

INDIA

NATIONAL RESIDUE CONTROL PLAN

FOR

AQUACULTURE PRODUCTS

YEAR 2017



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NATIONAL RESIDUE CONTROL PLAN OF INDIA FOR
AQUACULTURE PRODUCTS – 2017

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NATIONAL RESIDUE CONTROL PLAN (NRCP) OF INDIA FOR AQUACULTURE PRODUCTS – 2017

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 62% 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>)	4,93,962
<i>Macrobrachium rosenbergii</i>	4,201
Total	4,98,163

Source: MPEDA, 2015 -16

5.2 Details of State-wise production of brackish water shrimp & freshwater prawn (Scampi) during 2015 -16

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, 2015 -16). The aquaculture production of crustaceans (shrimp & scampi) in the country is given in Table: 2 below.

Table – 2

State	<i>L. vannamei</i> & <i>P. monodon</i> Production(MT)	% (production)	<i>M. rosenbergii</i> (Scampi) Production(MT)	% (production)	TOTAL Productio n (MT)
West Bengal	65562	13.27	2376	56.56	67938
Orissa	28083	5.68	1015	24.16	29098
Andhra Pradesh	306379	62.02	547	13.02	306926
Tamil Nadu	45542	9.22	0	0	45542
Kerala	7360	1.49	263	6.26	7623
Karnataka & Goa	1848	0.37	00	0	1848
Maharashtra	6123	1.24	0	0	6123
Gujarat	33065	6.69	0	0	33065
Total	4,93,962		4,201		498163

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>8232</td><td>0</td><td>0</td></tr><tr><td>Odisha</td><td>5725</td><td>0</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>32785</td><td>35</td><td>110</td></tr><tr><td>Tamil Nadu + Pondicherry</td><td>1679 (1666+13)</td><td>4</td><td>45</td></tr><tr><td>Kerala</td><td>2220</td><td>1</td><td>15</td></tr><tr><td>Karnataka</td><td>346</td><td>0</td><td>3</td></tr><tr><td>Goa</td><td>18</td><td>0</td><td>0</td></tr><tr><td>Maharashtra</td><td>168</td><td>0</td><td>0</td></tr><tr><td>Gujarat + Daman & Diu</td><td>723 (711+12)</td><td>1</td><td>3</td></tr><tr><td>Total</td><td>51896</td><td>42</td><td>193</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	8232	0	0	Odisha	5725	0	17	Chattisgarah	0	1	0	Andhra Pradesh	32785	35	110	Tamil Nadu + Pondicherry	1679 (1666+13)	4	45	Kerala	2220	1	15	Karnataka	346	0	3	Goa	18	0	0	Maharashtra	168	0	0	Gujarat + Daman & Diu	723 (711+12)	1	3	Total	51896	42	193
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5.5	Export of Aquaculture Products (Shrimp and Fish) by EU approved export establishments																																																				
	During the year 2015-16, a total quantity of 20241 MT of aquacultured shrimp/products exported by EU approved export establishments to EU and non-EU countries and 2018MT of fresh water fish/products exported by EU approved units to EU and Non EU countries.																																																				
6.0	Residue monitoring in India																																																				
	There are 558 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 & 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	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-chennai@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. The MPEDA QC Laboratories is also having ISO 9001:2008 certification.

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 sufficient number of field offices (Regional/Sub-regional Offices/Centres) located in different each maritime state 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 mixing plants 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 and Bhimavaram. 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(one) sample per 10% of the farms enrolled under MPEDA.. 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 2017 :**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	51896	493962	--	5190	1 sample per 10% of the enrolled farms
(i) <i>L. vannamei</i>		4201	--	42	1 sample per every 100 M/T of production (1:100)
(ii) <i>P. monodon</i> (iii) <i>P. indicus</i> & (iv) <i>M. rosenbergii</i>					
Sub Total		498163		5232	
1. Freshwater Fin-fishes	--	--	3363	35	1 sample per every 100 M/T (1:100), based on through-put in export approved (EU) establishments
TOTAL				5267	

10.2 NRCP 2017 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	5190	1730	--	1730	1730
(i) Shrimp					
(ii) Scampi	42	14	--	23	5
2. Fin-fishes	35	12	--	17	6
Total	5267	1756	--	1770	1741

10.3 NRCP 2017 - 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	1730	--	--	1730
Cultured fresh water Prawn (Scampi)	14	--	--	14
Cultured fresh water Fin-fishes	12	4	4	4
Total	1756	4	4	1748

10.4 NRCP 2017 - 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	3460	Farms (1730)	865	346	173	173	36	137
		Proc. Plants (1730)	865	346	173	173	36	137
Cultured fresh water prawn (Scampi)	28	Farms(23)	12	4	2	2	1	2
		Proc. Plants (5)	1	1	1	1	0	1
Cultured fresh water fin-fishes	23	Farms (17)	8	4	1	2	1	1
		Proc. Plants (6)	3	1	1	0	0	1
Total	3511	--	1754	702	351	351	74	279

10.5 NRCP 2017 - 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	42	21	Samples from 50% of registered feed mills
2	Hatchery Seed	NF + CAP	193	193	One sample from each Hatchery

10.6 Total number of Samples proposed under NRCP 2017:*Table - 9*

Sl no.	Item / species	No. of Samples to be tested by MPEDA Labs
1	Crustaceans	5190
	(i) Shrimp (L. vannamei / P. monodon/ P indicus)	
	(ii) Scampi (M. rosenbergii)	
2	Fresh water Fin-fishes	35
	Sub Total	5267
3	Hatchery seed	193
4	Feed	21
	Sub Total	214
	GRAND TOTAL	5481

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- 1µg/kg)
	A (3)	Steroids	Progesterone	Nil Recommended concentration-1µg/kg)
			MedroxyProgestrone	Nil Recommended concentration-1µg/kg)
			17-β Oestradiol	Nil Recommended concentration-1µg/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)

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	
<i>* LOD & LOQ IS determined as working limit by individual laboratory.</i> <i># Working Limit (ALARA) is determined by each Lab</i>				
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			
	<i>Group as per Directive</i>	<i>Residue</i>	<i>Technique</i>	<i>Equipment (Example)</i>
	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.			
	<i>Group as per Directive</i>	<i>Residue</i>	<i>Technique</i>	<i>Equipment (Example)</i>
	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 2016 :			
16.1	Shrimp, Scampi & Fin-fishes:			
	Under NRCP 2016, against the target/plan of 4418 samples (shrimp, scampi and fin-fishes), a total of 4295 samples were analyzed. The number of non-compliant (residue positive) samples detected were 26 under Group-A6 due to residues of NF & CAP (shrimp: 21 + scampi: 4 + fin-fish: 1)			
16.2	Feed & Hatchery Samples:			
	In case of hatchery seed and feed samples, against the target/plan of 64 feed and 235 hatchery samples, 62 feed and 209 hatchery samples were analysed. The number of non-compliant samples were, feed: nil and hatchery: 79 (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 2017			

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 (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			fish	crustaceans					
Substances / groups of substances to be monitored															
A1	Silbenes (e.g. dienylstilbestrol, hexestrol, dienestrol)	E	E	E	E		E	E	E			E		E	
A2	Thyrostats (e.g. thiouracil, tapazol etc)	E	E	E	E										
A3	Steroids [androgens, estrogens and (pro)gestagens] ⁽⁸⁾	E	E	E	E	E	E	E	E			E		E	
A4	Resoreylic acid lactones (e.g. zeranol)	E	E	E	E							E		E	
A5	Beta agonists (e.g. clenbuterol, ractopamine, zilpaterol, mabuterol etc)	E	E	E	E	E						E		E	
A6	Chloramphenicol	E	E	E	E	E		E	E	E	E	E		E	E
	Nitrofurans ⁽⁴⁾			E				E	E	E	E	E		HD	E
	Nitroimidazoles ⁽⁵⁾			E	E	E		E	HD	HD	HD	E		HD	
B1	Antibacterial substances ⁽⁶⁾	E	E	E	E		E	E	E	E	E	E		E	E ⁽⁸⁾
B2a	Anthelmintics	HD	HD	HD	HD		HD	HD	HD	HD		HD		HD	
B2b	Anticoccidials	HD	HD	HD	HD		HD	E			HD	E		HD	
B2c	Carbamates and pyrethroids	HD	HD	HD	HD		HD	HD				HD		HD	HD
B2d	Sedatives	HD	HD	HD	HD		HD								
B2e	Non steroidal anti-inflammatory drugs (NSAIDs) (e.g. phenylbutazone)	HD	HD	HD	E	E	HD			HD		HD		HD	
B2f	Other pharmacologically active substances			E ⁽⁹⁾											
B3a	Organochlorine compounds including PCBs	HD	HD	HD	HD		HD	HD	HD	HD	HD	HD		HD	HD
B3b	Organophosphorus compounds	HD	HD	HD	HD		HD			HD					HD
B3c	Chemical elements	HD	HD	HD	HD		HD	HD	HD	HD	HD	HD	E	HD	HD
B3d	Mycotoxins	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, 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); Furaltadone: 3-amino-5-morpholinomethyl-2-oxazolidinone (AMOX); Nitrofurazone: semicarbazide (SEM) and nitrofurantoin: aminohydantoin (AHD).

(5) The nitroimidazoles include dimetazazole, ronidazole, metronidazole, pronicazole 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.

Annex 1B

For official use

33.63

REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

DATE	2016 December 15
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COUNTRY	India
YEAR OF PLAN IMPLEMENTATION	2016
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)	3363
NUMBER OF SAMPLES †	ACCORDING TO EU REQUIREMENTS
MINIMUM #	34
PLAN	35

EU EXPORT DATA in TONNES (referring to the previous year)	EU: 223 MT Total: 2018 MT
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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 [\[link\]](#)

Sampling levels and
frequencies



GROUP OF SUBSTANCES TO BE MONITORED	NUMBER OF SAMPLES		COMPOUND or MARKER RESIDUE	MATRIX ANALYSED	SCREENING METHOD	CONFIRMATORY METHOD	SCREEN/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	4	4								
A3 STEROIDS (WITH ANDROGENIC, ESTROGENIC OR PROGESTAGENIC ACTIVITY)	4	4								
Chloramphenicol + Nitrofurans + Nitroimidazoles	4	4								
CHLORAMPHENICOL										
NITROFURANS										
Nitrofurantoin metabolite										
Furazolidone metabolite										
Furazolidone metabolite										
NITROIMIDAZOLES										
B1 ANTIBACTERIAL SUBSTANCES	11	11								

B2a ANTHELMINTICS	5	5	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								
B2f Other pharmacologically active subs												
GROUP OF SUBSTANCES TO BE MONITORED												
Sum of B3a + B3c + B3d + B3e	7	7										
B3a ORGANOCHLORINE COMPOUNDS INCLUDING PCBS		2										
B3c CHEMICAL ELEMENTS		2										
B3d MYCOTOXINS		1										
B3e DYES e.g. Malachite Green (+ leucomalachite green), crystal violet etc		2										

† 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

NRCP 2017 - Allocation of Samples from Field Offices to MPEDA Lab Kochi

Item / species	Parameter	RO Mumbai - Maharashtra samples	RO Gujarat samples	RO Veraval samples	SRO Porbandar	RC Valad	RC Panvel	SC Ratnagiri	SRO Goa	SRC Karwar	SRO Mangalore	SRC Kannur	RC Kochi	RO Kochi	SRO Kollam	RC Nagapattinam	SRO Tuticorin	RC Bhubaneswar	SRC Balasore	SRO Bhubaneswar	RC Kolkata	SRC Contal	RO Kolkata	SRC Bhimavar	SRO Bhimavar	RC Vijayawada	SC Nellore	RO Vizag	RO Chennai	Total (Parameter wise)
CULTURED SHRIMP	CAP + NF + Nitroimidazoles	0	0	0	0	116	19	4	0	6	0	3	23	0	0	159	0	0	0	0	63	0	0	0	0	0	0	0	0	393
	Antibact. B	121	60	3	1	58	10	1	1	3	0	1	12	80	1	80	118	14	30	14	83	32	34	0	0	0	0	0	0	762
	Anthelmintic	48	25	1	1	23	4	1	0	1	0	1	5	32	1	32	47	5	13	5	33	13	13	0	0	0	0	0	0	305
	Pesticides + PCBs	24	12	1	0	12	2	1	0	1	0	0	2	16	0	15	24	3	6	3	18	6	7	0	0	0	0	0	0	154
	Chem. Element	24	12	0	0	12	2	0	0	0	0	1	2	16	0	16	24	3	6	3	17	6	7	70	29	28	9	23	35	346
	Mycotoxins	5	4	0	0	2	0	0	0	0	0	0	1	3	0	3	5	1	1	1	4	1	2	0	0	0	0	0	0	33
	Dyes	20	8	1	0	9	1	1	0	1	0	0	1	14	0	13	18	1	5	1	12	5	6	0	0	0	0	0	0	119
	Sub Total	242	121	6	2	232	38	8	1	12	0	6	46	161	2	318	236	27	61	37	167	126	69	70	29	28	9	23	35	2112
	CAP + NF + Nitroimidazoles	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Antibact. B	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	5	0	1	0	0	0	0	0	0	11
SCAMPI	Anthelmintic	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	5
	Pesticides + PCBs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
	Chem. Elem.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3
	Mycotoxins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	Dyes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	3
	Sub Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	6	0	11	0	4	1	0	0	0	0	0	26
	CAP + NF + Nitroimidazoles	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Sulfona	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	4
	Styroids	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	4
	Antibact. B	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	7
FISH	Anthelmintic	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3
	Pesticides + PCBs	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	Chem. Elem.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
	Mycotoxins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Dyes	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Sub Total	6	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	7	0	0	2	0	2	0	0	0	24
	Grand TOTAL	248	121	6	2	232	38	8	1	19	0	6	49	161	2	318	236	28	67	37	185	126	73	73	29	30	9	23	35	2162

Marine Products Export Development Authority

NRCP 2017 - Allocation of Samples from Field Offices to MPEDA Labs at Bhimavaram & Nellore

QC Lab, Bhimavaram

Item / species	Parameter	Number of Samples			
		SRC Bhimavaram to Lab Bhimavaram	SRO Bhimavaram to Lab Bhimavaram	TOTAL (parametr wise)	
CULTURED SHRIMP	CAP + NF + Nitroimidazole	695	0	695	
	Antibacterial B	347	145	492	
	Anthelmintics	139	59	198	
	Pesticides + PCBs	69	30	99	
	Chem. Elements	0	0	0	
	Mycotoxins	13	5	18	
	Dyes	56	22	78	
	Sub Total	1319	261	1580	
	CAP + NF + Nitroimidazole	2	0	2	
	Antibacterial B	2	0	2	
SCAMPI	Anthelmintics	0	0	0	
	Pesticides + PCBs	1	0	1	
	Chem. Elements	0	0	0	
	Mycotoxins	0	0	0	
	Dyes	0	0	0	
	Sub Total	5	0	5	
	CAP + NF + Nitroimidazoles	1	0	1	
	Stilbens	0	0	0	
	Steroids	0	0	0	
	Antibacterial B	2	0	2	
FISH	Anthelmintics	1	0	1	
	Pesticides + PCBs	0	0	0	
	Chem. Elements	0	0	0	
	Mycotoxins	1	0	1	
	Dyes	0	0	0	
	Sub Total	5	0	5	
	CAP + NF + Nitroimidazoles	1	0	1	
	Stilbens	0	0	0	
	Steroids	0	0	0	
	Antibacterial B	2	0	2	
Total		1329	261	1590	

QC Lab, Nellore

Item / species	Parameter	Number of Samples							
		RC Vijaya- wada to Lab Nellore	SC Nellore to Lab Nellore	RO Vizag Lab to Nellore	RO Chennai to Lab Nellore	RC Bhubaneswa r Lab Nellore	RC Kolkata to Lab Nellore	SRC Balasore to Lab Nellore	TOTAL (parametr wise)
CULTURED SHRIMP	CAP + NF + Nitroimidazoles	287	91	0	0	37	167	60	642
	Antibacterial B	143	46	113	174	0	0	0	476
	Anthelmintics	57	18	45	69	0	0	0	189
	Pesticides	28	9	22	34	0	0	0	93
	Chem. Element	0	0	0	0	0	0	0	0
	Mycotoxins	8	2	4	7	0	0	0	21
	Dyes	23	7	19	28	0	0	0	77
	Sub Total	546	173	203	312	37	167	60	1498
	CAP + NF + Nitroimidazoles	0	0	0	0	0	8	3	11
	Antibacterial B	0	0	0	0	0	0	0	0
SCAMPI	Anthelmintic	0	0	0	0	0	0	0	0
	Pesticides	0	0	0	0	0	0	0	0
	Chem. Element	0	0	0	0	0	0	0	0
	Mycotoxins	0	0	0	0	0	0	0	0
	Dyes	0	0	0	0	0	0	0	0
	Sub Total	0	0	0	0	0	8	3	11
	CAP + NF + Nitroimidazoles	1	0	0	0	0	1	0	2
	Stilbens	0	0	0	0	0	0	0	0
	Steroids	0	0	0	0	0	0	0	0
	Antibacterial B	2	0	0	0	0	0	0	2
FISH	Anthelmintics	1	0	0	0	0	0	0	1
	Pesticides	0	0	0	0	0	0	0	0
	Chem. Elements	0	0	0	0	0	0	0	0
	Mycotoxins	0	0	0	0	0	0	0	0
	Dyes	1	0	0	0	0	0	0	1
	Sub Total	5	0	0	0	0	1	0	6
	CAP + NF + Nitroimidazoles	1	0	0	0	0	1	0	2
	Stilbens	0	0	0	0	0	0	0	0
	Steroids	0	0	0	0	0	0	0	0
	Antibacterial B	2	0	0	0	0	0	0	2
Total		551	173	203	312	37	176	63	1515

Marine Products Export Development Authority -NRCP 2017

Annex 3

Allocation of Feed and Hatchery Samples

A. Sample Allocation from Field Offices to MPEDA Lab Kochi

Item / species	Parameter	RC Valsad	RC Panvel	SRC Karwar	SRC Kannur	RC Kochi	RC Nagapattinam	RC Bhuvaneshwar	SRC Balasore	SRC Contai	RC Kolkata	Total
Feed	CAP + NF	0	0	0	0	0	0	0	0	0	0	0
Hatchery sample	CAP + NF	3	0	3	0	15	45	0	0	0	0	66

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

Lab, Nellore

Item / Species	Parameter	No. of Samples			Total
		RC Vijaya-wada	SC Nellore	RC Bhuvaneshwar	
Feed	CAP + NF	0	0	0	0
Hatchery sample	CAP + NF	13	22	17	52

Lab, Bhimavaram

Item / Species	Parameter	No. of Samples				Total
		SRC Bhimavaram	RC Vijayawada	SC Nellore	RC Nagapattinam	
Feed	CAP + NF	7	7	4	3	21
Hatchery sample	CAP + NF	75	0	0	0	75

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NRCP - 2016 - Summary of Results

Item/ Species	Substance	No. of Samples			Residue substance (s)
		Target	Analysed	Non-compliant	
Shrimp	Group A6	1422	1390	21	CAP/NF-AOZ
	Group B1	1423	1404	0	
	Group B2a Anth	560	550	0	
	Group B3a OCPs & PCBs	300	290	0	
	Group B3c CE	300	284	0	
	Group B3d Myco	130	129	0	
	Group B3e Dyes	130	127	0	
Scampi	Group A6	17	17	4	NF-SEM
	Group B1	16	10	0	
	Group B2a Anth	6	4	0	
	Group B3a OCPs & PCBs	4	4	0	
	Group B3c CE	4	3	0	
	Group B3d Myco	1	1	0	
	Group B3e Dyes	2	1	0	
Fish	Group A1	10	7	0	
	Group A3	10	6	0	
	Group A6	11	10	1	NF-AOZ
	Group B1	31	22	0	
	Group B2a Anth	11	10	0	
	Group B3a (i) OCPs & PCBs	8	7	0	
	(ii) Dioxins/Furans and dioxin like PCBs	10	10	0	
	Group B3c CE	6	5	0	
	Group B3d Myco	3	2	0	
	Group B3e Dyes	3	2	0	
Sub Total		4418	4295	26	

Feed	Group A6	64	62	0	
Hatchery Seed	Group A6	235	209	79	CAP/NF
TOTAL		4717	4566	105	

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2016
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH

DATE	25.02.2017
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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	10	7		NIL
A3. SYNTHETIC STEROIDS (WITH ANDROGENIC, GESTAGENIC OR ESTROGENIC ACTIVITY)	Progesterone	Shrimp	0	0	CCα: 0.20(Kochi)	NA
		Scampi	0	0		NA
		Fish	10	6		NIL
	Oestradiol	Shrimp	0	0	CCα: 0.20(Kochi)	NA
		Scampi	0	0		NA
		Fish	10	6		NIL
A6. CHLORAMPHENICOL	Chloramphenicol	Shrimp	1422	1390	CCα: 0.06(Kochi) 0.09 (Nellore) 0.07(Bhimavaram)	12
		Scampi	17	17		NIL
		Fish	11	10		NIL
Nitrofurantoin metabolite	AHD	Shrimp	1422	1390	CCα: 0.240 (Kochi) 0.64 (Nellore) 0.23(Bhimavaram)	NIL
		Scampi	17	17		NIL
		Fish	11	10		NIL
Furaltadone metabolite	AMAZ	Shrimp	1422	1390	CCα: 0.186 (Kochi) 0.60 (Nellore) 0.21(Bhimavaram)	NIL
		Scampi	17	17		NIL
		Fish	11	10		NIL
Furazolidone metabolite	AOZ	Shrimp	1422	1390	CCα: 0.333 (Kochi) 0.62 (Nellore) 0.21(Bhimavaram)	9
		Scampi	17	17		NIL
		Fish	11	10		1
Nitrofurazone metabolite	SEM	Shrimp	1422	1390	CCα: 0.443 (Kochi) 0.66 (Nellore) 0.28(Bhimavaram)	NIL
		Scampi	17	17		4
		Fish	11	10		NIL
	Ronidazole	Shrimp	1422	1390	CCα: 0.39(Kochi) 0.40(Nellore) 0.32(Bhimavaram)	NIL
		Scampi	17	17		
		Fish	11	10		
	Metronidazole	Shrimp	1422	1390	CCα: 0.59(Kochi) 0.41(Nellore) 0.32(Bhimavaram)	NIL
		Scampi	17	17		
		Fish	11	10		

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2016
ANIMAL SPECIES/PRODUCT	AQUACULTURE - CRUSTACEANS & FINFISH

DATE	25.02.2017
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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		
NITROIMIDAZOLES	Dimetronidazole	Shrimp	1422	1390	0.39(Kochi) 0.33(Nellore) 0.31(Bhimavaram)	NIL
		Scampi	17	17		
		Fish	11	10		
	Iprnidazole- OH	Shrimp	1422	1390	CCa: 0.56(Kochi) 0.24(Nellore) 0.32(Bhmavaram)	NIL
		Scampi	17	17		
		Fish	11	10		
	HMMNI	Shrimp	1422	1390	CCa: 0.42(Kochi) 0.25(Nellore) 0.32(Bhimavaram)	NIL
		Scampi	17	17		
		Fish	11	10		
B1. ANTIBACTERIAL SUBSTANCES						
Screening test	NIL	-	-	-	-	NA
Confirmatory test	Tetracycline	Shrimp	1423	1404	CCa: 104.1 (Kochi) 105.90 (Nellore) 110.45(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	4-Epi Tetracycline	Shrimp	1423	1404	CCa: 103.6 (Kochi) 106.07 (Nellore) 110.48(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	Oxytetracycline	Shrimp	1423	1404	CCa: 102.8 (Kochi) 105.74 (Nellore) 110.82(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	4-Epi Oxytetracycline	Shrimp	1423	1404	CCa: 103.2 (Kochi) 106.89 (Nellore) 112.99(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	Chlortetracycline	Shrimp	1423	1404	CCa: 102.6 (Kochi) 106.56 (Nellore) 108.23(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	4-Epi Chlortetracycline	Shrimp	1423	1404	CCa: 103.1 (Kochi) 107.05 (Nellore) 112.15(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA	DATE	25.02.2017
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2016		
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	Sulphadiazine	Shrimp	1423	1404	CCa: 102.01 (Kochi) 103.65 (Nellore) 112.36(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	Oxolinic Acid	Shrimp	1423	1404	CCa: 103.32 (Kochi) 104.205 (Nellore) 106.12(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
	Nalidixic Acid	Shrimp	1423	1404	CCa: 101.42 (Kochi) 105.18 (Nellore) 109.3(Bhimavaram)	NIL
		Scampi	16	10		
		Fish	31	22		
B2a. ANTHELMINTICS	Ivermectin	Shrimp	560	550	LOD: 10.0 (Kochi) CCa: 115.3 (Nellore) LOD: 34.8 (Bhimavaram)	NIL
		Scampi	6	4		
		Fish	11	10		
B2f. OTHER PHARMACOLOGICALLY ACTIVE SUBSTANCES						
B3a. ORGANOCHLORINE COMPOUNDS INCLUDING PCBs	Aldrin	Shrimp	300	290	> LOQ :10	NIL
		Scampi	4	4		
		Fish	8	7		
	Dieldrin	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Chloradane	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	DDT	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Endrin	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Heptachlor	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Hexachloro Benzene	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

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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		
	Alpha HCH	Shrimp	300	290	ML: 75 Sum of 6 ND-PCBs	NIL
		Scampi	4	4		
		Fish	8	7		
	Beta HCH	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Gamma HCH	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	PCBs	Shrimp	300	290		NIL
		Scampi	4	4		
		Fish	8	7		
	Dioxins/Furans and Dioxins like PCBs	Fish	10	10	ML:6.5pg/gm	NIL
B3c. CHEMICAL ELEMENTS	Mercury	Shrimp	300	284	ML:500	NIL
		Scampi	4	3		
		Fish	6	5		
	Cadmium	Shrimp	300	280	ML:500	NIL
		Scampi	4	3		
		Fish	6	5		
	Arsenic	Shrimp	300	280	ML:1000	NIL
		Scampi	4	3		
		Fish	6	5		
	Lead	Shrimp	300	280	ML:500	NIL
		Scampi	4	3		
		Fish	6	5		
B3d. MYCOTOXINS	Aflatoxin B1	Shrimp	130	129	LOQ: 0.25 (Kochi & Nellore) LOD:0.25 (Bhimavaram)	NIL
		Scampi	1	1		
		Fish	3	2		
	Aflatoxin B2	Shrimp	130	129	LOQ: 0.25 (Kochi & Nellore) LOD:0.25 (Bhimavaram)	NIL
		Scampi	1	1		
		Fish	3	2		
	Malachite green	Shrimp	130	127	CCa: 0.33 (Kochi) 0.72 (Nellore) 0.5(Bhimavaram)	NIL
		Scampi	2	1		
		Fish	3	2		

RESULTS OF REGULATORY PROGRAMME FOR CONTROL OF RESIDUES IN FOOD

COUNTRY	INDIA	DATE	25.02.2017
YEAR OF IMPLEMENTATION OF THE RESIDUE PLAN	2016		
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	Leucomalachite green	Shrimp	130	127	CCa: 0.22(Kochi) 0.20 (Nellore) 0.42 (Bhimavaram)	NIL
		Scampi	2	1		
		Fish	3	2		

The Marine Products Export Development Authority
NRCP 2016 - 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
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SCAMPI

1	1	M rosenbergi	Nitrofurantol Metabolite - SEM	1.17	Kochi	15/S2/P3/0080/2016
2	2	M rosenbergi	Nitrofurantol Metabolite - SEM	0.77	West Bengal	32/S2/P3/0083/2016
3	3	M rosenbergi	Nitrofurantol Metabolite - SEM	0.79	West Bengal	32/S2/P3/0084/2016
4	4	M rosenbergi	Nitrofurantol Metabolite - SEM	1.12	West Bengal	32/S2/P3/0096/2016

II Quality Control Laboratory, BHIMAVARAM

SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ state	Sample ID& Collection Date
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SHRIMP

5	1	L.Vannameli	Nitrofurantol Metabolite - AOZ	8.49	Andra Pradesh	25/S1/Q1/0024/2016
6	2	L.Vannameli	Nitrofurantol Metabolite - AOZ	1.73	Andra Pradesh	25/S1/Q1/0047/2016
7	3	L.Vannameli	Nitrofurantol Metabolite - AOZ	2.18	Andra Pradesh	25/S1/Q1/0052/2016
8	4	L.Vannameli	Nitrofurantol Metabolite - AOZ	0.4	Andra Pradesh	25/S1/Q1/0085/2016
9	5	L.Vannameli	Nitrofurantol Metabolite - AOZ	0.93	Andra Pradesh	25/S1/Q1/0089/2016
10	6	L.Vannameli	Nitrofurantol Metabolite - AOZ	0.60	Andra Pradesh	25/S1/Q1/0193/2016
11	7	L.Vannameli	Nitrofurantol Metabolite - AOZ	0.98	Andra Pradesh	25/S1/Q1/0214/2016
12	8	L.Vannameli	Chloramphenicol	0.14	Andra Pradesh	25/S1/Q1/0440/2016
13	9	L.Vannameli	Chloramphenicol	0.08	Andra Pradesh	25/S1/Q1/0442/2016
14	10	L.Vannameli	Chloramphenicol	0.16	Andra Pradesh	25/S1/Q1/0472/2016
15	11	L.Vannameli	Chloramphenicol	0.11	Andra Pradesh	25/S1/Q1/0474/2016
16	12	L.Vannameli	Chloramphenicol	0.12	Andra Pradesh	25/S1/Q1/0510/2016
17	13	L.Vannameli	Chloramphenicol	0.07	Andra Pradesh	25/S1/Q1/0513/2016
18	14	L.Vannameli	Chloramphenicol	0.13	Andra Pradesh	25/S1/Q1/0515/2016
19	15	L.Vannameli	Nitrofurantol Metabolite - AOZ	33.01	Andra Pradesh	25/S1/Q1/0660/2016
20	16	L.Vannameli	Chloramphenicol	0.15	Andra Pradesh	25/S1/Q1/0696/2016
21	17	L.Vannameli	Chloramphenicol	0.51	Andra Pradesh	25/S1/Q1/0704/2016
22	18	L.Vannameli	Chloramphenicol	0.26	Andra Pradesh	25/S1/Q1/0713/2016
23	19	L.Vannameli	Chloramphenicol	0.08	Andra Pradesh	25/S1/Q1/0714/2016
24	20	L.Vannameli	Chloramphenicol	0.09	Andra Pradesh	25/S1/Q1/0789/2016
25	21	L.Vannameli	Nitrofurantol Metabolite - AOZ	0.48	Andra Pradesh	25/S1/Q1/0830/2016

SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ State	Sample ID& Collection Date
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FISH

26	22	Catla Catla	Nitrofurantoin Metabolite - AOZ	210.7	Andhra Pradesh	25/S3/P5/0323/2016
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III Quality Control Laboratory, NELLORE - NIL

SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ State	Sample ID& Collection Date
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The Marine Products Export Development Authority

NRCP 2016 - 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	Chloramphenicol	0.19	Kerala	15/S4/01/0003/2016
2	2	Shrimp seed	Chloramphenicol	2.93	Tamilnadu	23/S4/01/0007/2016
3	3	Shrimp seed	Nitrofurantol Metabolite - AOZ	9.34	Kerala	15/S4/01/0013/2016
4	4	Shrimp seed	Nitrofurantol Metabolite - AOZ	15.93	Kerala	15/S4/01/0014/2016
5	5	Shrimp seed	Nitrofurantol Metabolite - AOZ	22.69	Odisha	24/S4/01/0011/2016
6	6	Shrimp seed	Nitrofurantol Metabolite - AOZ	57.59	Tamilnadu	23/S4/01/0010/2016
7	7	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	2.65 488.90	Odisha	24/S4/01/0019/2016
8	8	Shrimp seed	Nitrofurantol Metabolite - AOZ	15.61	Odisha	24/S4/01/0038/2016
9	9	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.12 11.65	Odisha	24/S4/01/0039/2016
10	10	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.14 17.84	Odisha	24/S4/01/0040/2016
11	11	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.45 570.37	Odisha	24/S4/01/0041/2016
12	12	Shrimp seed	Nitrofurantol Metabolite - AOZ	81.29	Tamilnadu	23/S4/01/0041/2016
13	13	Shrimp seed	Nitrofurantol Metabolite - AOZ	287.07	Tamilnadu	23/S4/01/0042/2016
14	14	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.12 109.00	Tamilnadu	23/S4/01/0044/2016
15	15	Shrimp seed	Nitrofurantol Metabolite - AOZ	2.53	Odisha	24/S4/01/0051/2016
16	16	Shrimp seed	Chloramphenicol	1.91	Tamilnadu	23/S4/01/0051/2016
17	17	Shrimp seed	Nitrofurantol Metabolite - AOZ	157.79	Tamilnadu	23/S4/01/0085/2016
18	18	Shrimp seed	Nitrofurantol Metabolite - AOZ	16.74	Tamilnadu	23/S4/01/0088/2016
19	19	Shrimp seed	Nitrofurantol Metabolite - AOZ	17.48	Tamilnadu	23/S4/01/0090/2016
20	20	Shrimp seed	Nitrofurantol Metabolite - AOZ	11.99	Tamilnadu	23/S4/01/0091/2016
21	21	Shrimp seed	Nitrofurantol Metabolite - AOZ	12.27	Tamilnadu	23/S4/01/0098/2016
22	22	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.34 111.74	Tamilnadu	23/S4/01/0100/2016
23	23	Shrimp seed	Nitrofurantol Metabolite - AOZ	79.29	Odisha	24/S4/01/0078/2016
24	24	Shrimp seed	Nitrofurantol Metabolite - AOZ	82.31	Odisha	24/S4/01/0079/2016
25	25	Shrimp seed	Nitrofurantol Metabolite - AOZ	17.17	Tamilnadu	23/S4/01/0286/2016
26	26	Shrimp seed	Nitrofurantol Metabolite - AOZ	23.51	Tamilnadu	23/S4/01/0287/2016
27	27	Shrimp seed	Nitrofurantol Metabolite - AOZ	22.32	Tamilnadu	23/S4/01/0288/2016
28	28	Shrimp seed	Nitrofurantol Metabolite - AOZ	275.36	Tamilnadu	23/S4/01/0289/2016
29	29	Shrimp seed	Nitrofurantol Metabolite - AOZ	7.99	Tamilnadu	23/S4/01/0292/2016
30	30	Shrimp seed	Chloramphenicol	0.38	Karnataka	19/S4/01/0018/2016
31	31	Shrimp seed	Chloramphenicol	0.47	Karnataka	19/S4/01/0019/2016

SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ State	Sample ID& Collection Date
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II Quality Control Laboratory, BHIMAVARAM

32	1	Shrimp seed	Nitrofurantol Metabolite - AOZ	5.72	Andra Pradesh	25/S4/01/0001/2016
33	2	Shrimp seed	Nitrofurantol Metabolite - AOZ	52.68	Andra Pradesh	25/S4/01/0009/2016
34	3	Shrimp seed	Nitrofurantol Metabolite - AOZ	5.67	Andra Pradesh	25/S4/01/0015/2016
35	4	Shrimp seed	Nitrofurantol Metabolite - AOZ	770.11	Andra Pradesh	25/S4/01/0017/2016
36	5	Shrimp seed	Nitrofurantol Metabolite - AOZ	7.45	Andra Pradesh	25/S4/01/0019/2016
37	6	Shrimp seed	Nitrofurantol Metabolite - AOZ	34.47	Andra Pradesh	25/S4/01/0021/2016
38	7	Shrimp seed	Nitrofurantol Metabolite - AOZ	0.66	Andra Pradesh	25/S4/01/0044/2016
39	8	Shrimp seed	Nitrofurantol Metabolite - AOZ	102.95	Andra Pradesh	25/S4/01/0014/2016
40	9	Shrimp seed	Chloramphenicol	6.75	Andra Pradesh	25/S4/01/0020/2016
41	10	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	412.73 865.61	Andra Pradesh	25/S4/01/0042/2016
42	11	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.28 321.33	Andra Pradesh	25/S4/01/0043/2016
43	12	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	19.87 571.64	Andra Pradesh	25/S4/01/0072/2016
44	13	Shrimp seed	Chloramphenicol	174.56	Andra Pradesh	25/S4/01/0073/2016
45	14	Shrimp seed	Nitrofurantol Metabolite - AOZ	42.07	Andra Pradesh	25/S4/01/0074/2016
46	15	Shrimp seed	Chloramphenicol	0.58	Andra Pradesh	25/S4/01/0166/2016
47	16	Shrimp seed	Chloramphenicol	0.28	Andra Pradesh	25/S4/01/0327/2016
48	17	Shrimp seed	Chloramphenicol	0.22	Andra Pradesh	25/S4/01/0328/2016
49	18	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	3.99 28.65	Andra Pradesh	25/S4/01/0165/2016
50	19	Shrimp seed	Chloramphenicol	0.13	Andra Pradesh	25/S4/01/0404/2016
51	20	Shrimp seed	Chloramphenicol	4.72	Andra Pradesh	25/S4/01/0409/2016
52	21	Shrimp seed	Chloramphenicol	1.42	Andra Pradesh	25/S4/01/0461/2016
53	22	Shrimp seed	Chloramphenicol	3.83	Andra Pradesh	25/S4/01/0462/2016
54	23	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.56 0.66	Andra Pradesh	25/S4/01/0084/2016
55	24	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.13 8.87	Andra Pradesh	25/S4/01/0329/2016
56	25	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	3.64 1.07	Andra Pradesh	25/S4/01/0405/2016
57	26	Shrimp seed	Nitrofurantol Metabolite - AOZ	55.26	Andra Pradesh	25/S4/01/0570/2016
58	27	Shrimp seed	Nitrofurantol Metabolite - AOZ	16.16	Andra Pradesh	25/S4/01/0573/2016
59	28	Shrimp seed	Nitrofurantol Metabolite - AOZ	1.15	Andra Pradesh	25/S4/01/0577/2016
60	29	Shrimp seed	Chloramphenicol	0.09	Andra Pradesh	25/S4/01/0326/2016
61	30	Shrimp seed	Chloramphenicol	0.76	Andra Pradesh	25/S4/01/0738/2016
62	31	Shrimp seed	Chloramphenicol	2.64	Andra Pradesh	25/S4/01/0740/2016
63	32	Shrimp seed	Chloramphenicol	0.65	Andra Pradesh	25/S4/01/0742/2016
64	33	Shrimp seed	Chloramphenicol	0.76	Andra Pradesh	25/S4/01/0743/2016
65	34	Shrimp seed	Chloramphenicol	27.57	Andra Pradesh	25/S4/01/0794/2016
66	35	Shrimp seed	Nitrofurantol Metabolite - AOZ	5.38	Andra Pradesh	25/S4/01/0741/2016
67	36	Shrimp seed	Nitrofurantol Metabolite - AOZ	1.63	Andra Pradesh	25/S4/01/0724/2016

III Quality Control Laboratory, NELLORE

68	1	Shrimp seed	Chloramphenicol	0.25	Andra Pradesh	16/S4/01/0007/2016
69	2	Shrimp seed	Chloramphenicol	0.2	Andra Pradesh	16/S4/01/0009/2016

	SNo.	Type & Species	Parameter	Value (µg/kg)	Region/ State	Sample ID& Collection Date
70	3	Shrlmp seed	Chloramphenicol	0.21	Andra Pradesh	16/S4/01/0010/2016
71	4	Shrimp seed	Chloramphenicol	0.1	Andra Pradesh	16/S4/01/0013/2016
72	5	Shrimp seed	Chloramphenicol	0.09	Andra Pradesh	16/S4/01/0014/2016
73	6	Shrimp seed	Chloramphenicol	0.14	Andra Pradesh	16/S4/01/0015/2016
74	7	Shrlmp seed	Chloramphenicol	0.25	Andra Pradesh	16/S4/01/0017/2016
75	8	Shrimp seed	Nitrofurantol Metabolite - AOZ	72.55	Andra Pradesh	16/S4/01/0005/2016
76	9	Shrimp seed	Nitrofurantol Metabolite - AOZ	16.9	Andra Pradesh	16/S4/01/0004/2016
77	10	Shrlmp seed	Nitrofurantol Metabolite - AOZ	129.89	Andra Pradesh	16/S4/01/0006/2016
78	11	Shrimp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.20 61.87	Andra Pradesh	16/S4/01/0008/2016
79	12	Shrlmp seed	Chloramphenicol Nitrofurantol Metabolite - AOZ	0.17 20.26	Andra Pradesh	16/S4/01/0011/2016

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, 2017

NRCP – Instructions – effective from January 2017.

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.