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SI.	Product / Material	Specific Test Performed	Test Method Specification	Range of Testing /
	of Test		against which tests are	Limits of Detection
			performed	

## **BIOLOGICAL TESTING**

I.	FOOD & AGRICUL	TURAL PRODUCTS		
1.	Tea, Coffee &	Total plate count	BAM	≥10 cfu/g
	Cocoa Products		AOAC	≥ 10 cfu/g
		Yeast&Mould	IS 5403	≥ 10 cfu/g
		Total coliforms	BAM	≥ 10 cfu/g
			BAM	(3 MPN to 1100 MPN)/g
			AOAC	≥ 10 cfu/g
		Faecal coliforms	BAM	(3 MPN to 1100 MPN)/g
		E. coli	BAM	≥ 10 cfu/g
			BAM	(3 MPN to 1100 MPN)/g
			AOAC	≥ 10 cfu/g
		Staphylococcus aureus	BAM	≥10 cfu/g
			AOAC	≥ 10 cfu/g
		Salmonella	BAM	Qualitative
İ				(Absent/Present) in 25g
			AOAC	Qualitative
<u> </u>				(Absent/Present) in 25g
		Vibrio cholerae	BAM	Qualitative
				(Absent/Present) in 25g
		Vibrio parahaemolyticus	BAM	(3 MPN to 1100 MPN)/g
		Vibrio vulnificus	BAM	(3 MPN to 1100 MPN)/g
		Bacillus cereus	BAM	≥ 100 cfu/g
		Shigella	BAM	Qualitative
ļ				(Absent/Present) in 25g
		Listeria monocytogenes	BAM	Qualitative
 				(Absent/Present) in 25g
		Enterobacteriacea	IS 7402	≥ 10 cfu/g
		Clostridium perfringens	BAM	≥ 10 cfu/g
		Faecal streptococci	IS 5887 (Part 2)	(3 MPN to 1100 MPN)/g

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2.	Spice &	Total plate count	BAM	≥10 cfu/g
	Condiments		AOAC	≥ 10 cfu/g
		Yeast&Mould	IS 5403	≥ 10 cfu/g
	Whole &	Total coliforms	BAM	≥ 10 cfu/g
	powdered Spices		BAM	(3 MPN to 1100 MPN)/g
	and Herbs and		AOAC	≥ 10 cfu/g
	their Oleoresins	Faecal coliforms	BAM	(3 MPN to 1100 MPN)/g
	(Black Pepper,	E. coli	BAM	≥ 10 cfu/g
	Chilly, Curry		BAM	(3 MPN to 1100 MPN)/g
	Powder, Turmeric,		AOAC	≥ 10 cfu/g
	Cumin, White	Staphylococcus aureus	BAM	≥10 cfu/g
	Pepper, Coriander,	, , , , , , , , , , , , , , , , , , , ,	AOAC	≥ 10 cfu/g
	Seasoning Powder)	Salmonella	BAM	Qualitative
				(Absent/Present) in 25g
			AOAC	Qualitative
				(Absent/Present) in 25g
		Vibrio cholerae	BAM	Qualitative
				(Absent/Present) in 25g
		Vibrio parahaemolyticus	BAM	(3 MPN to 1100 MPN)/g
		Vibrio vulnificus	BAM	(3 MPN to 1100 MPN)/g
		Bacillus cereus	BAM	≥ 100 cfu/g
		Shigella	BAM	Qualitative
		-		(Absent/Present) in 25g
		Listeria monocytogenes	BAM	Qualitative
				(Absent/Present) in 25g
		Enterobacteriacea	IS 7402	≥ 10 cfu/g
		Clostridium perfringens	BAM	≥ 10 cfu/g
		Faecal streptococci	IS 5887 (Part 2)	(3 MPN to 1100 MPN)/g

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SI. Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3. Cooked Food Stuffs	Total plate count	BAM	≥10 cfu/g
Ready to Eat	•	AOAC	≥ 10 cfu/g
Processed Food	Yeast&Mould	IS 5403	≥ 10 cfu/g
Stuffs, Snacks	Total coliforms	BAM	≥ 10 cfu/g
(Dosa, Idli,	,	BAM	(3 MPN to 1100 MPN)/g
Chappathi, Samosa,		AOAC	≥ 10 cfu/g
Paratha)	Faecal coliforms	BAM	(3 MPN to 1100 MPN)/g
	E. coli	BAM	≥ 10 cfu/g
		BAM	(3 MPN to 1100 MPN)/g
		AOAC	≥ 10 cfu/g
	Staphylococcus aureus	BAM	≥10 cfu/g
		AOAC	≥ 10 cfu/g
	Salmonella	BAM	Qualitative
			(Absent/Present) in 25g
		AOAC	Qualitative
			(Absent/Present) in 25g
	Vibrio cholerae	BAM	Qualitative
			(Absent/Present) in 25g
	Vibrio parahaemolyticus	BAM	(3 MPN to 1100 MPN)/g
	Vibrio vulnificus	BAM	(3 MPN to 1100 MPN)/g
	Bacillus cereus	BAM	≥ 100 cfu/g
	Shigella	BAM	Qualitative
			(Absent/Present) in 25g
	Listeria monocytogenes	BAM	Qualitative
			(Absent/Present) in 25g
	Enterobacteriacea	IS 7402	≥ 10 cfu/g
	Clostridium perfringens	BAM	≥ 10 cfu/g
	Faecal streptococci	IS 5887 (Part 2)	(3 MPN to 1100 MPN)/g
4. Thermally	Total plate count	IS 5402	≥10 cfu/g
Processed Fruits and Vegetable Products	Yeast&Mould	IS 5403	≥ 10 cfu/g

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Dehydrated Fruits and Vegetable Products (Soup, Desiccated Coconut Powder, Table Olives, Raisins, Pistachio Nuts, Dates, Dry Fruits and Nuts)	Total plate count	IS 5402	≥10 cfu/g
6.	Carbonated_	Total plate count	IS 5402	≥10 cfu/g
	Beverages, Ready	Yeast&Mould	IS 5403	≥ 10 cfu/g
	to Serve Beverages Including Fruit Beverages	Coliforms	IS 5402(Part 1)	≥ 10 cfu/g
7.	Tomato Products	Yeast	IS 5403	≥ 10 cfu/g
<u> </u>		Mould	IS 5403	≥ 10 cfu/g
8.	Jam/Marmalade/Fr uit jelly/Fruit Chutney and Sauces	Yeast&Mould	IS 5403	≥ 10 cfu/g
9.	Frozen Fruits and Vegetable Products	Total plate count	IS 5402	≥10 cfu/g
10.	Preserves	Yeast & Mould	IS 5403	≥ 10 cfu/g
11.	Pickles	Yeast & Mould	IS 5403	≥ 10 cfu/g
12.	Fruit Cereal Flakes	Yeast & Mould	IS 5403	≥ 10 cfu/g
13.	All Fruit and	E. coli	ISO 16649(Part 2)	≥10 cfu/g
		Staphylococcus aureus	ISO 6888(Part 1)	≥10 cfu/g
	and Ready to Serve Beverages	Salmonella	ISO 6579(Part1)	Qualitative (Absent/Present) in 25g
	Including Fruit Beverages and Synthetic Products		AOAC	Qualitative (Absent/Present) in 25g

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Vibrio cholerae	IS 5887 (Part 5)	Qualitative (Absent/Present) in 25g
		Shigella	IS 5887 (Part 7)	Qualitative (Absent/Present) in 25g
14.	Milk and Milk	Total plate count	IS 5402	≥10 cfu/g
	Products	Yeast&Mould	IS 5403	≥10 cfu/g
	(Pasteurized/	Coliforms	IS 5401(Part 1)	≥10 cfu/g
		E. coli	ISO 16649(Part 2)	≥10 cfu/g
	Boiled Milk/	Staphylococcus aureus	ISO 6888(Part 1)	≥10 cfu/g
	Flavored Milk, Pasteurized Cream,	Salmonella	ISO 6579(Part1)	Qualitative (Absent/Present) in 25g
	Sterilized Milk, Icecream, Curd		AOAC	Qualitative
	Cheese, Butter)	Decilling	IC 5007 (Dowt C)	(Absent/Present) in 25g
ļ	Gilosso, Buttor,	Bacillus cereus	IS 5887 (Part 6)	≥100 cfu/g
		Listeria monocytogenes	BAM	Qualitative (Absent/Present) in 25g
		Clostridium perfringens	BAM	≥10 cfu/g
		Sulphite reducing Clostridium	BAM	≥100 cfu/g
15.	Tea, Coffee, Cocca Powder,	Listeria monocytogenes	AOAC-21 <sup>st</sup> Ed 2019- 2004.02 (VIDAS)	Qualitative (Absent/Present) in 25g
	Spices and Condiments- Whole and powdered spices and herbs and their Oleoresins (Black pepper, Chilly, Curry powder, Tumeric, Cumin, White Pepper, Coriander,	Salmonella species	AOAC-21st Ed 2019- 2013.01 (VIDAS)	Qualitative (Absent/Present) in 25g

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Seasoning Powder) Cooked Food stuff, Ready to eat processed food stuffs, Snacks (Dosa, Idli, Chappathi, Samosa, Paratha) All Fruit and Vegetables products and ready to serve beverages including fruit beverage and synthetic products, Milk and Milk products (Pasteurized/ Boiled Milk/Flavored Milk, Pasteurized Milk, Pasteurized cream, Sterilized Milk, Ice cream, Curd, Cheese, Butter			
16.	Marine /Aqua culture Food	Salmonella sp.	AOAC-21 <sup>st</sup> Ed 2019- 2013.01 (VIDAS)	Qualitative (Absent/Present) in 25g
	Products (Raw and Processed Shrimps, Squid, Octopus,	Listeria monocytogenes	AOAC-21 <sup>st</sup> Ed 2019- 2004.02 (VIDAS)	Qualitative (Absent/Present) in 25g

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Cuttlefish, Clam Meat, Crab Meat and their products, Cooked/Blanched Shrimps, Cooked Squid Rings and Tentacles, Pasteurized Crab Meat, Cooked Octopus, Clam Meat			
II.	WATER			
1.	Water for Processed Food Industries	Standard plate count Coliform bacteria E. coli	IS 1622 IS 1622 IS 1622	≥ 1 cfu/ml 1 MPN/100ml to 161 MPN/100 ml 1 MPN/100ml to 161 MPN/100 ml
		Proteolytic bacteria Lipolytic bacteria	IS 4251 IS 4251	≥1 cfu/ml ≥ 1cfu/ml
2.	Drinking Water	Total Coliform	IS 1622	1 MPN/100ml to 161 MPN/100 ml
		E.coli	IS 1622	1 MPN/100ml to 161 MPN/100 ml

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SI.	Product / Material	Specific Test Performed	Test Method Specification	Range of Testing /	
	of Test		against which tests are	Limits of Detection	
			performed		

## **CHEMICAL TESTING**

I.	FOOD AND AGRICULTURAL PRODUCTS			
1.	Thermally	Total soluble solids	FSSAI Manual for Fruits &	0.1% to 80 %
	processed Fruit		Vegetables:1.6	
	Nectars/Fruit	Acidity/Titrable Acidity of	FSSAI Manual for Fruits &	0.1 % to 10 %
	Beverages/Fruit	Syrup/Sample (as Malic	Vegetables:2.4	
	Drinks/Fruit	Acid, Oxalic Acid, Citric		
	Juice/Ready to	Acid monohydrate, Citric		
	Serve Fruit	Acid anhydrous, Tartaric		
	Beverages/Jam/	Acid, Lactic Acid, Acetic		
ļ	Jelly	Acid, Oleic Acid.)		
		Fill of container	FSSAI Manual for Fruits &	80 % to 100 %
			Vegetables:1.3	
		Total Sugar as	FSSAI Manual for Fruits &	1.0 % to 70 %
		sucrose/Reducing	Vegetables:2.6	
		Sugar/total Reducing		
		Sugar/added sugar		
		Total soluble solids free of	FSSAI Manual for Fruits &	0.1% to 80 %
		added salt	Vegetables:2.12	
		Sorbic acid	GCKL/QS/C/5.4/078	25mg/kg to 250 mg/kg
			Issue No. 1, Issue	
		<u> </u>	Date:22/01/2018	
		Benzoic acid	GCKL/QS/C/5.4/078	25mg/kg to 250 mg/kg
			Issue No. 1, Issue	
			Date:22/01/2018	2.1.2( ) 22.2(
2.	Dehydrated	Moisture	FSSAI Manual for Fruits &	0.1 % to 80 %
ļ	Vegetables		Vegetables:17,17.2	10 " 1000 "
		Sulphite	FSSAI Manual for Fruits &	10 mg/kg to 1000 mg/kg
		_	Vegetables:17.7	
		<u> </u>	AOAC 990.28	
		Total ash	FSSAI Manual for Fruits &	0.1 % to 40 %
<u> </u>		<u> </u>	Vegetables:17.3	

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Acid insoluble ash	FSSAI Manual for Fruits & Vegetables:17.4	0.1 % to 10 %
		Peroxidase test	FSSAI Manual for Fruits & Vegetables:17.5	Qualitative (Positive/Negative)
		Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25mg/kg to 250 mg/kg
		Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 250 mg/kg
3.	Cereals and Cereal Products	Moisture	FSSAI Manual for Cereals & Cereals Products-2.0, 8.1	1 % to 20 %
		Total ash	FSSAI Manual for Cereals & Cereals Products-8.2	0.1 % to 20 %
		Acid insoluble ash	FSSAI Manual for Cereals & Cereals Products-8.3	0.1 % to 10 %
		Gluten	FSSAI Manual for Cereals & Cereals Products-8.4	5 % to 20 %
		Alcoholic acidity	FSSAI Manual for Cereals & Cereals Products-8.5	0.05 % to 1 %
		protein	FSSAI Manual for Cereals & Cereals Products-8.7	1 % to 25 %
		Uric acid	GCKL/QS/C/5.4/077 Issue No. 1, Issue Date:22/01/2018	40 mg/kg to 1000 mg/kg
		Crude fibre	FSSAI Manual for Cereals & Cereals Products-8.8	0.1 % to 50 %
4.	Cocoa Powder	Moisture	FSSAI Manual for beverages, sugar and sugar products and confectionary Products-4.2	0.1 % to 80 %

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total ash	FSSAI Manual for beverages, sugar and sugar products and confectionary Products-4.4	0.1 % to 40 %
		Acid insoluble ash	FSSAI Manual for beverages, sugar and sugar products and confectionary Products-4.5	0.1 % to 10 %
		Alkalinity of total ash	FSSAI Manual for beverages, sugar and sugar products and confectionary Products-4.6	0.1 % to 10 %
		Total fat (cocoa butter)	FSSAI Manual for beverages, sugar and sugar products and confectionary Products-4.3	0.1 % to 40 %
		Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25mg/kg to 250 mg/kg
		Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25mg/kg to 250 mg/kg
5.	Pickles	Drained weight	FSSAI Manual for Fruits & Vegetables:18.1	45 % to 70 %
		Titrable Acidity, acidity as citric acid/acetic acid/maleic acid etc	FSSAI Manual for Fruits & Vegetables:18.3,18.4	0.1 % to 20 %
		Sodium Chloride (NaCl) Salt/in Brine	FSSAI Manual for Fruits & Vegetables:18.2	0.1 % to 10.0 %
		Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 250 mg/kg
		Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 250 mg/kg

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Butylated Hydroxy anisole(BHA)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25mg/kg to 200 mg/kg
		Tert-Butyl hydroquinone (TBHQ)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg
		Butylated Hydroxy Toluene(BHT)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg
6.	Milk and Ice Cream	Detection of cane sugar in milk	FSSAI Manual for Milk & Milk Products:1.2.1	Qualitative (0.1%)
		Detection of starch in milk	FSSAI Manual for Milk & Milk Products:1.2.2	Qualitative (0.02%)
		Detection of cellulose in milk	FSSAI Manual for Milk & Milk Products:1.2.3	Qualitative
		Detection of added Urea in milk	FSSAI Manual for Milk & Milk Products:1.2.4	Qualitative
		Detection of ammonium compounds in milk	FSSAI Manual for Milk & Milk Products:1.2.5	Qualitative
		Presence of sulphates in milk	FSSAI Manual for Milk & Milk Products:1.2.6	Qualitative (0.05%)
		Detection of added glucose in milk	FSSAI Manual for Milk & Milk Products:1.2.7	Qualitative (0.1%)
		Detection of sodium chloride in milk	FSSAI Manual for Milk & Milk Products:1.2.8	Qualitative (0.02%)
		Presence of foreign fat in milk	FSSAI Manual for Milk & Milk Products:1.2.9	Qualitative
		Detection of nitrates in milk (pond water)	FSSAI Manual for Milk & Milk Products:1.2.10	Qualitative
<del>-</del> -		Detection of neutralizers in milk	FSSAI Manual for Milk & Milk Products:1.2.11	Qualitative (0.1% for NaOH, 0.1% for Na <sub>2</sub> CO <sub>3</sub> and 0.2% for NaHCO <sub>3</sub> )

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Presence of anionicdetergents	FSSAI Manual for Milk & Milk Products:1.2.14	Qualitative (0.15%)
		Presence of skimmed milk	FSSAI Manual for Milk &	Qualitative
 		powder in natural milk	Milk Products:1.2.15	
		Presence of formalin in milk	FSSAI Manual for Milk & Milk Products:1.2.17	Qualitative
		Presence of hydrogen peroxide in milk	FSSAI Manual for Milk & Milk Products:1.2.18	Qualitative
		Presence of boric acid and borates in milk	FSSAI Manual for Milk & Milk Products:1.2.19	Qualitative
		Presence of salicylic acid in milk	FSSAI Manual for Milk & Milk Products:1.2.20	Qualitative
		Milk fat	FSSAI Manual for Milk & Milk Products:1.3.4, 7.4	0.5 % to 80 %
		Milk solids not fat	FSSAI Manual for Milk & Milk Products:1.3.3, 7.2	0.5 % to 15 %
		Total solids	FSSAI Manual for Milk & Milk Products:1.3.3, 7.2	1.0 % to 65 %
		Weight/volume	FSSAI Manual for Milk & Milk Products:7.3	200g/l to 900 g/l
		Milk protein	FSSAI Manual for Milk & Milk Products:7.5,	0.5 % to 50 %
		Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 500 mg/kg
		Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 500 mg/kg
7.	Herbs, Spices &	Moisture	IS 1797	0.1 % to 20 %
<b> </b>	Condiments	Total Ash	IS 1797	0.1 % to 20 %
		Non volatile Ether Extract	IS 1797	0.2 % to 10 %
		Acid insoluble Ash	IS 1797	0.1 % to 20 %
		Crude Fibre	IS 1797	0.1 % to 50 %
<b> </b>		Volatile oil	IS 1797	0.1 % to 25 %

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Water insoluble Ash	IS 1797	0.1 % to 20 %
		Alcohol Soluble extract	IS 1797	0.5 % to 6 %
		Cold water soluble extract	IS 1797	5 % to 60 %
		Sulphite	AOAC 990.28	2mg/kg to 1000 mg/kg
		Salt (NaCl)	IS 1797	0.1 % to 25 %
		Lead Chromate	Manual of methods of analysis of foods, Lab manual 10, 15.6	Qualitative
		Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 200 mg/kg
		Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 200 mg/kg
A.	Pepper and Pepper Products	Piperine	ASTA Method12.1	0.1 % to 50 %
В.	Turmeric Preparations	Curcumin	ASTA 18.0	0.1 % to 95 %
8.	Tea	Moisture	IS 13853 FSSAI Manual for beverages, sugar and sugar products and confectionary Products-5.2	0.1 % to 25 %
•••••		Crude fiber	IS 16041, IS 102261 (Part-1)	0.1 % to 30 %
		Total ash	IS 13854	0.1 % to 25 %
		Water soluble ash in total ash	IS13855	0.1 % to 80 %
		Water insoluble ash	IS 13855	0.1 % to 80 %
		Acid insoluble ash	IS 13857	0.1 % to 60 %
		Caffeine	IS 16027 ISO 10727	0.01 % to 50 %
		Alkalinity of water soluble ash	IS 13856	0.1 % to 10 %

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Waterextract	IS 13862	0.1 % to 80 %
		Iron Filing	IS 3633	1mg/kg to 5000 mg/kg
		Added colouring matter	IS 15642 (Part I & II)	Qualitative [Present/Absent]
9.	Oils & Fats	Appearance (clarity)	GCKL/QS/C/5.4/065	Qualitative
			Issue No. 1, Issue	Clear/Not Clear
ļ			Date:01/03/2017	
		Taste	GCKL/QS/C/5.4/065	Qualitative
			Issue No. 1, Issue	Agreeable/Disagreeable
			Date:01/03/2017	
		Odour	GCKL/QS/C/5.4/065	Qualitative
			Issue No. 1, Issue	Agreeable/Disagreeable
ļ			Date:01/03/2017	0.04.15.40
ļ		FFA	IS 548(Part 1)	0.01 to 10
ļ		Acid value	IS 548 (Part 1)	0.01 to 10
ļ		Iodine Value	IS 548 (Part 1)	0.5 to 200
ļ		Moisture	IS 548 (Part 1)	0.01 % to 1.5 %
<u> </u>		Mineral Oil	FSSAI manual for oils and fats-28.0	Qualitative (>1%)
		Specific gravity	IS 548 (Part 1)	0.01 % to 1.5 %
		Saponification value	IS 548 (Part 1)	100 to 290
		Argemone oil	FSSAI instruction Manual	Qualitative
<b> </b>		ļ	(Part 2)	(Absent/present)
<u> </u>		Insoluble impurities	IS 548 (Part 1)	0.01 % to 1.5 %
<u>                                     </u>		Unsaponifiable matter	IS 548 (Part 1)	0.1 % to 8 %
<u> </u>		Peroxide value	IS 548 (Part 1)	(0.1 to 30)meq/1000 g
		Rancidity	FSSAI manual for oils and	Qualitative
<u> </u>			fats-38.2	(Absent/present)
		Refractive index	IS 548 (Part 1)	1.30 to 1.69
		Bleachability index	ISO 17932	0.01 to 10
		Butylated Hydroxy anisole(BHA)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg

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		Tert-Butyl hydroquinone (TBHQ)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg
II.	MARINE/AQUACUL	TURE FOOD PRODUCTS	<del></del>	
1.	Prawn & Prawn Products, Fish& Fish Products,	Sorbic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 250 mg/kg
	Shrimps Artemia & Artemia Products,Oyster,	Benzoic acid	GCKL/QS/C/5.4/078 Issue No. 1, Issue Date:22/01/2018	25 mg/kg to 250 mg/kg
	Crab & Crab Products, Meat & Meat Products	Butylated Hydroxy anisole(BHA)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg
		Tert-Butyl hydroquinone (TBHQ)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25mg/kg to 200 mg/kg
		Butylated Hydroxy Toluene(BHT)	GCKL/QS/C/5.4/068 Issue No. 1, Issue Date:26/08/2017	25 mg/kg to 200 mg/kg
		Histamine	GCKL/QS/C/5.4/007 Issue No. 1, Issue Date:04/01/2016	10 mg/kg to 2000mg/kg
		Indole	GCKL/QS/C/5.4/018 Issue No. 1, Issue Date:04/01/2016	40μg/kg to 2000μg/kg
		Total Volatile Base Nitrogen (TVBN)	EC 2071/2005 Chapter III, Page No 338/37	5mg/100g to 200 mg/100g
		Trimethyl Amine Nitrogen (TMA-N)	AOAC 971.14	0.5 mg/100g to 200 mg/100g
		Salt as NaCl	AOAC 937.09	0.1 % to 25 %

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		Moisture	GCKL/QS/C/5.4/020 Issue No. 1, Issue Date:04/01/2016	0.1 % to 95 %
		Total Fat	GCKL/QS/C/5.4/015 Issue No. 1, Issue Date:04/01/2016	0.1 % to 20 %
		Acid insoluble Ash	GCKL/QS/C/5.4/008 Issue No. 1, Issue Date:04/01/2016	0.01 % to 15 %
		Protein	GCKL/QS/C/5.4/010 Issue No. 1, Issue Date:04/01/2016	0.1 % to 85 %
		Sulphite	AOAC 990.28	10 mg/kg to 500 mg/kg
		Citric acid	GCKL/QS/C/5.4/044 Issue No. 1, Issue Date:04/01/2016	0.5mg/kg to 10000mg/kg
		Total Phosphateas P <sub>2</sub> O <sub>5</sub>	AOAC 20 <sup>th</sup> Ed, 995.11, 2016	0.05 g/100g to 10 g/100g
		Formaldehyde	GCKL/QS/C/5.4/017 Issue No. 1, Issue Date:04/01/2016	0.5mg/100 g to 100 mg/100 g
2.	Fish & Fishery	Total plate count	BAM	≥10 cfu/g
	Product		AOAC	≥ 10 cfu/g
	(Raw & Processed	Yeast&Mould	IS 5403	≥ 10 cfu/g
	Shrimps, Fish,	Total coliforms	BAM	≥ 10 cfu/g
	Squid, Octopus,		BAM	(3 MPN to 1100 MPN)/g
	Cuttlefish, Clam Meat, Crab Meat		AOAC	≥ 10 cfu/g
	and Their	Faecal coliforms	BAM	(3 MPN to 1100 MPN)/g
	Products.	E. coli	BAM	≥ 10 cfu/g
	Cooked/Blanched		BAM	(3 MPN to 1100 MPN)/g
	Shrimps, Cooked		AOAC	≥ 10 cfu/g
	Squid Rings & Tentacles, Pasteurized Crab		ISO 16649(Part 2) ISO 16649(Part 3)	≥ 10 cfu/g (0 MPN to 110 MPN)/g

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Meat, Cooked	Staphylococcus aureus	BAM	≥10 cfu/g
ļ	Octopus, Clam		AOAC	≥ 10 cfu/g
	Meat		ISO 6888 (Part1)	≥ 10 cfu/g
ļ		Salmonella	BAM	Qualitative
ļ				(Absent/Present)/25g
			ISO 6579 (Part 1)	Qualitative
			, , ,	(Absent/Present)/25g
			AOAC	Qualitative
				(Absent/Present)/25g
		Vibrio cholerae	BAM	Qualitative
<u> </u>				(Absent/Present)/25g
			ISO 21872(Part 1)	Qualitative
<u> </u>				(Absent/Present)/25g
<u> </u>		Vibrio parahaemolyticus	BAM	(3 MPN to 1100 MPN)/g
			ISO 21872(Part 1)	Qualitative
ļ				(Absent/Present)/25g
İ		Vibrio vulnificus	BAM	(3 MPN to 1100 MPN)/g
İ			ISO 21872(Part 1)	Qualitative
				(Absent/Present)/25g
<u> </u>		Bacillus cereus	BAM	≥ 100 cfu/g
<b></b>		Shigella	BAM	(Absent/Present)/25g
		Listeria monocytogenes	BAM	(Absent/Present)/25g
		Enterobacteriacea	IS 7402	≥ 10 cfu/g
<b></b>			AOAC	≥ 10 cfu/g
<b></b>		Clostridium perfringens	BAM	≥ 10 cfu/g
		Pseudomonas sps	IS 14843	≥ 100 cfu/g
		Faecal streptococci	IS 5887 (Part 2)	(3 MPN to 1100 MPN)/g
III.	ANIMAL FOOD AND	FEED		
1.	Animal Feeds and	Moisture	IS 7874 (Part 1)	1 % to 25 %
	Feeding Stuffs	Crude protein	IS 7874 (Part 1)	5 % to 90 %
		Crude fat	IS 7874 (Part 1)	0.1 % to 25 %

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		Total ash	IS 7874 (Part 1)	0.1 % to 40 %
		Acid insoluble ash	IS 7874 (Part 1)	0.1 % to 21 %
		Ammoniacal nitrogen	IS 7874 (Part 1)	0.1 % to 15 %
		Sodium chloride	IS 7874 (Part II)	0.1% to 10 %
2.	Pet Foods Feeds	Ethoxyquin	AOAC 996.13	0.5mg/kg to 300 mg/kg
	and Feeding	Aflatoxins	GCKL/QS/C/5.4/073	
	Stuffs	B1	Issue No. 1, Issue	1.2 μg/kg to 100 μg/kg
		B2	Date:22/01/2018	1.2 μg/kg to 100 μg/kg
		G1		1.2 µg/kg to 100 µg/kg
		G2		1.2 μg/kg to 100 μg/kg
IV.	RESIDUES IN FOO	D PRODUCTS	<u> </u>	
1.	Thermally	Heavy metals	GCKL/QS/C/5.4/079	
	Processed Fruit	Cadmium	Issue No. 1, Issue	0.2mg/kg to 10 mg/kg
	Nectars/Fruit	Lead	Date:22/01/2018	0.2mg/kg to 10 mg/kg
	Beverages/Fruit	Arsenic		0.1mg/kg to 10 mg/kg
	Drinks/Fruit	Mercury		0.04mg/kg to 1 mg/kg
	Juice/Ready to	Copper		0.2mg/kg to 200 mg/kg
	Serve Fruit	Tin		0.2mg/kg to 500 mg/kg
	Beverages/ Jam/Jelly	Zinc		0.2mg/kg to 200 mg/kg
2.	Dehydrated	Heavy metals	GCKL/QS/C/5.4/006	
	Vegetables	Cadmium	Issue No. 1, Issue	0.5mg/kg to 10 mg/kg
		Lead	Date:04/01/2016	0.5mg/kg to 10 mg/kg
		Arsenic		0.2mg/kg to 10 mg/kg
		Mercury		0.2mg/kg to 10 mg/kg
		Copper		0.5mg/kg to 200 mg/kg
		Tin		0.5mg/kg to 500 mg/kg
		Zinc		0.5mg/kg to 200 mg/kg
3.	Cereals and	Heavy metals	GCKL/QS/C/5.4/006	
	Cereal Products	Cadmium	Issue No. 1, Issue	0.5mg/kg to 10 mg/kg
		Lead	Date:04/01/2016	0.5mg/kg to 10 mg/kg
		Arsenic		0.2mg/kg to 10 mg/kg

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		Mercury		0.2mg/kg to 10 mg/kg
		Copper		0.5mg/kg to 200 mg/kg
		Tin		0.5mg/kg to 500 mg/kg
		Zinc		0.5mg/kg to 200 mg/kg
4.	Cocoa Powder	Cadmium	GCKL/QS/C/5.4/006	0.5mg/kg to 10 mg/kg
		Lead	Issue No. 1, Issue	0.5mg/kg to 10 mg/kg
		Arsenic	Date:04/01/2016	0.2mg/kg to 10 mg/kg
		Mercury		0.2mg/kg to 10 mg/kg
		Copper		0.5mg/kg to 200 mg/kg
		Tin		0.5mg/kg to 500 mg/kg
		Zinc		0.5mg/kg to 200 mg/kg
5.	Milk and Ice Cream	Cadmium	GCKL/QS/C/5.4/079 Issue No. 1, Issue	0.2mg/kg to 10 mg/kg
		Lead	Date:22/01/2018	0.2 mg/kg to 10 mg/kg
		Arsenic	1	0.04mg/kg to 10 mg/kg
		Mercury		0.04mg/kg to 1 mg/kg
		Copper		0.2mg/kg to 200 mg/kg
		Tin		0.2mg/kg to 500 mg/kg
		Zinc		0.2mg/kg to 200 mg/kg
6.	Nuts & Nut	Aflatoxins	GCKL/QS/C/5.4/069	
	Products, Spices,	B1	Issue No. 1, Issue	0.5µg/kg to 100 µg/kg
	Oils, Oil Seeds &	B2	Date:13/09/2017	0.5μg/kg to 100 μg/kg
	Bi-Products	G1		0.5μg/kg to 100 μg/kg
		G2		0.5μg/kg to 100 μg/kg
7.	Tea	Heavy metals	GCKL/QS/C/5.4/006	
		Cadmium	Issue No. 1, Issue	0.1 mg/kg to 10 mg/kg
		Mercury	Date:04/01/2016	0.1mg/kg to 100 mg/kg
		Arsenic		0.2mg/kg to 10 mg/kg
		Lead		0.2mg/kg to 100 mg/kg
		Copper		0.2mg/kg to 100 mg/kg
		Chromium		0.2mg/kg to 100 mg/kg
		Zinc		0.2mg/kg to 100 mg/kg
		Iron		0.2mg/kg to 250 mg/kg
		Nickel		0.2mg/kg to 250 mg/kg

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SI.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Herbs, Spices &	Heavy metals	GCKL/QS/C/5.4/006	
	Condiments	Cadmium	Issue No. 1, Issue	0.1 t mg/kg to10 mg/kg
		Mercury	Date:04/01/2016	0.1 mg/kg to 100 mg/kg
		Arsenic		0.2 mg/kg to 10 mg/kg
		Lead		0.2 mg/kg to 100 mg/kg
		Copper		0.2mg/kg to 100 mg/kg
		Chromium		0.2 mg/kg to 100 mg/kg
		Zinc		0.2 mg/kg to 100 mg/kg
		Iron		0.2 mg/kg to 250 mg/kg
		Nickel		0.2 mg/kg to 250 mg/kg
9.	Marine/Aquacultur	Dyes	GCKL/QS/C/5.4/080	
	e Food Products	Malachite Green	Issue No. 1, Issue	0.5 μg/kg to 10 μg/kg
	Prawn & Prawn	Leuco malachite green	Date:12/02/2018	0.5 μg/kg to 10 μg/kg
	Products, Shrimps	Crystal violet		0.5 μg/kg to 10 μg/kg
		Leuco Crystal violet		0.5µg/kg to 10 µg/kg
10.	Prawn & Prawn	Trimethoprim	GCKL/QS/C/5.4/001	25μg/kg to 1000 μg/kg
	Products, Fish&		Issue No. 1, Issue	
	Fish Products,	 	Date:04/01/2016	
	Shrimps Artemia	<u>Sulfonamides</u>	GCKL/QS/C/5.4/001	
	& Artemia	Sulfamethoxypyridazine	Issue No. 1, Issue	2.5 µg/kg to 1000 µg/kg
	Products, Oyster,	sulfachloropyridazine	Date:04/01/2016	2.5 µg/kg to 1000 µg/kg
	Crab & Crab	Sulfamethoxazole		2.5 µg/kg to 500 µg/kg
	Products, Meat &	Sulfamethizole		2.5µg/kg to 500 µg/kg
	Meat Products	Sulfadimidin/		2.5 µg/kg to 500 µg/kg
		Sulfamethazin		
		Sulfamerazine		2.5µg/kg to 500 µg/kg
		Sulfathiazole		2.5µg/kg to 500 µg/kg
		Sulfadiazin		2.5µg/kg to 500 µg/kg
		Sulfaguanidine		2.5 μg/kg to 500 μg/kg
		Sulfapyridine		2.5 µg/kg to 500 µg/kg
		Sulfadimethoxine		2.5 μg/kg to 500 μg/kg
		Tetracyclines	GCKL/QS/C/5.4/001	
		Tetracycline	Issue No. 1, Issue	10μg/kg to 1000 μg/kg
		4-Epitetracycline	Date:04/01/2016	10μg/kg to 1000 μg/kg

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		Oxytetracycline		10 μg/kg to 1000 μg/kg
		4-Epioxytetracycline		10 μg/kg to 1000 μg/kg
		Chlortetracycline		10μg/kg to 1000 μg/kg
		4-Epichlortetracycline		10 μg/kg to 1000 μg/kg
		Quinolones		
		Ciprofloxacin		10 μg/kg to 1000 μg/kg
		Enrofloxacin		10 μg/kg to 1000 μg/kg
		Sarafloxacin		10 μg/kg to 1000 μg/kg
		Flumequine		10 μg/kg to 1000 μg/kg
		Oxolinic acid		25 μg/kg to 1000 μg/kg
		Sulfonamides	GCKL/QS/C/5.4/022	
		Sulfamethoxazole	Issue No. 1, Issue	2.5 µg/kg to 500 µg/kg
		Sulfamethizole	Date:04/01/2016	2.5 µg/kg to 500 µg/kg
		Sulfadimidin/Sulfamethazin		2.5µg/kg to 500 µg/kg
		Sulfamerazine		2.5µg/kg to 500 µg/kg
		Sulfathiazole		2.5µg/kg to 500 µg/kg
		Sulfadiazine		2.5 µg/kg to 500 µg/kg
		Sulfaguanidine		2.5µg/kg to 500 µg/kg
		Sulfapyridine		2.5µg/kg to 500 µg/kg
		Sulfadimethoxine		2.5µg/kg to 500 µg/kg
		Trimethoprim	GCKL/QS/C/5.4/021 Issue No. 1, Issue Date:04/01/2016	25μg/kg to 1000 μg/kg
		Quinolones	GCKL/QS/C/5.4/021	
		Ciprofloxacin	Issue No. 1, Issue	10 μg/kg to 1000 μg/kg
		Enrofloxacin	Date:04/01/2016	10μg/kg to 1000 μg/kg
		Oxolinic acid		25µg/kg to 1000 µg/kg
		Tetracyclines		
		Tetracycline		10 μg/kg to 1000 μg/kg
		4-Epitetracycline		10 μg/kg to 1000 μg/kg
		Oxytetracycline		10 μg/kg to 1000 μg/kg
		4-Epi oxytetracycline		10 μg/kg to 1000 μg/kg
		Chlortetracycline		10 μg/kg to 1000 μg/kg
		4-Epi chlortetracycline		10 μg/kg to 1000 μg/kg

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		Chloramphenicol	GCKL/QS/C/5.4/002 Issue No. 1, Issue Date:04/01/2016	0.10 μg/kg to 2 μg/kg
		Nitrofuran Metabolites	GCKL/QS/C/5.4/003	
		3-Amino-2 Oxazolidilone (AOZ)	Issue No. 1, Issue Date:04/01/2016	0.35μg/kg to 3 μg/kg
		3-Amino-5- orpholinomethyl-2- oxazolidinone (AMOZ)		0.35 μg/kg to 3 μg/kg
		1-Aminohydantoin (AHD)		0.35 μg/kg to 3 μg/kg
		Semicarbazide (SEM)		0.35 μg/kg to 3 μg/kg
		Nitrofuran Parent Compounds	GCKL/QS/C/5.4/004 Issue No. 1, Issue	
		Nitrofurazone	Date:04/01/2016	0.5 μg/kg to 10 μg/kg
		Furaltadone		0.5 μg/kg to 10 μg/kg
		Nitrofurantoin		0.5 μg/kg to 10 μg/kg
		Furazolidone		0.5 μg/kg to 10 μg/kg
		Ethoxyquin	GCKL/QS/C/5.4/074 Issue No. 1, Issue Date:13/09/2017	10 μg/kg to 1000 μg/kg
		Heavy metals	GCKL/QS/C/5.4/005	_
		Mercury	Issue No. 1, Issue	0.1mg/kg to 100 mg/kg
		Cadmium	Date:04/01/2016	0.02 mg/kg to 100mg/kg
		Arsenic		0.2mg/kg to 100 mg/kg
		Lead		0.06 mg/kg to 100 mg/kg