

INDIA

NATIONAL RESIDUE CONTROL PLAN

FOR

AQUACULTURE PRODUCTS

YEAR 2018



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**NATIONAL RESIDUE CONTROL PLAN OF INDIA FOR
AQUACULTURE PRODUCTS – 2018**

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NATIONAL RESIDUE CONTROL PLAN (NRCP) OF INDIA FOR AQUACULTURE PRODUCTS – 2018

1.	Introduction
	The major concern all over the world for food and feed products of animal origin including aquaculture products is the presence of residues of veterinary medicinal products, feed additives and environmental contaminants. Specifications for a residue control programme are determined by the importance of the various health risks that could be incurred by consumers of products derived from animal food products. The Govt. of India is committed to ensure safe seafood for domestic and overseas market. Keeping the above in view, the National Residue Control Plan (NRCP) of India for Aquaculture products has been formulated for monitoring the presence of residues of Veterinary Medicinal Products (VMPs) including antibacterial and other veterinary/aquaculture medicinal substances like anthelmintics, growth promoters, substances like dyes, aflatoxin and environmental contaminants such as Organochlorine compounds including Pesticides, PCBs, Dioxins/Furans & dioxin like PCBs and Chemical Elements (Heavy Metals), etc.
2.	Objectives of NRCP
	➤ To establish a system for monitoring residues of Aquaculture drugs/VMPs and Environmental contaminants etc. in shrimp, scampi, fresh water fish, hatchery seed and feed samples drawn from aquaculture farms, feed mills, hatcheries and processing establishments. ➤ To establish a system of corrective action in the event of detection of residues/contaminants higher than the prescribed limits. ➤ To ensure that the aquaculture products exported from India <u>meet the prescribed regulatory requirements</u> of the importing countries/EU.
3.	Scope of NRCP
	All aquaculture farms, processing establishments, feed-mills and hatcheries linked to and / or intended for export oriented production of aquaculture products and the testing and certifying laboratories are covered under the NRCP, in order to ensure an overall monitoring of the aquaculture products at different stages of production to guarantee safe products from farm to table.
4.	Implementation of NRCP
	By exercising the powers under The Export (Quality Control & Inspection) Act, 1963, Ministry of Commerce and Industry (Govt. of India), amending the Notification S. O. 730 (E) dated 21.8.1995, vide notification No S.O. 1034(E) dated 9th September 2003, designated the Marine Products Export Development Authority (MPEDA) to carry out the residue monitoring on behalf of Export Inspection Council of India, the Indian Competent Authority.
5.	Aquaculture in India
	India is one of the largest supplier of shrimp to the world and ranks 2nd highest in aquaculture production in the global scenario (FAO Fisheries Statistics 2016). The pollution free waters along the 8129 km long Indian coastline, 1.2 million hectares of brackish water area and 5.4 million hectares of fresh water area contribute to the aquaculture (Handbook on Fisheries Statistics, 2014, Ministry of Agriculture, Govt. of India). In India, the aquaculture constitutes mainly freshwater and brackish water culture and are practiced

in the 9 maritime states of India. Andhra Pradesh is the leading state of aquaculture which produces about 63% of the total cultured crustaceans (*Litopenaeus vannamei*, *Penaeus monodon* and *Macrobrachium rosenbergii*) in India. Species-wise aquaculture production through inland and brackish water culture is given in Table-1 below

Presently, *L. vannamei* and *P. monodon* are the main species cultured in brackish water. This forms the bulk of shrimp exports to EU and other countries..

5.1 Brackish water/ Fresh water Shrimp/ Prawn culture

Table – 1

Name of species	Production (M/T)
Shrimp (<i>L. vannamei</i> <i>P. monodon</i> & <i>P. indicus</i>)	5,61,138
<i>Macrobrachium rosenbergii</i>	3,377
Total	5,64,515

Source: MPEDA, 2016 -17

5.2 Details of State-wise production of brackish water shrimp & freshwater Prawn (Scampi) during 2016-17:

Among the maritime states, most of the aquaculture activities are concentrated in Andhra Pradesh. The other leading states in aquaculture production are West Bengal, Kerala, Orissa and Gujarat (MPEDA). The aquaculture production of crustaceans (shrimp & scampi) in the country is given in Table: 2 below.

Table – 2

State	L. vannamei & P. monodon	% (production)	M. rosenbergii (Scampi)	% (production)	TOTAL Production (MT)
	Production(MT)		Production(MT)		
West Bengal	71051	12.66	2421	71.70	73472
Odisha	29296	5.22	769	22.77	30065
Andhra Pradesh	355956	63.43	14	0.41	355970
Tamil Nadu	49054	8.74	144	4.26	49198
Kerala	3987	0.71	29	0.86	4016
Karnataka & Goa	2197	0.39	0	0	2197
Maharashtra	6842	1.22	0	0	6842
Gujarat	42755	7.62	0	0	42755
Total	561138	99.99	3377	100	564515

5.3	Enrollment of Aquaculture Farms by MPEDA:																																																				
	In order to identify the aquaculture farms producing material for export intended production, the aqua farms producing shrimp (for export intended production), are enrolled by MPEDA. The details of aqua farms were collected through special campaigns conducted in the farming clusters by representatives of MPEDA. The information collected is digitized into several attributes of aqua farms database. Each farm enrolled is physically verified to obtain the Geo-spatial information through capturing co-ordinates of the aqua farm with the help of GPS instrument and the centroid of the farm is created by its latitude and longitude. Other required details/information on the farms are also collected by the representative of MPEDA. Each farm enrolled is recognized by a unique identification number of 8 characters.																																																				
5.4	Aquaculture Farms, Feed-mills & Hatcheries																																																				
	The number of aquaculture farms, hatcheries enrolled with MPEDA and the feed-mills manufacturing aqua feeds and functional are as shown in Table: 3 below. Table: 3 <table><tr><th colspan="4">Number of Aquaculture Farms, Feed-mills & Hatcheries enrolled/registered under MPEDA</th></tr><tr><th>Region/State</th><th>Farms</th><th>Feed-mills (functional)</th><th>Shrimp Hatcheries (functional)</th></tr><tr><td>West Bengal</td><td>8597</td><td>0</td><td>0</td></tr><tr><td>Odisha</td><td>5944</td><td>1</td><td>17</td></tr><tr><td>Chattisgarah</td><td>0</td><td>1</td><td>0</td></tr><tr><td>Andhra Pradesh</td><td>34961</td><td>20</td><td>226</td></tr><tr><td>Tamil Nadu</td><td>1695</td><td>3</td><td>72</td></tr><tr><td>Kerala</td><td>2256</td><td>0</td><td>12</td></tr><tr><td>Karnataka</td><td>373</td><td>0</td><td>4</td></tr><tr><td>Goa</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Maharashtra</td><td>219</td><td>0</td><td>0</td></tr><tr><td>Gujarat</td><td>751</td><td>1</td><td>5</td></tr><tr><td>Total</td><td>54796</td><td>26</td><td>336</td></tr></table>	Number of Aquaculture Farms, Feed-mills & Hatcheries enrolled/registered under MPEDA				Region/State	Farms	Feed-mills (functional)	Shrimp Hatcheries (functional)	West Bengal	8597	0	0	Odisha	5944	1	17	Chattisgarah	0	1	0	Andhra Pradesh	34961	20	226	Tamil Nadu	1695	3	72	Kerala	2256	0	12	Karnataka	373	0	4	Goa	0	0	0	Maharashtra	219	0	0	Gujarat	751	1	5	Total	54796	26	336
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5.5	Export of Aquaculture Products (Shrimp and Fish) by EU approved export establishments																																																				
	During the year 2016-17, a total quantity of 322691MT of aquacultured shrimp/products exported by EU approved export establishments to EU and non-EU countries and 2197MT of fresh water fish/products exported by EU approved units to EU and Non EU countries.																																																				
6.0	Residue monitoring in India																																																				
	There are 537 land based processing establishments in India. Of which, 347 establishments have been approved for processing of fish and fishery products to EU. In addition, 62 independent cold storages are also approved for storage of fish and fishery products for export to EU. Compliance with the Hazard Analysis and Critical Control Point (HACCP) system has been made																																																				

	mandatory for all seafood processing units in India. The residue control plan for aqua cultured animal is implemented since 1998 in India so as to comply with EU Directive 96/23/EC to ensure the safety of aquaculture products exported to member states of the European Union. Substances like Chloramphenicol, Nitrofurans, Nitroimidazoles, Stilbenes, Steroids, Tetracyclines, Sulphonamides, Quinolones/Fluroquinolones, Anthelmintics, Mycotoxins, Organo-chlorine Pesticides, PCBs, Dioxins, Heavy Metals, Dyes, etc. are monitored under NRCP.
7.0	Organizations associated with the implementation of NRCP:
	The Export Inspection Council of India (EIC) set up under Section 3 of the Export (Quality Control and Inspection) Act 1963, is the Competent Authority (CA) for inspection and quality control of fish and fishery products meant for exports.
7.1	Registering authorities for aquaculture farms:
	As per provision made in notification no. S.O. 497(E) dated 10.3.2011, the Competent Authority has recognized CAA, MPEDA & State Fisheries Authorities for registering the aquaculture farms.
7.2	The Marine Products Export Development Authority (MPEDA), a statutory body under Ministry of Commerce & Industry (Govt. of India) was constituted by the Marine Products Export Development Authority Act No 13 / 1972, to promote the production and export of marine products. Following are the major functions of MPEDA: 1. Registration of exporters / processing plants establishments/ storage premises / fishing vessels. 2. Quality up-gradation and modernization of seafood marine products industry. 3. Development of infrastructure facilities. 4. Implementation of residue monitoring/control programmes such as NRCP (as per EU Directive 96/23/EC), Monitoring of Pesticide Residue at National Level (MPRNL), etc. Monitoring of Cadmium content/residue in Cephalopods 5. Enrolment of farms, hatcheries & feed-mills intended for export linked production in order to ensure the code of practices for producing quality aquaculture products, hatchery seeds & aqua feed. 6. Promotion of export of marine products from the country to different international markets. 7. Guidance to farmers to adopt good management practices and sustainable aquaculture.
7.3	NRCP laboratories
	The MPEDA has set up a network of 4 (four) Quality Control Laboratories at Kochi, Bhimavaram, Nellore & Bhubaneswar. The Quality Control Laboratories at Kochi, Bhimavaram, Bhubaneswar & Nellore are involved in implementation of the National Residue Control Plan for aquaculture products, as per EU Directive 96/23/EC.

	In addition to above, Export Inspection Agency-Chennai laboratory shall be utilized for testing the parameters like dioxin & furans.
7.3.1	MPEDA Quality Control Laboratory, Kochi (Cochin)
	The Marine Products Export Development Authority (MPEDA), Ministry of Commerce and Industry, Government of India, MPEDA House – 5 th Floor, Panampilly Avenue, Cochin – 682036, Karalla, India. (Tel.91-484-2311979, 2321811, 2311033 Fax.91-484-2313361, E-mail: asha@mpeda.gov.in ; maresh@mpeda.gov.in)
7.3.2	MPEDA Quality Control Laboratory, Bhimavaram
	The Marine Products Export Development Authority, Pattabhi Plaza, 2 nd floor, 27/1/6, Juvalpuram Road, Bhimavaram-534202, West Godavari Dist. Andhra Pradesh, Tel: 91-08816-226410, 227076 E-mail: lab.bhi@mpeda.gov.in
7.3.3	MPEDA Quality Control Laboratory, Nellore
	The Marine Products Export Development Authority, D.No.26-1766/A-1, Srinagar colony, Mini Bypass Road, Nellore- 524003, Andhra Pradesh. Tel: 91-0861-2319144, 2319344 E-mail: lab.nel@mpeda.gov.in
7.3.4	MPEDA Quality Control Laboratory, Bhubaneswar
	N-6/452, Satya Kali Residency, 1st Floor, Near Crown Hotel, Nayapalli, Bhubaneswar-751015, Odisha Tel: 91-674-2362365, E-mail: lab.bhu@mpeda.gov.in
7.3.5	Export Inspection Agency-Chennai laboratory
	Export Inspection Agency-Chennai , 6th Floor CMDA Tower II, No: 1, Gandhi Irwin Road, Egmore, Chennai - 600 008, Tel: +91-44 - 2855 2841 / 42 Fax: + 91-44 - 2855 2840 E-mail: eia-chennailab@eicindia.gov.in
8.0	Level of competence of the MPEDA Laboratories and EIA-Chennai Laboratory involved in residue monitoring:
	The MPEDA QC Laboratories and EIA-Chennai Laboratory are equipped with high precision sophisticated equipment like Liquid Chromatography Tandem Mass Spectrometer (LC-MSMS), Inductively Coupled Plasma - Mass Spectrometer (ICP-MS), Atomic Absorption Spectrometer (AAS), High Performance Liquid Chromatograph (HPLC), Gas Chromatograph(GC-ECD), Gas Chromatograph - Mass Spectrometer (GC-MS / GC-MSMS), etc. and all necessary supporting equipment/instruments. The EIA-Chennai Laboratory is also equipped with the GC-HRMS.
8.1	Accreditation / approvals of Laboratories:
	The MPEDA QC Laboratories & EIA Chennai laboratories are accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL), member of International Laboratory Accreditation Co-operation (ILAC), as per the ISO/IEC 17025 Standard. The scope of accreditations covers testing of fish and fishery products for chemical residues. The Laboratories are also approved by the Export Inspection Council of India for testing of fish and fishery products intended for export.

8.2	Proficiency Test & Inter-laboratory comparisons:
	The MPEDA Laboratories (Kochi, Nellore & Bhimavaram) & EIA Chennai laboratory participate regularly in Proficiency Testing programmes conducted by international PT providers like FAPAS (CSL) and LGC Promochem, UK to prove the competency in testing of various parameters under the scope of accreditation. The Laboratories have successfully participated in several PT programmes for analysis of Nitrofurans metabolites, Chloramphenicol, Tetracyclines, Chemical Elements, Quinolones (Oxolinic Acid/Nalidixic Acid), Sulphonamides, Organochlorine compounds like Pesticides and PCBs, Dyes, etc. Dyes (Malachite green and Leucomalachite green) and also regularly organize as well as participate in Inter-laboratory Testing/Comparison programmes.
9.0	Personnel responsible for sample collections:
	The MPEDA has a number of field offices (Regional/Sub-regional Offices/Centres) located in different maritime states of India where the aquaculture is carried out. The Residue Monitoring Officers of MPEDA field offices (who are designated for sample collection and other field/follow up activities related to NRCP) at different regions visit the farms, processing plants, hatcheries and feed mills and collect the targeted samples as per the monthly target/ schedule assigned to different regions/states and forward the same to the laboratories of MPEDA at Cochin, Nellore Bhimavaram and Bhubaneswar. The sampling official records the nature, source, the date and place of sampling and other relevant information. Trainings/work-shops are conducted for the Residue Monitoring Officers every year to evaluate the implementation of NRCP with regard to sampling procedure and strategies, collection of samples & follow-up samples, follow-up action, etc.
10.0	Sampling Strategy:
	i. Shrimps (<i>P.monodon</i>, <i>P. indicus</i>, <i>L.vannamei</i>, etc): The number of samples are decided based on the total number of farms registered/enrolled. i.e., 1 sample per every 100 M/T of production (1:100). ii. Scampi (<i>M. rosenbergii</i>): At least one sample per every 100 M/T of production. iii. Fin-fishes: based on throughput in the approved export establishments (approved for export to EU) - at least one sample per every 100 M/T of export iv. Feed samples: One sample per two registered feed-mill (50%). v. Hatchery sample (seed/water): at least one sample from each hatchery under operation.

10.1 Number of Aquaculture Samples to be collected and analyzed under NRCP 2018 :
Table – 4

Type of sample	No. of Enrolled Farms	Aqua-culture Production (M/T)	Total through-put of EU approved Processing plants (RM)	No. of samples to be analysed	Criteria for sampling
1. Crustaceans (i) L. vannamei (ii) P. monodon (iii) P. indicus & (iv) M. rosenbergii	54796	561138	--	5611	1 sample per every 100 M/T of production (1:100)
		3377	--	34	1 sample per every 100 M/T of production (1:100)
Sub Total		564515	-	5645	
1. Freshwater Fin-fishes	--	--	2197	22	1 sample per every 100 M/T (1:100), based on through-put in export approved (EU) establishments
TOTAL				5667	

10.2 NRCP 2018 Break up of Aquaculture samples for analysis of Group A & Group B Substances
Table – 5

Type of Sample	Number of samples to be tested	Break up of samples to be tested			
		Group A substances		Group B substances	
		Farms	Processing Plants	Farms	Processing Plants
1. Crustaceans (i) Shrimp	5611	1871	--	1870	1870
(ii) Scampi	34	12	--	17	5
2. Fin-fishes	22	8	--	9	5
Total	5667	1891	--	1896	1880

10.3 NRCP 2018 - Break up of samples for analysis of Group A substances
Table – 6

Samples for analysis of Group-A substances:				
Species	No. of samples for Group A Substances	A-1 Stilbenes	A-3 Steroids	A-6 NF + CAP + Nitroimidazoles.
Cultured Shrimp	1871	--	--	1871
Cultured fresh water Prawn (Scampi)	12	--	--	12
Cultured fresh water Fin-fishes	8	2	2	4
Total	1891	2	2	1887

10.4 NRCP 2018 - Break up of samples for Analysis of Group B substances
Table – 7

Species / item	No. of Samples	Samples taken from	No. of samples					
			(B1) Antibacterials	(B2a) Anthelmintics	(B3a) Organochlorine Compounds including PCBs	(B3c) Chemical Elements	(B3d) Mycotoxin	(B3e) Dyes
Cultured shrimp	3740	Farms (1870)	935	374	187	187	47	140
		Proc. Plants (1870)	935	374	187	187	47	140
Cultured fresh water prawn (Scampi)	22	Farms(17)	9	3	2	1	1	1
		Proc. Plants (5)	1	1	1	1	0	1
Cultured fresh water fin-fishes	14	Farms (9)	4	2	1	1	1	0
		Proc. Plants (5)	1	1	1	1	0	1
Total	3776	--	1885	755	379	378	96	283

10.5 NRCP 2018 - Number of Feed Samples to be monitored: Hatchery and Feed Samples:*Table – 8*

Sl/ no.	Item	Parameter	No. of Hatcheries / Feed-mills in operation	No. of samples to be analysed	Criteria for sampling
1	Feed	NF + CAP	26	13	Samples from 50% of registered feed mills
2	Hatchery Seed	NF + CAP	336	336	Samples from 100% of operational Hatcheries

10.6 Total number of Samples proposed under NRCP 2018:*Table - 9*

Sl no.	Item / species	No. of Samples to be tested by MPEDA Labs
1	Crustaceans	5611
	(i) Shrimp (L. vannamei / P. monodon/ P indicus)	
	(ii) Scampi (M. rosenbergii)	
2	Fresh water Fin-fishes	22
	Sub Total	5667
3	Hatchery seed	336
4	Feed	13
	Sub Total	349
	GRAND TOTAL	6016

11.0 Collection and transportation of samples

500 gms of samples (whole prawns / fish) shall be taken from farm / establishment for analysis. In case of samples from hatchery, 20 to 25 gm of juveniles (excluding water) are collected from the larval and post-larval rearing tanks in polythene bags, sealed and transported in thermocole box packed with dried/ wet ice. In case of feed, 500 gms of feed samples are taken in polythene bags from farms and feed mills.

Shrimp / fish samples collected in polythene bags and covered in aluminum foil, affixed with code numbers, to maintain sample integrity and traceability. The container / packing must be officially sealed and packed in thermocole boxes are dispatched along with the sampling report, with sufficient dry ice in the case of long duration transport and with wet ice in the case of short distance transport.

The samples are forwarded to the concerned laboratories within 3 days of its collection so as to reach MPEDA Laboratories within 30 hours (transit time) of its dispatch.

	Instructions issued to the field offices of MPEDA on sample collection, packing & transportation and follow-up action to be taken on residue positive samples. (<i>Annexure-V</i>)
12.0	Handling of sample in the Laboratory
	Immediately on receipt, the samples are decoded and stored in deep freezer at -18°C ($\pm 2^{\circ}\text{C}$). The samples are then homogenized and divided into two equal portions and stored in deep freezer. One portion is used for the analysis, while the remaining portion is retained in the deep freezer. The samples are analyzed by the respective laboratories at the earliest not more than 15 days from the receipt of the samples. If the initial test shows positive, the remaining sample will be tested for confirmation of the results. The samples are disposed only on completion of 90 days after analysis. The test reports are received by the Field Offices & EIAs electronically (online).
13.0	Alert information, communication of results & measures taken in the event of infringement:
	- In the case of positive test results (non-compliant samples), the alert information along with test results is transmitted to the concerned field offices of MPEDA and EIA. - On receipt of such information EIA & MPEDA shall undertake the joint inspection of the facility to trace the origin / source of contamination. - The EIA & MPEDA officials collect follow up samples from the same premises for the further analysis at MPEDA laboratory. A joint inspection report shall be prepared & be available at EIA & MPEDA. - If the sample is found positive, on repeated analysis the results shall be communicated by MPEDA to EIAs and the defaulting facility will be issued show cause notice by EIAs. - Based on the reply received from the facility, the EIA shall take the action as deemed fit. - A monthly summary of the samples drawn, tested and results (including positive and negative), shall be communicated to the Competent Authority by MPEDA. - EIAs shall send the monthly report of action taken on non-compliance results to EIC. - The farms reported with non-compliant results are subjected to more stringent checks for a period of at least twelve months by EIAs. - A Committee headed by the In-charge of the EIA reviews regularly the non-compliant (residue positive) cases for appropriate follow-up guidelines and actions

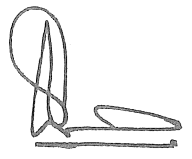
14.0	MRL/MRPL/MLs for Group A and Group B Substances of Veterinary Drugs and Environmental Contaminants		
14.1	MRL/MRPL/MLs for Group A Substances		
	<i>Substance group</i>	<i>Substances</i>	<i>Substance monitored</i>
			<i>MRL/MRPL/Working Limit</i>
	Group: A (1)	Stilbenes and its derivatives	Diethyl Stilbestrol Dienestrol; Hexestrol
			Nil (Recommended concentration- 1 µg/kg)
	A (3)	Steroids	Progesterone
			Nil Recommended concentration-1 µg/kg)
			MedroxyProgestrone
			Nil Recommended concentration-1 µg/kg)
			17-β Oestradiol
			Nil Recommended concentration-1 µg/kg)
	A (6)	Compounds included in Council Regulation No.37/2010.	(i) Chloramphenicol
			Nil MRPL: 0.3 µg/kg
			(ii) Nitrofurans Metabolites (AOZ, AMOZ, SEM & AHD)
			Nil MRPL: 1.0 µg/kg
			(iii) Nitrofurans (parent compounds, in case of feed samples)
			Nil #
			(iv) Nitroimidazoles (Metronidazole, Dimetridazole & Ronidazole and their hydroxyl compounds)
			Nil (Recommended concentration /Working Limit - 3 µg/kg)

*

Group B substances/residues:

B -1	Antibacterial substances		
	Quinolones/Fluoro-quinolones	Oxolinic acid	100 µg/kg
		Difloxacin	300 µg/kg
		Sarafloxacin	30 µg/kg
		Enrofloxacin (sum of Enrofloxacin & Ciprofloxacin)	100 µg/kg
		Danofloxacin	100 µg/kg
		Flumequine - Fin-fish	600 µg/kg
		Flumequine - Other species	200 µg/kg
		Norfloxacin	No MRL (Reporting >LOQ)
		Nalidixic acid	No MRL (Reporting >LOQ)
	Tetracyclines	Tetracycline & its 4-epimer	100 µg/kg
		Oxytetracycline & its 4-epimer	100 µg/kg
		Chlortetracycline & its 4-epimer	100 µg/kg
	Sulfonamides	Sulfadiazine, Sulfamethoxazole, Sulfamethoxypyridine, Sulfamethazole, Sulfamethazine, Sulfamerazine, Sulfapyridine, Sulfadimethine, sulfachloropyradazine, Sulfathiazole..	100 µg/kg (MRL - sum of all substances)
B-2(a)	Anthelmintics	Emamectin	100 µg/kg
		Ivermectin	No MRL (Reporting >LOQ)
Environmental Contaminants			
B-3(a)	Organochlorine compounds (i) Pesticides	α BHC	No MRL (Reporting > LOQ)
		β BHC	
		γ BHC	
		Aldrin	
		DDT	
		Dieldrin	
		Endrin	
		Heptachlor	
		HCB	
		Chlordane	
	(ii) PCBs	PCBs (PCB 28, PCB 52, PCB 101, PCB 138, PCB 153, PCB 180)	75 µg/kg (sum of PCBs)
	(iii) Dioxins/Furans and dioxin like PCBs	Dioxins / Furans (17 compounds) & dioxin like PCBs (12 compounds)	3.5 pg/g (sum of all Dioxins/Furans) and 6.5 pg/g (sum of all Dioxins/Furans & dioxin like PCBs)

Other Substances				
B-3(d)	Mycotoxins	Aflatoxin B1& B2	No MRL Reporting >LOQ.	
B-3(e)	Dyes	Malachite green & Leuco-malachite green	Nil (MRPL: 2 µg/kg) sum	
		Chrystal Violet & Leuco-crystal Violet	Nil #	
B-3(c)	Chemical Elements	Mercury	500 µg/kg	
		Cadmium (Crustaceans)	500 µg/kg	
		-do- (Fish muscle)	50 µg/kg	
		-do- (Cephalapod, without viscera)	1000 µg/kg	
		Arsenic (Fish muscle)	No MRL*	
		Lead (Crustaceans)	500 µg/kg	
		-do- (Fish muscle)	300 µg/kg	
* LOD & LOQ IS determined as working limit by individual laboratory. # Working Limit (ALARA) is determined by each Lab				
15.0	DETAILS OF ANALYTICAL METHODS			
	Unless otherwise mentioned elsewhere the methods described in the Manual/Journal of Association of Official Analytical Chemists and methodology followed in the EU Community Referral Laboratories (CRLs) are followed using the equipment mentioned against the substances as given below.			
15.1	Group A – substances having anabolic effect and unauthorized substances			
	Group as per Directive	Residue	Technique	Equipment (Example)
	Group A.1	Stilbenes, Stilbene derivatives and their salts and esters	Liquid Chromatography-Tandem Mass Spectrometry	LC-MSMS
	Group A.3	Steroids	Liquid Chromatography-Tandem Mass Spectrometry	LC-MSMS
	Group A.6	Chloramphenicol, Nitrofurans Metabolites and Nitroimidazoles	Liquid Chromatography-Tandem Mass Spectrometry	LC-MSMS
15.2	Group B -Antibacterial substances, Pesticides and Chemical elements.			
	Group as per Directive	Residue	Technique	Equipment (Example)
	Group B.1	Tetracyclines, Quinolones and Sulphonamides	Liquid Chromatography / Liquid Chromatography-Tandem Mass Spectrometry	HPLC (with PDA/Fluro. Detector) / LC-MSMS
	Group B.2(a)	Anthelmintics (Ivermectin / Emamectin)	Liquid Chromatography / Liquid Chromatography-Tandem Mass Spectrometry	HPLC / LC-MSMS

	Group B.3(a)	i. Organo-chlorine Pesticides	Gas Chromatography	GC-ECD/ GC-MS / GC-MSMS
		ii. PCBs (non-dioxin like)	Gas Chromatography / Gas Chromatography-Mass Spectrometry / Tandem Mass Spectrometry	GC-ECD / GC-MS / GC-MSMS
		iii. Dioxins/Furans & dioxin like PCBs	Gas Chromatography-High Resolution Mass Spectrometry/ Gas Chromatography-Tandem Mass Spectrometry	GC-HRMS / GC-MSMS
	Group B.3(c)	Chemical Elements	Atomic Absorption Spectrometry / Inductively coupled Plasma-Optical Emission Spectrometry/ Mass Spectrometry	AAS / ICP-OES / ICP-MS
	Group B.3(d)	Mycotoxin / Aflatoxin	Liquid Chromatography	HPLC with Fluorescent Detector.
	Group B.3(e)	Dyes	Liquid Chromatography-Tandem Mass Spectrometry	LC-MSMS
16.0	Non-compliant (residue positive) samples of NRCP 2017 :			
16.1	Shrimp, Scampi & Fin-fishes:			
	Under NRCP 2017, against the target/plan of 5267 samples (shrimp, scampi and fin-fishes), a total of 5250 samples were analyzed. The number of non-compliant (residue positive) samples detected were 24 under Group-A6 due to residues of NF & CAP (shrimp: 23 + scampi: 1 + fin-fish: 0)			
16.2	Feed & Hatchery Samples:			
	In case of hatchery seed and feed samples, against the target/plan of 21 feed and 193 hatchery samples, 21 feed and 133 hatchery samples were analysed. The number of non-compliant samples were, feed: nil and hatchery: 43 (Gr. A6 (CAP/NF)).			
	Details of the non-compliant samples are given at Annexure- 4A,4B & 4C			
	  Dr. S. K. Saxena Director, (Insp. & Quality Control) Export Inspection Council of India 22nd March 2018			

INSTRUCTIONS

Note	
1	The competent authority is requested to fill in each sheet (for the relevant commodity). Numerical data should only be included for those commodities currently being exported to the European Union (EU) or which the third country intends to export to the EU. Numerical data should be entered in those cells shaded light yellow thus: 
2	Basis of the calculation: The tables are set up to calculate the required sample numbers on the basis of Directive 96/23/EC and Commission Decision 97/747/EC. Data in cells shaded light blue are automatically calculated when the production data cell (Cell C8) is completed (see note 4 below). In the case of milk, eggs, farmed game and wild game , the minimum numbers of samples to be taken have already been entered in the blue cells and are independent of the production volumes.
3	In order to ensure that all samples are tested and to facilitate the allocation of the balance of samples between groups (as is required for several commodities), explanations are given at the foot of each individual Excel worksheet.
4	It is important that for those countries where animals and products from any farm are eligible to be exported to the EU, the proportion of animals sampled should be taken relative to the annual national production figures . [IN THIS CASE THE ANNUAL PRODUCTION DATA SHOULD BE ENTERED IN CELL C8]. For those countries where only a defined population of animals are eligible for export to the EU, and where there is a system in place guaranteeing that only those animals from those farms are eligible for export (i.e. a split system), it is permissible that the proportion of animals sampled is relative to that defined population. [IN THIS CASE THE EU EXPORT DATA ONLY SHOULD BE ENTERED IN CELL C8].
5	With regard to the selection of residues to be analysed , guidance is given on this web page and is summarised in Table 2 below. The European Community considers that certain substances are 'essential' for monitoring. These are indicated in the table as 'E' and must be monitored for . Other substances are designated as 'highly desirable – HD' and the Community expects that these substances will be included in all residue monitoring plans of third countries. However, deviations concerning HD substances may be acceptable. In this case arguments based on an analysis of the risk of residues remaining in food are to be submitted by the third country. These arguments should demonstrate that, for example, because of the production conditions in that third country it is not necessary to test for the substance. When selecting individual substances in the HD groups, third countries should consider what veterinary medicines or feed additives are authorised and used legally in the country in each of the production sectors and what contamination might occur e.g. via feed and water or directly through the environment. Consideration should also be given to the possibility of illegal or unauthorised use.
6	The reduced number of substances to be looked for in live equidae exported for direct slaughter to the EU presupposes that there is no slaughter of horses in that third country, hence the substances chosen may be looked for in body fluids (i.e. blood and urine) which can be sampled from live horses. It is stressed that if there is slaughter of horses in the third country and only live horses are exported for direct slaughter, <i>sampling should be based on the slaughtered animals</i> and take account of the wider range of substances that can be checked.

Table 2 Substances or Group of substances ⁽¹⁾ to be monitored for in the relevant commodity. E = 'essential' HD = 'highly desirable'

Animal species or food covered by the plan		→														
		bovine	ovine/ caprine	swine	Equine ⁽⁷⁾		poultry	aquaculture		milk	eggs	rabbit	wild game	farmed game	honey	
					slaughtered	live equidae for direct slaughter		finfish	crustaceans							
Substances / groups of substances to be monitored																
A1	Stilbenes (e.g. diethylstilbestrol, hexestrol, dienestrol)	E	E	E	E	E	E	E					E	E		
A2	Thyrostats (e.g. thiouracil, tapazol etc)	E	E	E	E	E										
A3	Steroids [androgens, estrogens and (pro)gestagens] ⁽³⁾	E	E	E	E	E	E	E				E		E		
A4	Resorcylic acid lactones (e.g. zeranol)	E	E	E	E	E	E	E				E		E		
A5	Beta agonists (e.g. clenbuterol, ractopamine, zilpaterol, mabuterol etc)	E	E	E	E	E	E	E				E		E		
A6	Compounds included in Annex IV to Council Regulation (EEC) No 2377/90	E	E	E	E	E	E	E	E	E	E	E		E	E	
				E			E	E	E		E			HD	E	
				E			E	E	E		HD	E		HD	E ⁽⁸⁾	
B1	Antibacterial substances ⁽⁶⁾	E	E	E	E	E	E	E	E	E	E	E		HD		
B2a	Anthelmintics	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD		HD		
B2b	Anticoccidials	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD		HD		
B2c	Carbamates and pyrethroids	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	E		HD		
B2d	Sedatives	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD		HD	HD	
B2e	Non steroidal anti-inflammatory drugs (NSAIDs) (e.g. phenylbutazone)	HD	HD	HD	HD	HD	E	HD	HD	HD	HD	HD		HD		
B2f	Other pharmacologically active substances			E ⁽⁹⁾						HD		HD		HD		
B3a	Organochlorine compounds including PCBs	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD		HD	HD	
B3b	Organophosphorus compounds	HD	HD	HD	HD	HD				HD						
B3c	Chemical elements	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	E	HD	HD	
B3d	Mycotoxins	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD	HD				
B3e	Dyes (in particular malachite green and its major metabolite leucomalachite green)							E	E							

(1) Groups defined in Annex I of Directive 96/23/EC. Monitoring of E (essential) substances or group of substances is mandatory. Monitoring of HD (highly desirable) groups is mandatory in the Member States. Ideally a third country should also monitor these groups, however, if they are not monitored, evidence must be provided justifying this decision. A full list of substances is included on the DG SANCO third country residues web page.

(3) Typical steroids to be monitored for include testosterone, methyl testosterone, trenbolone, nortestosterone, boldenone, stanozolol, estradiol, ethinyl estradiol, progesterone, medroxyprogesterone acetate, megestrol acetate, flugestone etc.

(4) The stable metabolites/marker residues of the four main nitrofurans drugs (furazolidone, furaltadone, nitrofurazone and nitrofurantoin) should be analysed. The metabolites are: Furazolidone: amino-oxazolidinone (AOZ), Furaladone: 3-amino-5-morpholinomethyl-2-oxazolidinone (AMOZ), Nitrofurazone: semicarbazide (SEM), Nitrofurantoin: aminohydantoin (AHD).

(5) The nitroimidazoles include dimetridazole, ronidazole, metronidazole, ipronidazole etc.

(6) Antibacterial substances should be chosen on the basis of what is authorised and used in the relevant livestock production sector. Examples include beta-lactams, tetracyclines, sulphonamides, fluoroquinolones, aminoglycosides, macrolides etc.

(7) The reduced number of substances to be looked for in live equidae exported for direct slaughter to the EU presupposes that there is no slaughter of horses in that third country, hence the substances chosen may be looked for in body fluids (i.e. blood and urine) which can be sampled from live horses. It is stressed that if there is slaughter of horses in the third country and only live horses are exported for direct slaughter, sampling should be based on the slaughtered animals and take account of the wider range of substances that can be checked.

(8) Honey should be tested for antibacterial substances including sulphonamides, tetracyclines, tylosin and streptomycin.

(9) If carbadox or olaquinox are authorised in swine production, residue testing of tissues and/or feedingstuffs should be carried out.

REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA		
YEAR OF PLAN IMPLEMENTATION	2018		
ANIMAL SPECIES / PRODUCT	AQUACULTURE CRUSTACEANS		
National PRODUCTION DATA - in TONNES (referring to the previous year)	Table no.... in NRCP Doc.		
PRODUCTION DATA in <u>TONNES</u> for calculation of SAMPLE NUMBERS. (referring to previous year's production)	564515		
NUMBER OF SAMPLES †	ACCORDING TO EU REQUIREMENTS		ACCORDING TO CODEX ALIMENTARIUS
MINIMUM	5645		
PLAN	5645		

Sampling levels and frequencies

[illegible]

[illegible]

REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

Annex 1B

For official use

21.97

DATE	1st December 2017
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COUNTRY	India
YEAR OF PLAN IMPLEMENTATION	2018
ANIMAL SPECIES / PRODUCT	AQUACULTURE FIN FISHES
National PRODUCTION DATA - in TONNES (referring to the previous year)	Annexe I (B)
PRODUCTION DATA in TONNES for calculation of SAMPLE NUMBERS. (referring to previous year's production THROUGHPUT by EU approved Export Establishments)	2197
NUMBER OF SAMPLES ↑	ACCORDING TO EU REQUIREMENTS
MINIMUM #	22
PLAN	22

EU EXPORT DATA in TONNES (referring to the previous year)	2197
---	------

See instruction sheet, note 4. If a split system is in place for exports to the EU, actual export data may be entered in this cell. If there is no split system, and farmed FINFISH from ALL FARMS are eligible for export to the EU, national production data must be entered in this cell. For a more detailed description of the options see hyperlink →

Sampling levels and
frequencies



GROUP OF SUBSTANCES TO BE MONITORED	NUMBER OF SAMPLES		COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	SCREENING METHOD	CONFIRMATORY METHOD	SCREENING METH. DETECTION LIMIT [µg/kg]	CONFIRM. METH. DETECTION LIMIT [µg/kg]	LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	LABORATORY
	MIN	PLAN								
A1 STILBENES	2	2								
A3 STEROIDS (WITH ANDROGENIC, ESTROGENIC OR PROGESTAGENIC ACTIVITY)	2	2								
Chloramphenicol + Nitrofurans + Nitroimidazoles	2	4								
CHLORAMPHENICOL										
NITROFURANS										
Nitrofurantoin metabolite										
Furaltadone metabolite										
Furazolidone metabolite										
Nitrofurazone metabolite										
NITROIMIDAZOLES										
B1 ANTIBACTERIAL SUBSTANCES	7	5								

GROUP OF SUBSTANCES TO BE MONITORED	B2a ANTHELMINTICS	3	3	NUMBER OF SAMPLES	MIN	PLAN	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	SCREENING METHOD	CONFIRMATORY METHOD	SCREEN.METH. DETECTION LIMIT $\mu\text{g}/\text{kg}$	CONFIR.METH. DETECTION LIMIT $\mu\text{g}/\text{kg}$	LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) $\mu\text{g}/\text{kg}$	LABORATORY
B2f Other pharmacologically active sube														
Sum of B3a + B3c + B3d + B3e		4	6											
B3a ORGANOCHEMICAL COMPOUNDS INCLUDING PCBs				2										
B3c CHEMICAL ELEMENTS				2										
B3d MYCOTOXINS				1										
B3e DYES e.g. Malachite Green (+ leucomalachite green), crystal violet etc				1										

† A sample is one or more fish. The minimum number of samples to be collected each year must be at least 1 per 100 tonnes of annual production.

The following breakdown must be respected: **Group A: one third of the total samples.**

All of these samples must be taken at farm level, on fish at all stages of farming, including fish which is ready to be placed on the market for consumption.

Group B: two thirds of the total samples.

This sampling should be carried out: (a) preferably at the farm, on fish ready to be placed on the market for consumption;

(b) either at the processing plant, or at wholesale level, on fresh fish, on condition that tracing-back to the farm of origin, in the event of positive results, can be done.

Marine Products Export Development Authority

Annex-2A

NRCP 2018- Allocation of Samples from Field Offices to MPEDA Lab Kochi

Item/ species	Parameter	RO Mumbai	RO Veralal	SRO Porbandar	SRO Goa	SRO Mangalore	RO Kochi	SRO Kollam	SRO Tuticorin	SRO Bhubaneswar	RO Kolkata	SRO Bhimavaram	RO Vizag	RO Chennai	RC Valsad	RC Panvel	SRC Karwar	SRC Kannur	RC Kochi	RC Nagapattinam	RC Bhubaneswar	SRC Balasore	RC Kolkata	SRC Contai	SRC Bhimavaram	RC Vijayawada	SC Nellore	Total (Param eter wise)
CULTURED SHRIMP	CAP + NF + NI														143	23	7	2	12	164								351
	Antibact. B	189	6	1	8		78		94	41	49				71	11	4	1	6	82	23	26	85	33	0	0	0	808
	Anthelmintic	76	2		3		31		38	16	20				28	5	1	0	2	33	9	12	34	13	0	0	0	323
	Pesticides + PCBs	38	1		2		16		19	8	10				14	2	1	0	1	16	5	5	17	7	0	0	0	162
	Chem. Element	38	1		2		16		19	8	10	50	15	28	14	2	1	0	1	16	5	5	17	7	82	30	7	374
	Mycotoxins	10					4		5	2	2				4	1	0	0	0	4	1	1	4	2	0	0	0	40
	Dyes	28	1		1		12		14	6	7				11	2	1	0	1	12	3	4	13	5	0	0	0	121
	Sub Total	379	11	1	16	0	157	0	189	81	98	50	15	28	285	46	15	3	23	327	46	53	170	67	82	30	7	2179
SCAMPI	CAP + NF + NI																			1								1
	Antibact. B													1							1	1	6	1				10
	Anthelmintic													1									2	1				4
	Pesticides + PCBs										1												1	1				3
	Chem. Elem.	1																					1					2
	Mycotoxins																						1					1
	Dyes										1												1					2
	Sub Total	1	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	1	1	1	12	3	0	0	0	23
FISH	CAP + NF + NI																											0
	Stilbens																						1	1				2
	Steroids																						1	1				2
	Antibact. B	1																					1	1				3
	Anthelmintic	1																					1	1				3
	Pesticides + PCBs	1																					1					2
	Chem. Elem.	1																					1					2
	Mycotoxins																											0
Dyes	1																										1	
	Sub Total	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4	0	0	0	15
	Grand TOTAL	385	11	1	16	0	157	0	189	81	100	50	15	30	285	46	15	3	23	328	47	54	188	74	82	30	7	2217

Marine Products Export Development Authority

Annex 2B

NRCP 2018 - Allocation of Samples from Field Offices to MPEDA Labs at Bhimavaram, Nellore & Bhubaneswar

QC Lab, Bhimavaram					QC Lab, Nellore					QC Lab, Bhubaneswar						
Item / species	Parameter	Number of Samples			Item / species	Parameter	Number of Samples			Item / species	Parameter	Number of Samples				
		SRC Bhimavaram to Lab	SRO Bhimavaram to Lab	(parametrwise) TOTAL			RC Vijaya-wada to Lab Nellore	SRC Bhimavaram to Lab Nellore	SC Nellore to Lab Nellore			RO Vizag Lab to Nellore	RO Chennai to Lab Nellore	(parametrwise) TOTAL	RC Bhubaneswar to Lab BBSR	RC Kolkata to Lab BBSR
CULTURED SHRIMP	CAP + NF + NI	400		400	299	413	75			787	CAP + NF + NI	45	171	52	65	333
	Antibacterial B	406	253	659	150		37	77	139	403	Antibacterial B	0	0	0	0	0
	Anthelmintics	162	101	263	60		15	31	56	162	Anthelmintics	0	0	0	0	0
	Pesticides + PCBs	82	50	132	30		7	15	28	80	Pesticides + PCBs	0	0	0	0	0
	Chem. Elements			0						0	Chem. Element	0	0	0	0	0
	Mycotoxins	20	13	33	8		2	4	7	21	Mycotoxins	0	0	0	0	0
	Dyes	60	38	98	22		6	12	21	61	Dyes	0	0	0	0	0
	Sub Total	1130	455	1585	569	413	142	139	251	1514	Sub Total	45	171	52	65	333
SCAMPI	CAP + NF + NI									0	CAP + NF + NI	1	8	1	1	11
	Antibacterial B									0	Antibacterial B					
	Anthelmintics									0	Anthelmintic					
	Pesticides + PCBs									0	Pesticides + PCBs					
	Chem. Elements									0	Chem. Element					
	Mycotoxins									0	Mycotoxins					
	Dyes									0	Dyes					
	Sub Total	0	0	0	0	0	0	0	0	0	Sub Total	1	8	1	1	11
FISH	CAP + NF + NI				1		1			2	CAP + NF + NI		1		1	2
	Stilbens									0	Stilbens					
	Steroids									0	Steroids					
	Antibacterial B				1		1			2	Antibacterial B					
	Anthelmintics									0	Anthelmintics					
	Pesticides + PCBs									0	Pesticides + PCBs					
	Chem. Elements									0	Chem. Elements					
	Mycotoxins						1			1	Mycotoxins					
Dyes									0	Dyes						
Sub Total	0	0	0	2		3	0	0	5	Sub Total	0	1	0	1	2	
Total	1130	455	1585	571	413	145	139	251	1519	Total	46	180	53	67	346	

Marine Products Export Development Authority - NRCP 2018
Allocation of Feed and Hatchery Samples

Annex-3

A. Sample Allocation from Field Offices to MPEDA Lab Kochi & Bhubaneswar

Lab, Kochi							Lab, Bhubaneswar		
Item / species	Parameter	RC Valsad	SRC Karwar	RC Kochi	RC Nagapat tinam	Total	Item / species	Parameter	Total
Feed	CAP + NF	0	0	0	0	0	Feed	CAP + NF	0
Hatchery sample	CAP + NF	5	4	12	72	93	Hatchery sample	CAP + NF	17

B. Sample Allocation from Field Offices to MPEDA Labs at Bhimavaram and Nellore

Lab, Nellore										Lab, Bhimavaram			
Item / Species	Parameter	No. of Samples						Item / Species	Parameter	No. of Samples			Total
		RC Vijaya-wada	SC Nellore	SRC Bhimavaram	RC Bhubaneswar	RC Nagapat tinam	RC Valsad			Parameter	SRC Bhimavaram	Total	
Feed	CAP + NF	3	2	5	1	1	1	Feed	CAP + NF	0	0	0	
Hatchery sample	CAP + NF	36	73	0	0	0	0	Hatchery sample	CAP + NF	117	117	117	

MPEDA - NRCP for Aquaculture Products - 2018

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NRCP - 2017 - Summary of Results

All Labs

Item/ Species	Substance	No. of Samples			Residue substance (s)
		Target	Analysed	Non-compliant	
Shrimp	Group A6	1730	1720	23	CAP/NF-AOZ, SEM, AHD/NI- MNZ
	Group B1	1730	1732	0	
	Group B2a Anth	692	689	0	
	Group B3a OCPs & PCBs	346	344	0	
	Group B3c CE	346	344	0	
	Group B3d Myco	72	74	0	
	Group B3e Dyes	274	273	0	
Scampi	Group A6	14	13	1	NF-SEM
	Group B1	13	13	0	
	Group B2a Anth	5	4	0	
	Group B3a OCPs & PCBs	3	3	0	
	Group B3c CE	3	2	0	
	Group B3d Myco	1	4	0	
	Group B3e Dyes	3	3	0	
Fish	Group A1	4	3	0	
	Group A3	4	4	0	
	Group A6	4	4	0	
	Group B1	11	10	0	
	Group B2a Anth	5	4	0	
	Group B3a OCPs & PCBs	2	4	0	
	Group B3c CE	2	0	0	
	Group B3d Myco	1	1	0	
	Group B3e Dyes	2	2	0	
Sub Total		5267	5250	24	

Feed	Group A6	21	21	0	
Hatchery Seed	Group A6	193	133	43	CAP/NF
TOTAL		5481	5404	67	

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA			DATE		12.03.2018
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2017					
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH					
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)
			PLANNED	TESTED		
A1. STILBENES	Diethylstilbesterol	Shrimp	0	0	CCα: 0.19(Kochi)	NA
		Scampi	0	0		NA
		Fish	4	3		NIL
A3. SYNTHETIC STEROIDS (WITH ANDROGENIC, GESTAGENIC OR ESTROGENIC ACTIVITY)	Progesterone	Shrimp	0	0	CCα: 0.20(Kochi)	NA
		Scampi	0	0		NA
		Fish	4	4		NIL
	Oestradiol	Shrimp	0	0	CCα: 0.20(Kochi)	NA
		Scampi	0	0		NA
		Fish	4	4		NIL
A6. CHLORAMPHENICOL	Chloramphenicol	Shrimp	1730	1720	CCα: 0.06(Kochi) 0.13 (Nellore) 0.07(Bhimavaram)	8
		Scampi	14	13		NIL
		Fish	4	4		NIL
Nitrofurantoin metabolite	AHD	Shrimp	1730	1720	CCα: 0.240 (Kochi) 0.506 (Nellore) 0.23(Bhimavaram)	1
		Scampi	14	13		NIL
		Fish	4	4		NIL
Furaltadone metabolite	AMOZ	Shrimp	1730	1720	CCα: 0.186 (Kochi) 0.57 (Nellore) 0.21(Bhimavaram)	NIL
		Scampi	14	13		NIL
		Fish	4	4		NIL
Furazolidone metabolite	AOZ	Shrimp	1730	1720	CCα: 0.333 (Kochi) 0.512 (Nellore) 0.21(Bhimavaram)	5
		Scampi	14	13		NIL
		Fish	4	4		NIL
Nitrofurazone metabolite	SEM	Shrimp	1730	1720	CCα: 0.443 (Kochi) 0.513 (Nellore) 0.28(Bhimavaram)	2
		Scampi	14	13		1
		Fish	4	4		NIL
NITROIMIDAZOLES	Ronidazole	Shrimp	1730	1720	CCα: 0.39(Kochi) 0.40(Nellore) 0.32(Bhimavaram)	NIL
		Scampi	14	13		
		Fish	4	4		
	Metronidazole	Shrimp	1730	1720	CCα: 0.59(Kochi) 0.41(Nellore) 0.32(Bhimavaram)	7
		Scampi	14	13		NIL
		Fish	4	4		NIL
	Dimetronidazole	Shrimp	1730	1720	0.39(Kochi) 0.33(Nellore) 0.31(Bhimavaram)	NIL
		Scampi	14	13		
		Fish	4	4		
Iprnidazole-OH	Shrimp	1730	1720	CCα: 0.56(Kochi) 0.24(Nellore)	NIL	
	Scampi	14	13			

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA				DATE		12.03.2018
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2017						
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH						
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)	
			PLANNED	TESTED			
		Fish	4	4	0.32(Bhimavaram)		
	HMMNI	Shrimp	1730	1720	CCα: 0.42(Kochi) 0.25(Nellore) 0.32(Bhimavaram)	NIL	
		Scampi	14	13			
		Fish	4	4			
B1. ANTIBACTERIAL SUBSTANCES							
Screening test	NIL	-	-	-	-	NA	
Confirmatory test	Tetracycline	Shrimp	1730	1732	CCα: 104.1 (Kochi) 109.80 (Nellore) 109.6(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	4-Epi Tetracycline	Shrimp	1730	1732	CCα: 103.6 (Kochi) 115.0 (Nellore) 110.1(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Oxytetracycline	Shrimp	1730	1732	CCα: 102.8 (Kochi) 111.5 (Nellore) 111.1(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	4-Epi Oxytetracycline	Shrimp	1730	1732	CCα: 103.2 (Kochi) 111.3 (Nellore) 112.1(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Chlortetracycline	Shrimp	1730	1732	CCα: 102.6 (Kochi) 107.2 (Nellore) 114.5(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	4-Epi Chlortetracycline	Shrimp	1730	1732	CCα: 103.1 (Kochi) 107.2 (Nellore) 113.2(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Sulphadiazine	Shrimp	1730	1732	CCα: 109.59 (Kochi) 103.65 (Nellore) 112.36(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Sulfapyridine (SPD)	Shrimp	762	763	CCα: 113.05(Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfamethoxizole(SMTX)	Shrimp	762	763	CCα: 110.99 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfathiazole(STZ)	Shrimp	762	763	CCα: 109.15 (Kochi)	NIL	
		Scampi	11	11			

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA			DATE			12.03.2018
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2017						
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH						
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)	
			PLANNED	TESTED			
Confirmatory test		Fish	7	6			
	Sulfamerazine(SMR)	Shrimp	762	763	CCa: 109.14 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfamethizole(SMTZ)	Shrimp	762	763	CCa: 111.52 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfamethazine(SMT)	Shrimp	762	763	CCa: 106.60 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfamethoxypyridazine(SMP)	Shrimp	762	763	CCa: 111.40 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfadimethoxine(SDM)	Shrimp	762	763	CCa: 115.72 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfadoxine(SD)	Shrimp	762	763	CCa: 116.21(Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sulfachloropyridazine(SCP)	Shrimp	762	763	CCa: 111.25(Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Oxolinic Acid	Shrimp	1730	1732	CCa: 106.27 (Kochi) 104.205 (Nellore) 106.12(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Nalidixic Acid	Shrimp	1730	1732	LOD:2 (Kochi) CCa: 105.18 (Nellore) 109.3(Bhimavaram)	NIL	
		Scampi	13	13			
		Fish	10	10			
	Flumequine (FLU)	Shrimp	762	763	CCa: 215.48 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Norfloxacin (NOR)	Shrimp	762	763	CCa/ LOD: LOD:2 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
		Shrimp	762	763	CCa:		

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA			DATE		12.03.2018	
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ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH						
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)	
			PLANNED	TESTED			
	Ciprofloxacin (CIP)	Scampi	11	11	106.27 (Kochi)	NIL	
		Fish	7	6			
	Enrofloxacin (ENR)	Shrimp	762	763	CCa: 106.14 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Sarafloxacin (SAR)	Shrimp	762	763	CCa: 31.91(Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Difloxacin (DIF)	Shrimp	762	763	CCa: 331.79 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
	Danofloxacin (DAN)	Shrimp	762	763	CCa: 109.29 (Kochi)	NIL	
		Scampi	11	11			
		Fish	7	6			
B2a. ANTHELMINTICS	Ivermectin	Shrimp	692	689	LOD: 10.0 (Kochi) CCa: 115.3 (Nellore) LOD: 5 (Bhimavaram)	NIL	
		Scampi	5	4			
		Fish	5	4			
B2f. OTHER PHARMACOLOGICALLY ACTIVE SUBSTANCES							
B3a. ORGANOCHLORINE COMPOUNDS INCLUDING PCBS	Aldrin	Shrimp	346	344	> LOQ -10ppb	NIL	
		Scampi	3	3			
		Fish	2	4			
	Dieldrin	Shrimp	346	344		NIL	
		Scampi	3	3			
		Fish	2	4			
	Chloradane	Shrimp	346	344		NIL	
		Scampi	3	3			
		Fish	2	4			
	DDT	Shrimp	346	344		NIL	
		Scampi	3	3			
		Fish	2	4			
	Endrin	Shrimp	346	344		NIL	
		Scampi	3	3			
		Fish	2	4			
	Heptachlor	Shrimp	346	344		NIL	
		Scampi	3	3			

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

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ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH					
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)
			PLANNED	TESTED		
	Hexachloro Benzene	Fish	2	4		NIL
		Shrimp	346	344		
		Scampi	3	3		
		Fish	2	4		
	Alpha HCH	Shrimp	346	344		NIL
		Scampi	3	3		
		Fish	2	4		
	Beta HCH	Shrimp	346	344		NIL
		Scampi	3	3		
		Fish	2	4		
	Gamma HCH	Shrimp	346	344		NIL
		Scampi	3	3		
		Fish	2	4		
	PCBs	Shrimp	346	344	ML: 75 Sum of 6 NDL-PCBs	NIL
		Scampi	3	3		
Fish		2	4			
B3c. CHEMICAL ELEMENTS	Mercury	Shrimp	346	344	ML:500	NIL
		Scampi	3	2		
		Fish	2	0		
	Cadmium	Shrimp	346	344	ML:500	NIL
		Scampi	3	2		
		Fish	2	0		
	Arsenic	Shrimp	346	344	> LOQ	NIL
		Scampi	3	2		
		Fish	2	0		
	Lead	Shrimp	346	344	ML:500	NIL
		Scampi	3	2		
		Fish	2	0		
B3d. MYCOTOXINS	Aflatoxin B1	Shrimp	72	74	LOQ: 0.25 (Kochi & Nellore) LOQ:5 (Bhimavaram)	NIL
		Scampi	1	4		
		Fish	1	1		
	Aflatoxin B2	Shrimp	72	74	LOQ: 0.25 (Kochi & Nellore) LOQ:5 (Bhimavaram)	NIL
		Scampi	1	4		
		Fish	1	1		
		Shrimp	274	273	CCa:	

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA			DATE		12.03.2018
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2017					
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH					
GROUP OF SUBSTANCES TO BE MONITORED	COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	NUMBER OF SAMPLES		LEVEL OF ACTION (i.e. concentration above which a result is deemed non-compliant) [µg/kg]	NUMBER OF NON COMPLIANT RESULTS (ABOVE LEVEL OF ACTION)
			PLANNED	TESTED		
B3e. DYES	Malachite green	Scampi	3	3	0.33 (Kochi) 0.72 (Nellore) 0.5(Bhimavaram)	NIL
		Fish	2	2		
	Leucomalachite green	Shrimp	274	273	CCa: 0.22(Kochi) 0.20 (Nellore) 0.42 (Bhimavaram)	NIL
		Scampi	3	3		
		Fish	2	2		

The Marine Products Export Development Authority

NRCP 2017 - List of Non-Compliant (Residue Positive) Samples

I Quality Control Laboratory, KOCHI

SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ state	Sample ID& Collection Date
Shrimp					
1	L.Vannamei	Chloramphenicol	30.22	West Bengal	32/S1/Q1/0059/2017

II Quality Control Laboratory, BHIMAVARAM

	SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ state	Sample ID& Collection Date
		SHRIMP				
2	1	L.Vannamei	Nitrofurantoin Metabolite - SEM	1.2	Andhra Pradesh	25/S1/Q1/0005/2017
3	2	L.Vannamei	Chloramphenicol	0.1	Andhra Pradesh	25/S1/Q1/0140/2017
4	3	L.Vannamei	Chloramphenicol	0.51	Andhra Pradesh	25/S1/Q1/0182/2017
5	4	L.Vannamei	Metronidazole (MNZ)	0.63	Andhra Pradesh	25/S1/Q1/0204/2017
6	5	L.Vannamei	Metronidazole (MNZ)	0.46	Andhra Pradesh	25/S1/Q1/0208/2017
7	6	L.Vannamei	Metronidazole (MNZ)	0.55	Andhra Pradesh	25/S1/Q1/0210/2017
8	7	L.Vannamei	Metronidazole (MNZ)	0.34	Andhra Pradesh	25/S1/Q1/0214/2017
9	8	L.Vannamei	Metronidazole (MNZ)	0.38	Andhra Pradesh	25/S1/Q1/0222/2017
10	9	L.Vannamei	Metronidazole (MNZ)	0.55	Andhra Pradesh	25/S1/Q1/0224/2017
11	10	L.Vannamei	Metronidazole (MNZ)	0.47	Andhra Pradesh	25/S1/Q1/0228/2017
12	11	L.Vannamei	Nitrofurantoin Metabolite -AHD	0.35	Andhra Pradesh	25/S1/Q1/0343/2017
13	12	L.Vannamei	Chloramphenicol	0.09	Andhra Pradesh	25/S1/Q1/0427/2017
14	13	L.Vannamei	Chloramphenicol	0.13	Andhra Pradesh	25/S1/Q1/0562/2017
15	14	L.Vannamei	Chloramphenicol	0.74	Andhra Pradesh	25/S1/Q1/0646/2017
16	15	L.Vannamei	Chloramphenicol	1.54	Andhra Pradesh	25/S1/Q1/0684/2017
17	16	L.Vannamei	Nitrofurantoin Metabolite - SEM	0.87	Andhra Pradesh	25/S1/Q1/0758/2017
18	17	L.Vannamei	Nitrofurantoin Metabolite - AOZ	0.37	Andhra Pradesh	25/S1/Q1/0816/2017
19	18	L.Vannamei	Nitrofurantoin Metabolite - AOZ	1.06	Andhra Pradesh	25/S1/Q1/0885/2017
20	19	L.Vannamei	Nitrofurantoin Metabolite - AOZ	0.57	Andhra Pradesh	25/S1/Q1/0888/2017
21	20	L.Vannamei	Nitrofurantoin Metabolite - AOZ	0.46	Andhra Pradesh	25/S1/Q1/0895/2017
SCAMPI						
22	1	M rosenbergi	Nitrofurantoin Metabolite - SEM	2.79	Andhra Pradesh	25/S2/P3/1476/2017

III Quality Control Laboratory, NELLORE

SHRIMP

23	1	<i>P. monodon</i>	Chloramphenicol	0.07	West Bengal	26/S1/P1/0002/2017
24	2	L.Vannamei	Nitrofurantoin Metabolite - AOZ	10.29	Andhra Pradesh	16/S1/Q1/0312/2017

The Marine Products Export Development Authority

NRCP 2017 - Non-Compliant (Residue Positive) Hatcherly Samples

I Quality Control Laboratory, KOCHI

HATCHERY SAMPLES

	SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ state	Sample ID& Collection Date
1	1	Shrimp seed	Nitrofurantol Metabolite - SEM	1.01	Kerala	15/S4/01/0005/2017
2	2	Shrimp seed	Chloramphenicol	0.28	Tamilnadu	23/S4/01/0002/2017
3	3	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.89 0.48	Tamilnadu	23/S4/01/0004/2017
4	4	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	13.68	Tamilnadu	23/S4/01/0003/2017
5	5	Shrimp seed	Nitrofurantol Metabolite - AOZ	>100	Tamilnadu	23/S4/01/0012/2017
6	6	Shrimp seed	Nitrofurantol Metabolite - AOZ	43.7	Tamilnadu	23/S4/01/0016/2017
7	7	Shrimp seed	Nitrofurantol Metabolite - AOZ Nitrofurantol Metabolite - SEM	7.58 1.08	Kerala	15/S4/01/0025/2017
8	8	Shrimp seed	Nitrofurantol Metabolite - SEM	0.5	Kerala	15/S4/01/0033/2017
9	9	Shrimp seed	Nitrofurantol Metabolite - SEM	0.68	Kerala	15/S4/01/0034/2017
10	10	Shrimp seed	Nitrofurantol Metabolite - SEM	1.21	Kerala	15/S4/01/0042/2017
11	11	Shrimp seed	Chloramphenicol	25.11	Karnataka	19/S4/01/0010/2017
12	12	Shrimp seed	Nitrofurantol Metabolite - AOZ	2.86	Karnataka	19/S4/01/0011/2017
13	13	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	7.88	Karnataka	19/S4/01/0020/2017
14	14	Shrimp seed	Nitrofurantol Metabolite - AOZ	>100	Tamilnadu	23/S4/01/0189/2017
15	15	Shrimp seed	Nitrofurantol Metabolite - AOZ	8.22	Tamilnadu	23/S4/01/0190/2017
16	16	Shrimp seed	Nitrofurantol Metabolite - AOZ	37.65	Tamilnadu	23/S4/01/0192/2017
17	17	Shrimp seed	Nitrofurantol Metabolite - AOZ	>100	Tamilnadu	23/S4/01/0196/2017
18	18	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	9.39	Tamilnadu	23/S4/01/0201/2017
19	19	Shrimp seed	Chloramphenicol	0.64	Tamilnadu	23/S4/01/0199/2017
20	20	Shrimp seed	Nitrofurantol Metabolite - AOZ	2.39	Tamilnadu	23/S1/P1/0018/2017
21	21	Shrimp seed	Nitrofurantol Metabolite - AOZ	0.89	Tamilnadu	23/S1/Q1/0064/2017

II Quality Control Laboratory, BHIMAVARAM

22	1	Shrimp seed	Nitrofurantol Metabolite - AOZ	>50	Andra Pradesh	25/S4/01/0003/2017
23	2	Shrimp seed	Nitrofurantol Metabolite - AOZ	49.06	Andra Pradesh	25/S4/01/0004/2017
24	3	Shrimp seed	Nitrofurantol Metabolite - AOZ	25.61	Andra Pradesh	25/S4/01/0070/2017
25	4	Shrimp seed	Chloramphenicol	0.72	Andra Pradesh	25/S4/01/0068/2017
26	5	Shrimp seed	Nitrofurantol Metabolite - AOZ	0.55	Andra Pradesh	25/S4/01/0395/2017
27	6	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	7.40 >50	Andra Pradesh	25/S4/01/0399/2017

28	7	Shrimp seed	Chloramphenicol	0.16	Andra Pradesh	25/S4/01/1330/2017
29	8	Shrimp seed	Chloramphenicol	0.36	Andra Pradesh	25/S4/01/1336/2017
30	9	Shrimp seed	Chloramphenicol	0.39	Andra Pradesh	25/S4/01/1340/2017
31	10	Shrimp seed	Chloramphenicol	0.87	Andra Pradesh	25/S4/01/1341/2017
32	11	Shrimp seed	Chloramphenicol Nitrofurantoin Metabolite - AOZ	1.89 41.55	Andra Pradesh	25/S4/01/1337/2017
33	12	Shrimp seed	Chloramphenicol	0.19	Andra Pradesh	25/S4/01/1359/2017
34	13	Shrimp seed	Chloramphenicol	1.37	Andra Pradesh	25/S4/01/1466/2017
35	14	Shrimp seed	Chloramphenicol Nitrofurantoin Metabolite - AOZ	1.72 48.79	Andra Pradesh	25/S4/01/1369/2017
36	15	Shrimp seed	Chloramphenicol	54.66	Andra Pradesh	25/S4/01/1471/2017

III Quality Control Laboratory, NELLORE

37	1	Shrimp seed	Chloramphenicol	8.29	Andra Pradesh	16/S4/01/0106/2017
38	2	Shrimp seed	Nitrofurantoin Metabolite - AOZ	>100	Andra Pradesh	16/S4/01/0295/2017
39	3	Shrimp seed	Chloramphenicol Nitrofurantoin Metabolite - AOZ	0.81 >100	Odisha	24/S4/01/0023/2017
40	4	Shrimp seed	Nitrofurantoin Metabolite - AOZ	>5	Odisha	24/S4/00/0035/2017
41	5	Shrimp seed	Chloramphenicol	0.17	Andra Pradesh	16/S4/01/0606/2017
42	6	Shrimp seed	Nitrofurantoin Metabolite - AOZ	>50	Odisha	24/S4/01/0002/2017
43	7	Shrimp seed	Nitrofurantoin Metabolite - AOZ	23.79	Odisha	24/S4/01/0005/2017

The Marine Products Export Development Authority
(Ministry of Commerce & Industry, Govt. Of India)
Kochi – 682 036

No. LAB-KOC/NRCP(NRCP)/1/2016

Dated: 06 January, 2018

NRCP – Instructions – effective from January 2018.

1. The sampling procedure/strategy shall be as per the instruction contained in Annex III to the EU Directive 96/23/EC. The sampling level for RO/SRO/RC/SRC is being communicated to you separately. However, if further clarity is required please see annex IV to the EU Directive 96/23/EC for the sampling level and frequency.
2. The target given to each RC/SRC/RO/SRO is in consideration of enrolled site/export from their jurisdiction. The sample target for RC/SRC is fixed on the basis of district-wise registration of farms and according to the aquaculture production and the month-wise targets for the RCs/ SRCs are also based on the various stages of production. Similarly, the month-wise targets for sampling from processing plants will be in such a way that the total number of samples will tally with the target fixed for the RO/SRO.
3. The collection of sample shall be unforeseen, unexpected and effected at no fixed time and on no particular day of the week and the sample collection must be done as per the guidelines on sample acceptance criteria.
4. The shrimp/scampi/fish samples under NRCP shall be collected by the designated residue monitoring officers(RMOs) only from farms approved/ enrolled by/under the Marine Products Export Development Authority(MPEDA).
5. Samples must be collected in Polythene bags and properly labeled to maintain the sample integrity and traceability. The container/packing must prevent the substitution, cross contamination and degradation of sample. The container/packing must be officially sealed. The designated officers for sample collection have to be provided with official seals by the concerned field offices.
6. The follow-up samples being collected from farms/processing plants shall be considered as only additional samples over and above the samples allocated under NRCP to each region/state.
7. Sampling at farm level shall be in such a way that a minimum 10% of enrolled sites of production is covered in the yearly Plan, as all the enrolled farms in a State need to be covered over a period of time. In other words, there shall not be excess drawl of samples from one unit or farm and similarly no unit or farm will be left uncovered.
8. The farms reported with residue positive cases and processing plants reported with rejections/quality complaints have to be closely monitored and subjected to stringent and frequent sampling.
9. In case of farms situated in areas reported/suspected with presence/use of unknown chemicals/substances or indications of fraudulent activities, disease out breaks etc, more samples may be drawn.
10. Sampling levels:
 - Shrimp(black tiger) farms: 60 - 90 days & 15 days prior to harvest.
 - Scampi farms : 60-90 days, 90-120 days & 15 days prior to harvest.

- Fish farms : at any stage of production & 15 days prior to harvest.

11. In respect of farms, while the netting may be done by the employees of the farm, the supervision of the netting and actual selection of the samples shall be done by the MPEDA officer himself and not by the farm representative. When sample is drawn from the aquaculture farm, netting should be done at least in 4 to 5 positions of the pond. Sample netting may be done in each pond at equidistant places on four sides and the centre.
12. While collecting the hatchery samples (seed), a minimum of 20 - 25 gm (excluding water) shall be drawn. The seed sample should be collected in polythene bags, sealed and transported in thermo-cole box packed with dry/wet ice.
13. All RCs and SRCs are advised to draw samples from saltwater aquaculture (cage culture) also, as per availability in their region, for analysis of different substance groups.
16. RCs and SRCs are directed to use the GPS device while collecting samples from farms.
17. In the case of on-farm sampling, the farmer or his representative has to sign the original sampling report. The original sampling report has to be kept with the field office to guarantee that unauthorized persons cannot access the original report.
18. When collecting samples from the farm, the details of medication within the last 4 weeks before sampling shall be collected and indicated in the register as well as in the packing slip/sampling report that will accompany each sample.
19. As already in practice, the RO/SRO and RC/SRC shall maintain a register of samples collected and dispatched to the respective Laboratory. Needless to mention, in respect of RC/SRC, the column relating to "Name of Processing Plant" will be left blank. RO/SRO will note the name of the farm in respect of each sample drawn from a processing plant. This should be obtained from the records of the processing plant. The RO/SRO has also to note the name of the farm as well as the identification/registration number issued by the MPEDA.
20. The number of samples to be collected from the processing plants under the RO/SRO will be based on the production capacity and/or actual production/through-put of each processing plant.
21. In respect of processing plants, in normal case, the number of samples to be drawn has to be taken as one sample from one farm and the samples at the rate of two per plant per day. Drawing multi number of samples from processing plant shall be allowed only with prior permission of HO, provided the number of plants processing aquaculture products in a region is less than the number of samples to be drawn for the month from the region.
22. ROs and SROs shall ensure that all samples are collected only from the raw material receiving section of the processing establishments approved for export to EU.

23. The ROs/SROs shall verify periodically, the parameter-wise target/allocation assigned to each region/state, in order to ensure that all the processing plants in the region/state are covered for all the parameters in sample collection during the plan year.
24. The drawl of samples from processing plant shall be done by the residue monitoring officer of MPEDA himself. This task should not be entrusted to any personnel of the Processing Plant.
25. The quantity (net weight) of sample drawn shall be 500 gm in case of farm / processing plant and 20 - 25 gm in case of hatchery seed.
26. The samples shall be forwarded to the respective MPEDA Laboratory with in 3(three) days of its collection so as to reach the laboratory with in 30(thirty) hours of dispatch.
27. All RCs/SRCs/ROs/SROs shall ensure that the samples are collected and delivered to the QC Lab concerned before 20th of every month as per their monthly target/allocation.
28. The results of the tests communicated from the respective laboratory should be recorded in the specified columns in the registers maintained by the RC/SRC/RO/SRO.
28. Wherever non-compliant (residue positive) results are reported, the EIAs and MPEDA RC/SRC/RO/SRO concerned may take action as follows:
 - i. On receipt of the alert information along with test results, the EIA & MPEDA shall undertake the joint inspection of the facility to trace the origin/source of contamination. A joint inspection report shall be prepared & be available at EIA & MPEDA.
 - ii. The EIA & MPEDA officials collect follow up samples from the same premises for further analysis at MPEDA Laboratory. If the sample is found positive, on repeated analysis the results shall be communicated by MPEDA to EIAs and the defaulting facility will be issued show cause notice by EIAs.
 - iii. Based on the reply received from the facility, the EIA shall take the action as deemed fit.
 - iv. A Committee headed by the In-charge of the EIA reviews regularly the non-compliant (residue positive) cases for appropriate follow-up guidelines and actions.
29. The farms reported with non-compliant results are subjected to more stringent checks for a period of at least twelve months by the EIAs.