfish	عندق، خباية	JF	
<i>Lutjanus argentimaculatus</i>	-Sharptooth jobfish, Sharptooth	عندق، حمام		

Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
MUGILIDAE	<i>Crenimugil crenilabis</i>	Fringelip mullet	بياح، عانوية	FM
	<i>Liza tricuspidens</i>	Striped springer mullet, Striped mullet	عانوية، بياح	ML
	<i>Liza vaigiensis</i>	Diamondscaled grey mullet , Squaretail mullet, Yellowtail mullet	بياح ، أسفيطي	
MULLIDAE	<i>Mulloides flavolineatus</i>	Yellowstripe goatfish	كاسر ملة، سلطان ابراهيم، ميراج	GF
	<i>Mulloides vanicolensis</i>	Yellowfin goatfish	سلطان ابراهيم، حدي	LGF
	<i>Parupeneus macronema</i>	Longbarbel goatfish, Banded goatfish	حدي، سلطان ابراهيم	
	<i>Upeneus sulphureus</i>	Sulphur goatfish, Yellow goatfish	حدي، دقون، سلطان ابراهيم، ميراج	SGF
	<i>Upeneus tragula</i>	Freckled goatfish, Darkband goatfish	دقون، ميراج	FGF
NEMIPTERIDAE	<i>Nemipterus japonicas</i>	Japanese threadfin bream	عندق، غزوان	TB
	<i>Nemipterus mesoprion</i>	Redfilament threadfin bream	عندق، غزوان	
	<i>Nemipterus nemurus</i>	Redspine butterfly bream, Redspine threadfin bream	عندق، غزوان، باسيج	
	<i>Parascolopsis eriomma</i>	Rosy dwarf monocle bream, Shimmering spinecheek	غزوان، بريم	RB
	<i>Scolopsis ghanam</i>	Arabian monocle bream, Dotted spinecheek	برايم، زرع	MB
	<i>Scolopsis taeniatus</i>	Banded monocle bream, Banded spinecheek	برايم	
	<i>Scolopsis vosmeri</i>	Whitecheek monocle bream, Silverflash spinecheek	برايم، غزوان، حاسية	
<i>Octopus aegina</i>	Sandbird octopus	أخطبوط	SO	
PALINURIDAE	<i>Panulirus homarus</i>	Scalloped spiny lobster	شارخة الصخور	SL
	<i>Panulirus versicolor</i>	Painted spiny lobster	الشارخة الملونة	
PENAEIDAE	<i>Penaeus indicus</i>	Indian white shrimp	الربيان الأبيض	WSH
PLOTOSIDAE	<i>Plotosus lineatus</i>	Striped eel catfish	خن فارسي	SC
POMATOMIDAE	<i>Pomatomus saltatrix</i>	Bluefish	تقواية	BL
PORTUNIDAE	<i>Portunus pelagicus</i>	Sand crab	السرطان الرملي	SC
	<i>Scylla serrata</i>	Mud crab, Mangrove crab	سرطان الطين	MC
PSETTODIDAE	<i>Psettodes erume</i>	Indian halibut, Indian spiny turbot	كبش، كلب البحر، مديس، خبز البحر	IH
SCARIDAE	<i>Scarus collana</i>	Red sea parrotfish	جن، بيغاء	PF
	<i>Scarus fuscopurpureus</i>	Purplebrown parrotfish	جن، بيغاء	
	<i>Scarus ghobban</i>	Flame parrotfish, Yellow scale parrotfish, Bluebarred parrotfish	قين، بيغاء، جن	



Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
SCARIDAE	Scarus persicus	Gulf parrotfish	جن، بيبغاء	PF
SCIAENIDAE	Argyrosomus regius	Meagre	شماهي، اشخلي	CRM
	Atractoscion aequidens	Geelbeck croaker, Capesalmon ,Terag	اشخلي، شماهي	CR
	Otolithes ruber	Tigertoothed croaker, Longtoothed salmo	ينم، صارف، ديوش	CRT
SCOMBRIDAE	Acanthocybium solandri	Wahoo, Kingfish	كنعد	WK
	Auxis thazard	Frigate tuna	تبانة، حقيبة، شروي	FT
	Euthynnus affinis	Kawakawa, Eastern little tuna	صداه، شروة	KE
	Katsuwonus pelamis	Skipjack tuna	صده، حقيبة، شروة	ST
	Rastrelliger faughni	Island mackerel, Faughn's mackerel	كرفا	IM
	Rastrelliger kanagurta	Indian mackerel	كرفا، باغة، ضلاعة	
	Sarda orientalis	Striped bonito, Oriental bonito	سقطانة، مرمرة	BO
	Scomber japonicus	Chub mackerel	بالجة، قتمة، ضلعة	CM
	Scomberomorus commerson	Kingfish, Spanish mackerel, narrow-barred Spanish mackerel	كنعد	KF
	Thunnus albacares	Yellowfin tuna	جيذر	YT
	Thunnus tonggol	Longtail tuna	سهوة	LT
SEPIIDAE	Sepia pharaonis	Pharaoh cuttlefish	الحبار القاعي الكبير	CF
SERRANIDAE	Aethaloperca rogae	Redmouth grouper, Flat grouper	لهامور ذو الفم الأحمر	GRR

Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
SERRANIDAE	Cephalopholis aurantia	-Orange rockcod, Golden hind	الهامور الذهبي	GRO
	Cephalopholis hemistiktos	-Yellowfin hind, Halfspotted grouper	هامورن سمان، ضوة	
	Cephalopholis sonnerati	-Tomato seabass, tomato rockcod	هامورن سمان	
	Epinephelus areolatus	-Areolated grouper	هامور، سمان، غلثوق	GR
	Epinephelus chlorostigma	-Brownspotted grouper, Brownspotted rockcod	هامور، قتلوة	
	Epinephelus diacanthus	-Thornycheek grouper, Spinycheek	هامور	
	Epinephelus epistictus	-Dotted grouper, Brokenline grouper, Blackspotted grouper	هامور	
	Epinephelus latifasciatus	-Laterally banded grouper, banded grouper, Striped grouper	هامور، الهامور المخطط	
	Epinephelus moara	-Longteeth grouper	هامور	
	Epinephelus multinotatus	-Whiteblotched grouper	هامور، برطام، سمان، مشخالي	
	Epinephelus radiatus	-Obliquebanded grouper	هامور	
	Epinephelus stoliczkae	-Epaulet grouper	هامور	
	Epinephelus tukula	-Potato grouper	هامور	
	SIGANIDAE	Siganus canaliculatus	-Whitespotted spinefoot, Whitespotted rabbitfish	صايف
Siganus javus		-Streaked spinefoot, Streaked rabbitfish	صايف، صايف ضيفي	
Siganus rivulatus		-Marbled spinefoot, Rivulated rabbitfish	صايف	
Siganus spinus		-Little spinefoot, Squaretail rabbitfish	صايف، سيسيق	
SOLEIDAE	Pardachirusmarmoratus	-Finless sole, Moses sole	مديس، خوفعة	FS



Continued Annex 7 Table (7-4)

FAMILY NAME	SCIENTAFIC NAME	ENGLISH NAME	ARABIC NAME	CODE
SPARIDAE	<i>Acanthopagrus bifasciatus</i>	-Two bar bream, Double bar bream	فسكرة، ربابة، بنت النوخدة	BR
	<i>Acanthopagrus latus</i>	-Yellowfin bream	سيطي	
	<i>Acanthopagrus sp</i>	-Seabream	شعم	
	<i>Argyrops filamentosus</i>	-Soldier bream	فرنكة، كوفر، ضاف، طرحة	BS
	<i>Argyrops spinifer</i>	-King soldier bream, longspine bream	كوفر، فرنكة	
	<i>Cheimerius nufar</i>	-Santer bream, barred silver bream	كوفر، فرنكي	SB
	<i>Diplodus cervinus hottentot</i>	-Zebra seabream	شعم، ضعرة	ZB
	<i>Diplodus sargus kotschy</i>	-White seabream, Dassie, Onespot Pandora	كوفر، ضعرة	
	<i>Lithognathus mormyrus</i>	-Striped seabream, Marmora.	نزحة، خشيم	SSB
	<i>Pagellus affinis</i>	-Arabian pandora	نزحة	AP
	<i>Pagellus natalensis</i>	-Natal Pandora, natal seabream	نزحة، نزاحه	
	<i>Rhabdosargus sabra</i>	-Goldlined seabream	شعم، قابط	GP
	<i>Rhabdosargus sp</i>	-Seabream stumpnose	شعم، تراحة	
SPHYRAENIDAE	<i>Sphyaena acutipinnis</i>	-Sharpfin Africana	قد، عقام	BC
	<i>Sphyaena barracuda</i>	-Great barracuda	القد نعقام	
	<i>Sphyaena flavicauda</i>	-Shortjawed barracuda, Yellowtail barracuda	قد، عقام	
	<i>Sphyaena jello</i>	-Pickhandle barracuda	قد، جد	
	<i>Sphyaena obtusata</i>	-Obtuse barracuda	قد، جد، عقام	
SYNODONTIDAE	<i>Saurida tumbil</i>	-Greater lizardfish	حاسوم، عقامة، كسور	LF
	<i>Saurida undosquamis</i>	-Brushtooth lizardfish	حاسوم، ابولين	
TERAPONIDAE	<i>Terapon jarbua</i>	-Jarbua terapon, Tigerfish, Thornfish	برعم، جمجام، بام، صارور	TF
	<i>Terapon theraps</i>	-Largescaled terapon	برعم، جمجام، صارور، بام	
RICHIURIDAE	<i>Trichiurus lepturus</i>	-Largehead hairtail, Largehead ribbonfish	خردويل	LH
ISTIOPHORIDAE	<i>Istiophorus platypterus</i>	Sailfish	خيل البحر، فرس	SAF
	<i>Makaira spp</i>	-Marlin	سنسول	MR
XIPHIIDAE	<i>Xiphias gladius</i>	-Swordfish	أبوسيف	SW



ANNEX NO: 8

GUIDELINES FOR THE HAZARD ANALYSIS AND CRITICAL CONTROL POINT CONCEPT (HACCP).

Application of the hazard analysis critical control point concept is considered as an organized approach for tracing the steps in order to determine the hazards and to assess the possibility of their existence or occurrence during the processing, distribution or use of food products. The concept also determines the methods and means of control of such hazards and therefore it is deemed as a complementary mean for safeguarding the safety and monitoring the general quality plan.

The hazard analysis critical control point concept shall be applied in any fish processing establishment and it shall be made sure that such establishment operates in accordance with the general principles of codex related to food safety and the appropriate codes of practices and legislations pertaining to food safety. All fish processing establishments shall keep a printed copy of the hazard analysis critical control point concept which is applied by the establishment duly endorsed by the competent authority.

Definitions

The hazard analysis and critical control point concept: an approach for determining contamination sources and hazards by any biological chemical or alien substances which may harm food safety and the related assessment and control measures.

- * Contamination hazards: biological, chemical and physical hazards which exist or occur in food and may cause harmful health impacts.
- * Critical point: a criterion for differentiating between what is acceptable and what is not acceptable.
- * Control: taking all necessary proper actions and compliance with the required criterions.



Principle of the hazard analysis and critical control point concept

The hazard analysis and critical control point concept is based on 7 principles which form the pillar of the concept as follows:

First Principle

Analysis of contamination hazards

Collection and assessment process of the information related to the contamination hazards and the cases which lead to their existence in order to determine their importance to food safety and to deal with them in accordance with a plan of hazard analysis and critical control point.

Second Principle

Determination of critical points

The critical control point may be a raw material, position in production line, treatment, method or an operation which can be conducted during the processing and monitoring in order to prevent or to remove or limit one of the contamination hazards. These are the points where the control measures can be applied which are considered basic for preventing exposure of food safety to hazards or for eliminating them or reducing them to the acceptable level.

Third Principle

Determination of critical limits

Determination of the physical, biological or chemical values or features which are used for differentiation between the acceptable and non acceptable food product properly under test

Fourth Principle

Setting up a concept for monitoring each critical control point

A concept shall be created for monitoring to ensure accurate control of each critical point according to the use of the criteria as agreed to.

Fifth Principle

Determination of corrective actions

Any actions which shall be implemented when the monitoring results of the critical point reveal that the product property exceeded the control limits (accepted). The corrective actions shall be executed as soon as possible while paying adequate attention to the appropriate monitoring means.



Sixth Principle

Setting up verification measures for ensuring the efficiency of the hazard analysis and critical control point concept:

This step is considered an important mean for inspection during examination of hazard analysis and critical control point concept. The examination includes several activities such as inspection, revision, conduction of microbiological and chemical tests for verification of the control means efficiency.

Seventh Principle

Keeping the documents

Keeping the documents is considered a basic element in the system and such documentation will result in the preservation of the entire information acquired and collected during the establishment, amendment and implementation of the concept. This will enable anyone concerned to review the system and be acquainted with it.

Guidelines for the application of hazard analysis and critical control point concept.

- The hazard analysis and critical control point concept can be applied by implementing the series of the following tasks.
- Formation of the required team for the application of hazard analysis and critical control point concept.
- The work team is generally formed of a director or general supervisor responsible of the concept, engineer, quality control official and analysis specialist. The team members shall be adequately acquainted with the hazard analysis and critical control point concept. They may also seek the assistance and advice of other individuals and establishments.
- **Products classification:**
A complete classification shall be prepared for the products including the related food safety information such as physical, chemical composition and components, elimination and limitation methods of micro organisms, packing, wrapping, storage, distribution and validity period.
- **Determination of intended usage:**
The final usage of the product shall be explained along with the consumers category to whom the product is directed while taking into consideration Sensitive categories to the product from the general consumers



- **Determination of the flow track**

The hazards analysis and critical control point team shall describe the product production lines track with comprehensive description to all processing stages and indication of any critical points recorded.

- **Monitoring of flow track**

The processing operation shall be monitored to ensure that it is proceeding according to the planned flow track and to introduce any necessary amendments to the processing operations. The monitoring and verification shall be carried out by trained individuals fully acquainted with the designed flow tracks.

- **Determination of likely contamination hazards**

The assigned team for the application of the concept shall prepare a list of the likely contamination hazards that may occur at each step (chemical, biological or physical) beginning by the production or reception of raw materials and heading to preparation, processing, distribution and ending by the consumer table. The team shall study and assess contamination hazards which shall be removed or reduced to the acceptable level for producing safe food.

- **Determination of critical control points**

The work team shall determine the critical control points after identifying the hazard sources and the control measures in addition to the inspection of the processing operation for each production step.

- **Determination of critical limits for each control point**

The maximum limits for each critical control point shall be determined and the value of such limits shall be verified including the criterions which are frequently applied in this regard such as measure of temperature and the time and humidity level and acidity and alkaline degree and permitted water activity, chlorine and standard sensory features such as appearance and texture.

- **Setting up a system for monitoring critical control points**

It shall be observed to carry out the required measures and the monitoring tasks at each critical point.



- **Determination of corrective actions:**

It shall be observed to lay down specific corrective actions for each critical control point to enable to rectify the deviations.

- **Setting up verification measures:**

It shall be observed to use the verification measures and revision and testing means including collection of random samples and analyzing them for determining whether the concept is properly operating or not.

- **Collection and keeping of documents and records:**

It shall be observed to keep proper and accurate documents and records pertaining to the entire processing stages and monitoring of critical control points as these are considered as basic elements for the application of hazards analysis and critical control point concept.

