



environment, forestry
& fisheries

Department: Environment, Forestry
and Fisheries
REPUBLIC OF SOUTH AFRICA

Standard Operating Procedure: Classification of Farms

Branch: Fisheries Management
Chief Directorate: Aquaculture & Economic Development
Directorate: Sustainable Aquaculture Management

Issue 7: March 2021

TITLE

Standard Operating Procedure: Classification of Farms

COMMENCEMENT

This Standard Operating Procedure comes into force on 1 March 2021.

REVOCATION

This programme issue revokes and replaces Standard Operating Procedure: Classification of Farms, Issue 6 as well as any previous issues of the document.

STANDARD OPERATING PROCEDURES ISSUED

Issue	Date of issue
1	19 March 2014
2	1 June 2016
3	1 June 2017
4	1 February 2018
5	1 January 2019
6	1 September 2020
7	1 March 2020

ISSUING AUTHORITY

This Standard Operating Procedure is issued by the Environmental Officer Specialised Production of the Directorate Sustainable Aquaculture Management of the Department of Environment, Forestry and Fisheries in terms of the South African Shellfish Monitoring (Issue 8) and Control Programme that was issued by the Deputy Director General of the Branch Fisheries Management.



Environmental Officer Specialised Production
DATE: 23/02/2021

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1. DOCUMENT CONTROL

The Standard Operating Procedure (SOP): Classification of Farms was compiled by Department of Environment, Forestry and Fisheries: Food Safety Office (FSO) of the Directorate Sustainable Aquaculture Management. The SOP is administered by the FSO and will be reviewed and updated as relevant new information becomes available.

A detailed record of all amendments shall be maintained, and the latest version will be made available at the FSO and will be loaded onto the DEFF website. Suggestions for alterations that would significantly improve the document are welcomed. These should be forwarded to the coordinator, Mr John Foord and enquiries can be directed to Mr Mayizole Majangaza (Appendix 1).

2. SCOPE

This document covers the procedures for the classification of farms as required in terms of the South African Shellfish Monitoring and Control Programme (SASM&CP). The procedures include the provisional and full classification requirements for marine shellfish production facilities and the reporting of the analysis results to the Department of Environment, Forestry and Fisheries (DEFF). Sampling of the shellfish takes place at various production areas located between Port Nolloth in the Northern Cape and Haga Haga in the Eastern Cape, South Africa.

3. BACKGROUND

The Department of Environment, Forestry and Fisheries (DEFF) is the managing and regulatory authority for the undertaking of aquaculture activities that include farming, harvesting and transporting of fish for wholesale trading stipulated in the permit conditions issued in terms of the Marine Living Resources Act, 1998 (Act No. 18 of 1998) and associated regulations. The Directorate: Sustainable Aquaculture Management (D: SAM) of the Fisheries Branch of DEFF is responsible for the development, management and regulation of a sustainable aquaculture industry that contributes towards job creation, food security, rural development and economic growth. D: SAM aims to achieve the above mentioned strategic objectives through the development and implementation of relevant enabling legislation, policies and programmes as well as be responsive and compliant to international obligations and agreed standards. The Food Safety Office (FSO) within D: SAM is responsible for the development and management of food safety programmes stipulated in the permit conditions issued in terms of the Marine Living Resources Act, 1998 (Act No. 18 of 1998) including the SASM&CP, South African Aquacultured Marine Fish Monitoring and Control Programme (SAMFM&CP) and National Residue Control Programme (NRCP). The objectives of the food safety programmes include providing guarantees to domestic and international markets and consumers that South African cultured fish products are safe for human consumption.

The risks to food safety of cultured fish include environmental residues (heavy metals, pesticides, polychlorinated biphenyl, dioxins polycyclic aromatic hydrocarbons and radionuclides) and veterinary drug residues (hormones, antibiotics and anthelmintics), the accumulation of biotoxins (Paralytic Shellfish Toxins (PST), Lipophilic Shellfish Toxins (LST) and Amnesic Shellfish Toxins (AST)) and microbiological contamination in shellfish indicated by the presence of *E. coli*.

The classification of shellfish production areas are required prior to the harvesting and marketing of shellfish from the production area to determine the food safety risks to the relevant production areas. The classification is based primarily on microbiological risks as well as environmental contaminants that may impact on the species to be harvested. A sanitary survey shall be carried out for each new production area prior to its approval as a source of shellfish for human consumption or for shellfish to be used in a relaying or depuration facility. The test results and sanitary survey will be used to classify the farm in accordance with the SASM&CP.

4. SAMPLING REQUIREMENTS AND SAMPLE SUBMISSION

DEFF are required to determine the official sampling stations from which the samples shall be taken based on potential food safety risks. The sampling stations for the land-based farms shall be located in the production facility or in close proximity to the water intake pipe. The sampling stations for the sea-based farms shall be within the production area close to the source of potential food safety risks.

The species sampled shall be the shellfish species to be cultured or a suitable surrogate as advised by DEFF. Where the culture species is not available in a new production area an alternative species may be used as advised by the DEFF. In the case of bivalves, it may be necessary to place bags containing the culture species in the production area to provide shellfish for testing.

The DEFF has appointed National Regulator for Compulsory Specifications (NRCS) to officially sample the production facilities. The samples are taken and transported to the relevant laboratories in accordance with the Standard Operating Procedure (SOP): The Sampling and Transport of Aquacultured Marine Fish. The samples are sent to laboratories approved by the FSO for testing (Appendix 1).

The testing of samples shall be undertaken as outlined in the SASM&CP and the regulatory limits are indicated in the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) regulations, the National Residue Control Plan (NRCP), and the SASM&CP. The results from the laboratories shall be emailed to the Food Safety Office (Email: SAMSanitation@environment.gov.za) within 24 hours of completing the analysis.

5. PROVISIONAL CLASSIFICATION

Should a shellfish farm want to market its products for human consumption, the farm is required to be classified prior to harvesting, which takes a minimum of one year. The farm may, however, request provisional classification based on the following criteria, which takes a minimum of three months:

- 1) For a period of no shorter than three months prior to sale, shellfish shall be sampled weekly from the production area and tested for *E. coli*. A minimum of 12 samples shall be analysed and no more than one sample may be taken per week.
- 2) Within the first three months samples from the farm shall also be tested for:
 - Pesticides (Organophosphate & Organochlorine)
 - Dioxins
 - Dioxin-like and non-dioxin-like polychlorinated biphenyls (PCB).
 - Heavy metals viz. Lead, mercury and cadmium
 - Radionuclides (Caesium 134 and 137)
 - Additional tests required based on potential food safety risks include but not limited to polycyclic aromatic hydrocarbons (PAH) if the farm is in close proximity to a harbour or port.
- 3) Once the test results are completed DEFF is required to draft a Sanitary Survey Report based on the test results and a survey of the farm surroundings

Once the farm is provisionally classified, the farm is required to test for PST, LST and AST no longer than one week prior to harvest in accordance with the SASM&CP requirements. The farm is furthermore required to be included in the NRCP and comply with the SASM&CP requirements for routine monitoring.

6. FULL CLASSIFICATION

Full classification takes a minimum of 12 months and is based on the following criteria:

- 1) Results of microbiological testing of shellfish samples taken over a period of at least 12 months are required for full classification of the production area.

- 2) A minimum of 30 samples are required to be tested for *E. coli* full classification. The samples shall not be taken more frequently than every two weeks for the final nine months if the farm was provisionally classified. If the farm was not provisionally classified samples for *E. coli* testing shall be taken every two weeks for the 12 month period and the additional 6 samples may also be taken within the 12 month period but no *E. coli* sample may be taken more frequently than once a week.
- 3) Farms are required to test for heavy metals, pesticides and PCBs as well as additional tests based on potential food safety risks and tests required by importing country. Samples shall be tested twice within the classification period and the samples shall be taken at least 6 months apart for the same test.

7. REFERENCES

Department of Environment, Forestry and Fisheries. 2021 South African Shellfish Monitoring and Control Programme. Cape Town. Issue 8, 1-65.

National Regulator for Compulsory Specifications. 2018. Procedure: Sampling and Transport of Aquacultured Marine Fish. Cape Town. Issue 1, 1-14.

Appendix 1: Contact Information

Food Safety Office
 Directorate: Sustainable Aquaculture Management
 Chief Directorate: Aquaculture and Economic Development
 Department of Environment, Forestry and Fisheries
 Sea Point Research Facility
 307 Beach Road
 Sea Point
 8001

Food Safety Office

Contact	Email	Office	Cell
Food Safety Office	SAMSanitation@environment.gov.za	021 430 7065	-
Ms Helen Ntoampe	HNtoampe@environment.gov.za	021 430 7065	-
Ms Portia Dwane	PDwane@environment.gov.za	012 319 6397	076 172 7305
Mr Mayizole Majangaza	MMajangaza@environment.gov.za	021 430 7076	061 5062328
Mr John Foord	JFoord@environment.gov.za	021 430 7003	082 343 8327

Laboratories

Laboratory	Tests	Manager	Telephone	Email	Address
NOSA	Biotoxins Heavy metals (Pb, Hg & Cd)	Mr Fikree van Niekerk Reception	021 658 2740 021 492 6652	mogammat.vniekerk@nosa.co.za	3 Hermes Street Paarden Eiland 7405 Cape Town
Mérieux NutriSciences	<i>E. coli</i> Dioxins Dioxin-like PCBs Non-dioxin-like PCBs Heavy metals (Pb, Hg, Cd & As) Pesticides Radionuclides PAH	Ms Firoza Jacobs Reception	021 683 8436 021 683 8436	firoza.jacobs@mxns.com	7 Warrington Road, Claremont 7708 Cape Town
NECSA	Radionuclides	Mr Deon Kotze Reception	012 305 5243 082 857 6455 012 305 5728	deon.kotze@necsa.co.za	Elias Motsoaledi Street & Church Street West Ext Pelindaba 0240 Pretoria
SABS	Pesticides (Organophosphate & Organochlorine)	Mr Hein Garbers Reception	082 375 41 67 012 428 6648 / 012 428 6446	hein.garbers@sabs.co.za	1 Dr Lategan Road Groenkloof 0001 Pretoria

PAH – polycyclic aromatic hydrocarbons, PCB – polychlorinated biphenyl, Pb – lead, Hg – mercury, Cd – cadmium, As – arsenic