

Laboratory MAARC Labs Pvt. Ltd., Plot No. 1 & 2, Gat No. 27, Nanded Phata,
Sinhgad Road, Pune, Maharashtra

Accreditation Standard ISO/IEC 17025:2005

Certificate Number TC-6673 (in lieu of T-0642 & T-1338) **Page 1 of 36**

Validity 29.11.2017 to 28.11.2019 **Last Amended on** 04.07.2018

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

I.	FOOD & AGRICULTURAL PRODUCTS			
1.	Sugar & by Product (by membrane filtration assembly)	Mesophilic bacteria/ Total Aerobic Plate Count	ICUMSA GS 2/3-41:2011 ISBT Procedure 4	≥ 10CFU/g
		Yeast /Total Aerobic Yeast Count	ICUMSA GS 2/3-47:1998 ISBT Procedure 5	≥ 10CFU/g
		Mould/ Total Aerobic Mould Count		≥ 10CFU/g
		Thermophilic Acidophilic bacteria	SOP/MAARC/TAB Based on SM-PR-687 Issue date 07/11/2013	≥ 10CFU/g
		Guaicol Producing Bacteria	SOP/MAARC/GTAB Based on SM-PR-687 Issue date 07/11/2013	Present/Absent/50 g (Dry Basis)
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g/ml
		Staphylococcus aureus	IS 5887 (Part II):1976	Present/Absent/25 g/ml
		Shigella	IS 5887 (Part 7):1999	Present/Absent/25 g/ml
		E. coli	IS 5887 (Part I):1976	Present/Absent/25 g/ml
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/25 g/ml
2.	Milk and Dairy Products	Total Plate Count	IS 5402:2012	10 to10 ⁵ CFU/g/ ≥ 10CFU/g
		Yeast	IS 5403:1999	10 to10 ⁵ CFU/g
		Mould		≥ 10CFU/g
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g/ml
		Staphylococcus aureus	IS 5887 (Part II):1976	10 to10 ⁴ CFU/g/ml
				Present/Absent/g/ml
		E. coli	IS 5887 (Part I):1976	10 to10 ⁵ CFU/g ≥ 10CFU/ml
				Present/Absent/g

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		Coliform Count	IS 5401 (Part 1):2002	10 to10 ⁵ CFU/g/ ≥ 10 CFU/ml
		Vibrio cholerae	IS 5887 (Part v):1976	Present/Absent/25g/ml
		Listeria monocytogenes	ISO 11290 Part 1:1996	Present/Absent/g
		Anaerobic spore forming bacteria	ISO 15213	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
3.	Confectionary & Bakery Products	Total Plate Count	IS 5402:2012	10 to10 ⁵ CFU/g
		Yeast and Mould Count	IS 5403:1999	10 to10 ⁵ CFU/g
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g
		Staphylococcus aureus	IS 5887 (Part II):1976	Present/Absent/25 g
		Shigella	IS 5887 (Part 7):1999	Present/Absent/25 g
		E. coli	IS 5887 (Part I):1976	Present/Absent/25 g
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/25g
4.	Fruit & Fruit Products	Total Plate Count	IS 5402:2012	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
		Yeast and Mould Count	IS 5403:1999	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g/ml
		Staphylococcus aureus	IS 5887 (Part II):1976	Present/Absent/25 g/ml
		Shigella	IS 5887 (Part 7):1999	Present/Absent/25 g/ml
		E. coli	IS 5887 (Part I):1976	Present/Absent/25g/ml
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/25 g/ml
		Flat sour organism	FSSAI:Lab manual14, 2012	10 to 10,000 CFU/g Present/Absent.
		Mould Count	FSSAI Lab Manual 14, clause 6, 2012	Positive/Negative of the field examined
		Yeast and spores	FSSAI Lab Manual 14, clause 6, 2012	1 to 200/1/60 c.m.m.
5.	Vegetable & Vegetable Products	Total Plate Count	IS 5402:2012	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
		Yeast and Mould Count	IS 5403:1999	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g/ml

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		Staphylococcus aureus	IS 5887 (Part II):1976	Present/Absent/25 g/ml
				Present/Absent/g/ml
		Shigella	IS 5887 (Part 7):1999	Present/Absent/25 g/ml
		E. coli	IS 5887 (Part I):1976	Present/Absent/25g/ml
				Present/Absent/g/ml
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/25 g/ml
		Mould Count	FSSAI Lab Manual 14 clause 6, 2012	Positive/Negative of the field examined
6.	Beverages (Alcoholic/Non Alcoholic)	Yeast and spores	FSSAI Lab Manual 14 clause 6, 2012	1 to 200/1/60 c.m.m.
		Total Plate Count	IS 5402:2012	10 to10 ⁵ CFU per g or ≥ 10 CFU/ml
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25g/ml
		Staphylococcus aureus	IS 5887 (Part II):1976	Present/Absent/25 g/ml
		Shigella	IS 5887 (Part 7):1999	Present/Absent/25 g ml
		E. coli	IS 5887 (Part I):1976	Present/Absent/25g/ml
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/25 g/ml
7.	Herbs, Spices & Condiments	Yeast and Mould Count	IS 5403:1999	10 to10 ⁵ CFU/g ≥ 10 CFU/ml
		Salmonella	IS 5887 (Part 3):1999	Present/Absent/25 g
II.	WATER			
1.	Water for Processed Food Industries	Proteolytic Organisms	IS 4251:1967	≥ 10 CFU/ml
		Lipolytic organisms	IS 4251:1967	≥ 10 CFU/ml
		Standard Plate Count	IS 1622:1981	≥ 10 CFU/ml
		Coliform	IS 1622:1981	1 to 161 MPN/100 ml
2.	Drinking Water & Packaged Drinking Water & Packaged Natural Mineral Water (by membrane filtration assembly)	E. coli	IS 15185:2002	Present/Absent/250 ml
			IS 1622:1981	Present/Absent/100 ml
		Coliform bacteria	IS 15185:2002	Present/Absent per 250 ml
			IS 1622:1981	2 to 1600 MPN/100 ml
		Faecal streptococci	IS 15186:2002	Present/Absent/250 ml
		S. aureus	IS 5887 (Part II):1976	Present/Absent/250 ml

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		Sulphite reducing anaerobes	Annex C of IS 13428:2005	Present/Absent/50 ml
		Pseudomonas aeruginosa	Annex D of IS 13428:2005	Present/Absent/250 ml
		Aerobic Microbial Count(37°C)	IS 5402:2012	≥ 1 CFU/ml
		Aerobic Microbial Count(22°C)	IS 5402:2012	≥ 1 CFU/ml
		Yeast and mould	IS 5403:1999	Present/Absent/250 ml
		Salmonella	IS 15187:2002	Present/Absent/250 ml
		Shigella	IS 5887 (Part 7):1999	Present/Absent/250 ml
		Vibrio cholerae	IS 5887 (Part V):1976	Present/Absent/250 ml
		Vibrio parahaemolyticus	IS 5887 (Part V):1976	Present/Absent/250 ml

Ashok Kumar
Convenor

Birendra Prasad Murmu
Program Manager

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CHEMICAL TESTING

I.	FOOD & AGRICULTURAL PRODUCTS			
1.	Fruit & Vegetable product, Cereals, pulses & by products, Milk and Dairy Product, sugar & by products	Methyl mercury as Hg	SOP/MAARC/Methyl mercury/GC-ECD, Issue date 01/07/2015	0.1 to 5 mg/kg
		Hydrocyanic Acid	SOP/MAARC/Hydrocyanic Acid, Issue date 01/06/2015	2 to 20 mg/kg
		Hypericin	SOP/MAARC/ Hypericin /HPLC, Issue date 01/06/2015	0.5 to 10 mg/kg
		Agaric Acid	SOP/MAARC/Agaric acid /HPLC, Issue Date 01/06/2015	10 to 500 mg/kg
		Safrole	SOP/MAARC/Safrole/ GCMS, Issue Date 01/06/2015	1 to 10 mg/kg
		Total Aflatoxin	SOP/MAARC/Aflatoxin/ HPLC, Issue Date 04/05/2015	10 to 50 µg/kg
2.	Sugar and by products	Colour	ICUMSA GS 2/3-10 (2011)	5 to 250 IU
		Colour	ICUMSA GS 2/3-9 (2005)	5 to 250 IU
		Colour	ICUMSA GS 1/3-7 (2002)	250 to 42,000 IU _{7.0}
		Colour	ICUMSA GS 9/1/2/3-8 (2011)	5 to 16,000 IU
		Conductivity Ash/ Ash	ICUMSA GS 2/3/9-17 (2011)	0.003 to 0.200%
		Dextran	ICUMSA GS 1/2/9-15 (2011)	20 mg/kg to 1000 mg/kg
		Floc Potential/ Beverage floc	ICUMSA GS 2/3-40 (2007)/ SOP/MAARC/Floc / SM-PR-270	0 = negative to 4 = Heavy

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			Issue date 07/11/2013	
		Insoluble Matter/Sediment / extraneous matter	ICUMSA GS 2/3/9-19 (2007) / SOP/MAARC /Sediment /SM-PR-415 Issue date 07/11/2013	5 to 500 mg/kg
		Loss on Drying /Moisture	ICUMSA GS 2/1/3/9-15 (2011)	0.01 to 1.0%
		Polarization	IS 15279:2003 Clause 5, Reaffirm 2008	10 to 100 °Z
		Sucrose	FSSAI lab manual Sugar and sugar products S No 7.4(2015)	50 to 100%
		Assay/ Purity	By calculation	NA
		Brix/ Refractometer Brix	ICUMSA GS 4/3/8-13	0.1 to 85°
		Reducing Sugars/Invert Sugars	SOP/RS/GS2/3/9-5(A), Issue Date 01/10/2014	0.1 to 0.5%
			ICUMSA GS 2/3/9-5 (2011)	0.002 to 0.050%
		Sulphite/Sulphur Dioxide	ICUMSA GS 2/1/7/9-33 (2011)/FSSAI lab manual Sugar and sugar products S No 7.5(2015)	2 to 70 mg/kg
		Chloride	Food Chemical Codex III edition, page 471	50 to 200 mg/kg
		QAC	SOP/MAARC/QAC/ SM-PR-470 Issue date 09/11/2013	0.5 to 5 mg/kg
		pH	ICUMSA GS1/2/3/4/7/8/9-23 (2009)	1 to 14
		Turbidity	ICUMSA GS2/3-18 (2013)	1 to 250 IU
		Melamine	SOP/MAARC/Melamine/LC MS issue date 30/04/2016	2 to 10 mg/kg
		Dirt,filth,iron fillings & added colouring matter.	FSSAI Instructions Manual Part II (2012)	NA
		Taste,odour,odour after acidification &	SOP/Sensory evaluation/SM-PR-420	NA

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3.	Milk and Dairy Product	appearance	Issue Date 01/02/2016	
		Moisture	IS 1479 (Part II):1961(RA 2013) /IS 11623:2008 (RA 2013)/ FSSAI Lab Manual (Milk & Milk Products) 1.3.3, 3.2, 4.4, 5.2, 6.2, 7.2, 8.2, 9.2, 10.2, 11.2, 12.2,13.2,14.2,15.2,16.2, 17.2(2016)	0.2 to 99%
		Fat	IS 11762:2013 / IS 1479 (Part II):1961 (RA 2013) / IS 11721:2013 / FSSAI Lab Manual (Milk & Milk Products) 1.3.4, 2.2, 3.3, 4.2, 5.3, 6.3, 7.4, 9.3, 10.3, 11.3, 12.3, 14.3, 15.3, 16.3, 17.3 (2016)	0.1 to 50%
		Protein	IS 1479 (Part II):1961 (RA 2013) / IS 7219:1973 (RA 2010 / FSSAI Lab Manual (Milk & Milk Products) 3.4, 7.5, 9.6, 10.6, 15.4, 16.4, 17.4, 19.1 (2016)	0.1 to 35%
		Titration Acidity	IS 3507:1966 (RA 2013)/ IS 11766:1986 (RA 2012)/ FSSAI Lab Manual (Milk & Milk Products) 9.5, 10.4, 14.5, 15.5 (2016)	0.1 to 5%
		Total Ash	IS 1479 (Part II):1961/ (RA 2013)/ IS 1165:2002(RA 2013) / FSSAI Lab Manual 14.6, 16.5, 17.7 (Milk & Milk Products(2016)	0.1 to 10%

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Solids	IS 1479 (Part II);1961 (RA 2013)/IS 11622:1986 (RA 2013) / IS 11623:2008 (RA 2013) / FSSAI Lab Manual (Milk & Milk Products) 1.3.3, 3.2, 4.4, 5.2, 6.2, 7.2, 8.2, 9.2, 10.2, 11.2, 12.2,13.2,14.2, 15.2,16.2, 17.2 (2016)	0.2 to 99%
		Sugar (added / total)	IS 4079:1967 (RA 2011)/ FSSAI Lab Manual (Milk & Milk Products) 9.4, 14.7 (2016)	1 to 90%
		Solid not fat	IS 12299:1998 (RA 2011)	1 to 99%
		Carbohydrate	IS 1656:2007 (RA 2012) / FSSAI Lab Manual (Milk & Milk Products) 10.5 (2016)	1 to 99%
		Aflatoxin M1	SOP/MAARC/AflatoxinM1/ HPLC, issue date 01/06/2015	0.2 to 10 µg/kg
		Melamine	SOP/MAARC/Melamine/LC MS issue date 30/04/2016	0.25 to 2 mg/kg
4.	Cereals, pulses and by products,	Moisture	IS 1155:1968 (RA 2010) / FSSAI Lab Manual 2.0, 8.1 (2016) (Cereals & Cereal Products) IS 3579:1966 (RA 2015)	0.02 to 90%
		Total ash	IS 1155:1968 (RA 2010) / FSSAI Lab Manual 8.2 (2016) (Cereals & Cereal Products)	0.01 to 20%
		Acid insoluble ash	IS 1155:1968 (RA 2010) / FSSAI Lab Manual 8.3 (2016) (Cereals & Cereal	0.01 to 20%

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5.	Bakery, and Confectionery Products	Moisture	IS 12711:1989 (RA 2010) / DGHS Lab manual 4-1.2,2.2,4.2,5.2,7.2 (2005)	0.02 to 90%
		Total ash	IS 12711:1989 (RA 2010) / DGHS Lab manual 4-1.3,2.3,3.2,4.4,5.3,6.7,7.3,9.3 (2005)	0.01 to 20%
		Acid insoluble ash	IS 12711:1989 (RA 2010) / DGHS Lab manual 4-1.5,2.4,4.5,5.5,8.1,13.3,14.3 15.5 (2005)	0.01 to 20%
6.	Edible oil & fats	Cholesterol	AOAC 994.10 20 th edition 2016	0.1 to 300 mg/100 gm
		Saturated fatty acids	IS 548 (PART III) (1976) (RA:2012)	0.01 to 99.9% m/m
		Mono unsaturated fatty acids (MUFA)		
		Poly unsaturated fatty acids (PUFA)		
		Trans fat (Trans-9-Elaidic acid)		0.01 to 10% m/m
7.	Fruit & Vegetable Products	Moisture	FSSAI Lab Manual (Fruits & Vegetable Products)	0.2 to 99%
		Brix/ Total soluble solids	IS13815:2010/ FSSAI Lab Manual (Fruits & Vegetable Products)	0.2 to 90%
		Total ash	FSSAI Lab Manual (Fruits & Vegetable Products)	0.1 to 10%
		Acid insoluble ash	IS13846:2009/ FSSAI Lab Manual (Fruits & Vegetable Products)	0.1 to 10%
		Total Solids	FSSAI Lab Manual (Fruits & Vegetable Products)	0.5 to 99%

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8.	Fruit and Vegetable Products, Milk and Dairy Products, Sugar and Sugar Products, Non Alcoholic Beverages, Confectionary & Bakery products	Arsenic	SOP/MAARC/ICPMS/Food FSSAI Manual of analysis of foods : Metals S No 6, 2016	0.04 to 15mg/kg
		Cadmium		0.04 to 15mg/kg
		Copper		0.1 to 100 mg/kg
		Lead		0.04 to 15mg/kg
		Mercury		0.04 to 15mg/kg
		Tin		0.04 to 100 mg/kg
		Chromium		0.01 to 15 mg/kg
9.	Non Alcoholic Beverages	Melamine	SOP/MAARC/Melamine/LC MS-MS Based on FDA LIB No 4421 vol 24,2008	0.5 to 100 mg/L
		Methyl Mercury as Hg	SOP/MAARC/Methyl Mercury/GC ECD	0.1 to 5 mg /L
		Saffrole	SOP/MAARC/Saffrole/GC MS	1 to 10 mg /L
		Brix	FSSAI Lab Manual (Fruit and Veg) 1.62016	0.1 to 30 %
		Total Sugars	FSSAI Lab Manual (Fruit and Veg) 2.62016	1 to 25 %
		Phosphoric Acid	SOP/MAARC/Phosphoric acid/Spectro-molybdenum blue Based on SMPR/360	0.01 to 10 %
		Caffeine	FSSAI Lab Manual (Food Additive) 3.5.52016	1 to 200 mg/L
		Aspartame (Methyl Ester)		50 to 1000 mg/L
		Acesulfame-K		50 to 1000 mg/L
		Benzoic Acid		50 to 200 mg/L
		Sunset Yellow	FSSAI Lab Manual (Food Additive) 32016	10 to 100 mg/L

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	Pesticide residue			
3.	Non Alcoholic Beverages	DDT (singly)	SOP/MAARC/Nonalcoholic beverages/ PRbased on US EPA 525.5	0.1 to 100 µg /L
		DDD (singly)		0.1 to 100 µg/L
		DDE (singly)		0.1 to 100 µg /L
		Endosulfan A		0.1 to 100 µg /L
		Endosulfan B		0.1 to 100 µg /L
		Endosulfan Sulfate		0.1 to 100 µg /L
		Hexachlorocyclohexane and isomers		
		Alfa isomer		0.1 to 100 µg /L
		Beta isomer		0.1 to 100 µg/L
		Gamma isomer Known as Lindane		0.1 to 100 µg/L
		Delta isomer		0.1 to 100 µg /L
		Malathion (To be determined and expressed as combined residues of malathion and malaxon)		0.1 to 100 µg /L
		Chlorpyrifos		0.1 to 100 µg /L
II.	WATER			
1.	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Food Processing Industries and	Colour	IS 3025 (Part 4):1983-Cl. 2 Reaffirmed 2006	2 to 50 units
		Odour	IS 3025 (Part 5):1983 Reaffirmed 2006	Qualitative Test
		Taste	IS 3025 (part 8):1984 Reaffirmed 2012	Qualitative Test
		Turbidity	IS 3025 (Part 10):1984-Cl. 1 Reaffirmed 2006	1 to 50 NTU

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	Raw Water			
		Total dissolved solids	IS 3025 (Part 16):1984-Cl. 1 Reaffirmed 2006	50 to 5000 mg/L
		pH	IS 3025 (Part 11):1983-Cl. 2 Reaffirmed 2006	1 to 14 pH units
		Nitrate (as NO ₃)	IS 3025 (Part 34):1988-Cl. 3.3 Reaffirmed 2009	2 to 100 mg/L
		Nitrite (as NO ₂)	IS 3025 (Part 34):1988-Cl. 4 Reaffirmed 2009	0.01 to 1 mg/L
		Fluoride (as F)	IS 3025 (PART 60):2008	0.2 to 2.5 mg/L
		Chloride (as Cl)	IS 3025 (Part 32):1988 Cl. 2 Reaffirmed 2009	5 to 500 mg/L
		Sulphate (as SO ₄)	IS 3025 (Part 24):1986-Cl. 4 Reaffirmed 2009	5 to 500 mg/L
		Alkalinity (asCaCO ₃)	IS 3025 (Part 23):1986-Cl. 8 Reaffirmed 1998	5 to 500 mg/L
		Calcium (as Ca)	IS 3025 (Part 40):1991-Cl. 5 Reaffirmed 2009	5 to 500 mg/L
		Magnesium (as Mg)	IS 3025 (Part 46):1994-Cl. 6 Reaffirmed 2009	5 to 500 mg/L
		Sodium (as Na)	IS 3025 (Part 45):1993-Cl. 6 Reaffirmed 2009	1 to 500 mg/L
		Residual free chlorine	IS 3025 (Part 26):1986-Cl. 3 Reaffirmed 2009	0.1 to 5 mg/L
		Bromate (as BrO ₃)	EPA 300.0 AUG 1993; Revision 2.1	0.001 to 0.05 mg/L
		Phenolic compounds (as C ₆ H ₅ OH)	IS 3025 (Part 43):1992-Cl. 6 Reaffirmed 2009	0.001 to 0.05 mg/L/ Absent
		Mineral oil	IS 3025 (Part 39):1991-Cl. 6 Reaffirmed 2009	0.1 to 5 mg/L/ Absent
		Anionic surface active agents (as MBAS)	Annex K of IS 13428:2005 Reaffirmed 2009 / APHA 5540 A,B and C 22 nd edition 2012	0.1 to 5 mg/L
		Sulphide (as H ₂ S)	IS 3025 (Part 29):1986-Cl. 3	0.04 to 5 mg/L

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			Reaffirmed 2009	
		Total hardness (as CaCO ₃)	IS 3025 (Part 21):1983-Cl. 2 Reaffirmed 2009	5 to 1000 mg/L
		Total solids	IS 3025 (Part 15):1984-Cl. 1 Reaffirmed 2009	50 to 5000 mg/L
		Ammonia (as NH ₃)	IS 3025 (Part 34):1988	0.4 to 10 mg/L
	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Food Processing Industries and Raw Water.	Barium	SOP/MAARC/ICPMS/Water based on IS 3025 Part 2: 2004, APHA 3125 B , 22nd Edition 2012	200 to 100000µg/L
		Copper		20 to 10000 µg/ L
		Iron		20 to 10000 µg /L
		Manganese		20 to 10000 µg /L
		Zinc		200 to 100000µg/L
		Silver		2 to 1000 µg /L
		Aluminum		10 to 5000 µg /L
		Selenium		2 to 1000 µg / L
		Antimony		2 to 1000 µg /L
		Boron		20 to 10000 µg /L
		Mercury		0.5 to 250µg /L
		Cadmium		2 to 1000 µg /L
		Arsenic		2 to 1000 µg /L
		Lead		2 to 1000 µg /L
		Chromium		20 to 10000 µg /L
		Nickel		10 to 5000 µg /L
	Molybdenum	20 to 10000 µg /L		
III.	RESIDUES IN FOOD PRODUCTS			
1.	Fruit & Vegetable product, Nuts & Nut Products, Confectionary & Bakery Products, Spices & Condiments, Cereals, pulses & by products, Milk &	Trace Metal Elements		
		Zinc	FSSAI Manual of methods of analysis of foods METALS S.No.3.0 (2016)	0.5 to 10mg/kg
		Arsenic	FSSAI Manual of methods of analysis of foods METALS S.No.7.2 (2016)	0.1 to 5 mg/kg
		Cadmium	FSSAI Manual of methods of analysis of foods	0.05 to 5 mg/kg
		Copper	FSSAI Manual of methods of analysis of foods	0.5 to 10mg/kg

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	dairy products, sugar & by products	Lead	METALS S.No.3.0 (2016)	0.1 to 10 mg/kg
		Mercury		0.1 to 5 mg/kg
		Tin	FSSAI Manual of methods of analysis of foods METALS S.No.8.1 (2016)	50 to 250 mg/kg
2.	Sugar and by products	Trace Metal Elements		
		Zinc	ICUMSA GS 9-11 (2015)	0.5 to 10 mg/kg
		Cadmium	ICUMSA GS 9-11 (2015) FSSAI Manual of methods of analysis of foods METALS S.No.3.0 (2016)	0.05 to 5 mg/kg
		Mercury	ICUMSA GS 9-12 FSSAI Manual of methods of analysis of foods METALS S.No.3.0 (2016)	0.08 to 5 mg/kg
		Tin	SOP / MAARC / HMS / AAS, Issue date 01/01/2015 FSSAI Manual of methods of analysis of foods METALS S.No.8.1 (2016)	50 to 250 mg/kg
		Chromium	SOP/MAARC/Cr/AAS	0.02 to 1 mg/kg
		Arsenic	ICUMSA GS 2/3/9-25 (2007)	0.05 to 1.0 mg/kg
		Copper	ICUMSA GS 9-9 (2013) ICUMSA GS 2-51 (2015) FSSAI Manual of methods of analysis of foods METALS S.No.3.0 (2016)	0.2 to 5 mg/kg
		Iron	ICUMSA GS 2/3/7/8-31 (1994), ICUMSA GS 9-10 (2013)	0.2 to 5 mg/kg
		Lead	ICUMSA GS 2/3-24 (1998) ICUMSA GS 2-51 (2015) FSSAI Manual of methods of analysis of foods METALS S.No.3.0 (2016)	0.05 to 5.00 mg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Sugar and sugar syrup	Pesticides Residues		
		2,4 D	SOP/MAARC/PRS/HPLC 1 (Based on USEPA 555:1962), Issue date 02/04/2012	1 to 1000 µg/kg
		2,4'DDT	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		4,4'DDT		1 to 1000 µg/kg
		2,4'DDD		1 to 1000 µg/kg
		4,4'DDD	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		2,4'DDE		1 to 1000 µg/kg
		4,4'DDE		1 to 1000 µg/kg
		α-HCH	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		β-HCH		1 to 1000 µg/kg
		δ-HCH		1 to 1000 µg/kg
		γ-HCH		1 to 1000 µg/kg
		Alchlor		1 to 1000 µg/kg
		Aldrin	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		Atrazin		1 to 1000 µg/kg
		Dieldrin	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		Endosulfan I		1 to 1000 µg/kg
		Endosulfan II		1 to 1000 µg/kg
		Endosulfan Sulfate	SOP/MAARC/PRS/GCMS (Based on USEPA 525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		Ethion		1 to 1000 µg/kg
		Isoproturon	SOP/MAARC/PRS/HPLC (Based on USEPA 532:2000), Issue date	1 to 1000 µg/kg

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			02/04/2012	
		Methyl Parathion	SOP/MAARC/PRS/GCMS	1 to 1000 µg/kg
		Methyl Paraxon	(Based on USEPA	1 to 1000 µg/kg
		Malathion	525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		Malaxon	SOP/MAARC/PRS/GCMS	1 to 1000 µg/kg
		Monocrotophos	(Based on USEPA	1 to 1000 µg/kg
		Phorate	525.2:1995), Issue date 02/04/2012	1 to 1000 µg/kg
		Phorate Sulfone	SOP/MAARC/PRS/GCMS	1 to 1000 µg/kg
			(Based on USEPA 525.2: 1995), Issue date 02/04/2012	
		Phorate Sulfoxide	SOP/MAARC/PRS/HPLC	1 to 1000 µg/kg
			(Based on USEPA 532: 2000), Issue date 02/04/2012	
		Carbofuran	SOP/MAARC/PR/09_1	10 to 1000 µg/kg
			Issue date 01/07/2015	
		Atrazine	SOP/MAARC/PR/09_1	10 to 1000 µg/kg
			Issue date 01/07/2015	
		Phorate	SOP/MAARC/PR/09_2	10 to 1000 µg/kg
			Issue date 01/07/2015	
		Simazine	SOP/MAARC/PR/09_2	10 to 1000 µg/kg
			Issue date 01/07/2015	
		DDT(o,p & p,p isomers of DDT,DDE & DDD)	SOP/MAARC/SUGAR/SUG	0.1 to 100 µg/kg
		Alpha,beta & delta HCH	AR SYRUP/PR Issue date	
		Lindane (gamma HCH)	02/04/2012	
		Endosulfan (alpha,beta & sulfate)		
		Chlorpyrifos		
		Dichlorvos		
		Ethion		
		Monocrotophos		
		Metribuzin		

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Malathion	SOP/MAARC/SUGAR/SUGAR SYRUP/PR Issue date 02/04/2012	0.1 to 100 µg/kg
		Malaxon		
		Methyl parathion		
		Methyl paraxon		
		Aldicarb		
		Carbofuran		
		Butachlor		
		Isoproturon		
		Aldrin		
		Dieldrin		
		Atrazine		
		Simazine		
		Imidacloprid		
		Propiconazole		
		Quinalphos		
		Alachlor		
		2,4-D		
		Azinphos methyl		
		Ethoprophos	SOP/MAARC/SUGAR/SUGAR SYRUP/PR Issue date 02/04/2012	0.1 to 100 µg/kg
		Cypermethrin		
		Oxamyl		
		Phorate (sum of phorate+phorate sulfoxide+phorate sulfone)		
4.	Milk and Dairy Product	Trace Metals Elements		
		Zinc	SOP / MAARC / HMM / AAS Issue date 03/08/2015 FSSAI Lab manual S.No.3.0 (Metals) (2016)	1 to 10 mg/kg
		Arsenic	SOP / MAARC/ As / Milk, Issue date 01/07/2011 FSSAI Lab manual S.No.7.2 (Metals) (2016)	0.04 to 5 mg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cadmium	SOP/MAARC/HMM/AAS, Issue date 03/08/2015 FSSAI Lab manual S.No.3.0 (Metals) (2016)	0.5 to 5 mg/kg
		Copper	SOP/MAARC/HMM/AAS, Issue date 03/08/2015 FSSAI Lab manual S.No.3.0 (Metals) (2016)	1 to 10 mg/kg
		Lead	SOP/MAARC/HMM/AAS, Issue date 03/08/2015 FSSAI Lab manual S.No.3.0 (Metals) (2016)	1 to 10 mg/kg
		Mercury	AOAC official method 971.21, 19 th ed. FSSAI Lab manual S.No.3.0 (Metals) (2016)	0.5 to 5 mg/kg
		Chromium	SOP/MAARC/HMM/AAS, Issue date 03/08/2015	0.5 to 250 mg/kg
		Tin	SOP/MAARC/HMM/AAS, Issue date 03/08/2015 FSSAI Lab manual S.No.8.1 (Metals) (2016)	50 to 500 mg/kg
		Pesticides	SOP/MAARC/PR/MILK/01 issue date 01/02/2015	10 to 10000 µg/kg
		Aldrin	Based on	
		Dieldrin	AOAC 970.52 18th Edition & AOAC 2015.03	
		Chlordane Cis		
		Chlordane Trans		
		o,p DDT		
		p,p DDT		
		o,p DDD		
		p,p DDD		
		o,p DDE		
		p,p DDE		

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Monocrotophos	SOP/MAARC/PR/MILK/01 issue date 01/02/2015 Based on AOAC 970.52 18th Edition & AOAC 2015.03	20 to 10000 µg/kg 10 to 10000 µg/kg 50 to 10000 µg/kg 10 to 10000 µg/kg 10 to 10000 µg/kg
		Paraquat dichloride		
		2-4D		
		Trichlorfon		
		Carbendazim		
		Carbofuran & 3 hydroxy carbofuran		
		Cypermethrin		
		Edifenphos		
		Fenthion and its sulfone and oxygen analogues		
		Fenvelerate		
		Phenthoate		
		Pirimiphos-methyl		
		HCH Alpha,		
		HCH Beta		
		HCH Gamma		
		HCH Delta		
		Benomyl		
		Heptachlor & its epoxides		
		Lindane		
		Chlorfenvinphos		
		Chlorpyrifos		
		Ethion		
		Fenitrothion		
		Phorate		
5.	Fruit & Vegetable (Grapes, Pomgranate,)	Organochlorine (OC)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Aldrin (expressed as Dieldrin)		
		Chlordane (cis& trans)		
		Chlorothalonil		
		DDT (all isomers, sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-TDE	SOP/MAARC/PR/01,issue date 01/02/2015 Based on	10 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		(DDD) expressed as DDT)	AOAC 2007.01 19th Edition	
		Dicofol (sum of p, p' and o,p' isomers)		
		Dieldrin (see Aldrin)		
		Endosulphan (All isomers, sum of <i>alpha</i> -and <i>beta</i> -isomers and endosulphan sulphate expressed as endosulphan)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Endrin	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		HCH (sum of isomers, except the <i>gamma</i> isomer)		
		Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)		
		Lindane (<i>gamma</i> -HCH)		
		Organophosphorus (OP)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		4-bromo-2-chlorophenol (metabolite of Profenophos)		
		Acephate		
		Chlorpyriphos methyl & chlorpyriphos		
		Chlorfenvinphos	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Cyantraniliprole		
		Diazinon		
		Dichlorvos		
		Dimethoate (Including Omethoate)	SOP/MAARC/PR/01,issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Edifenphos		
		Ethion		

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Etrimphos	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Fenitrothion		
		Fenthion (fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent)		
		Iprobenphos		
		Malathion (sum of malathion and malaoxon expressed as malathion)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Methamidophos		
		Monocrotophos		
		Omethoate (refer to Dimethoate)		
		Oxydemeton methyl (sum of oxydemeton methyl and demeton-S-methylsulfone expressed as oxydemeton methyl)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Parathion ethyl		
		Parathion methyl (sum of Parathion methyl and paraoxon methyl expressed as Parathion methyl)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Phenthoate		
		Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Phosalone		
		Phosphamidon	SOP/MAARC/PR/01,issue date 01/02/2015 Based on	10 to 10000 µg/kg
		Pirimiphos-methyl		
		Profenophos		

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Propetamphos	AOAC 2007.01 19th Edition	
		Quinalphos		
		Temephos		
		Thiometon		
		Triazophos		
		Synthetic Pyrethroids (SP)	SOP/MAARC/PR/01, issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Cyfluthrin (including other mixtures of constituent isomers sum of isomers)		
		Cypermethrin (including other mixtures of constituent isomers sum of isomers)	SOP/MAARC/PR/01, issue date 01/02/2015 Based on (AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Deltamethrin		
		Ethofenprox (Etofenprox)		
		Fenpropathrin		
		Fenvalerate & Esfenvalerate (sum of RR & SS, Rs and SR isomers)	SOP/MAARC/PR/01, issue date 01/02/2015 Based on (AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Lambda-cyhalothrin		
		Permethrin (sum of isomers)		
		tau-Fluvalinate		
		Transfluthrin		
		Triazines	SOP/MAARC/PR/01, issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Atrazine		
		Flufenazine		
		Simazine		
		Acrylamino acid fungicides	SOP/MAARC/PR/01, issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Benalaxyl including other mixtures of constituent isomers including Benalaxyl-M (sum of		

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		isomers)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Metalaxyl&Metalaxyl-M		
		Oxycarboxin		
		Propanil		
		Carbamates		
		Bendiocarb		
		Benfuracarb		
		Benomyl (see carbendazim)		
		Carbaryl		
		Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)		02 to 10000 µg/kg
		Carbosulfan		10 to 10000 µg/kg
		Dazomet (Methylisothiocyanate resulting from the use of dazomet and metam)		10 to 10000 µg/kg
		Fenobucarb		10 to 10000 µg/kg
		Indoxacarb (sum of R and S isomers)		
		Iprovalicarb		
		Methomyl and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Oxamyl		
		Propoxur		
		Propamocarb (sum of propamocarb and its salt expressed as propamocarb)	SOP/MAARC/PR/04,issue date 01/02/2015 AOAC 2007.01 19th Edition	10 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Thiobencarb (Benthiocarb)	SOP/MAARC/PR/01,issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Pyrimidines Fenarimol	SOP/MAARC/PR/01,issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Triazoles Cyazofamid Bitertanol Difenoconazole Flusilazole Hexaconazole	SOP/MAARC/PR/01,issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Myclobutanil Paclobutrazol Penconazole Propiconazole Tebuconazole tetraconazole	SOP/MAARC/PR/01,issue date 01/02/2015 (Based on AOAC 2007.01 19th Edition)	10 to 10000 µg/kg
		Triadimefon (sum of triadimefon and triadimenol) ametoctradin		
		Imidazole Fenamidone Iprodione	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg 10 to 10000 µg/kg
		Oxazole Famoxadone	SOP/MAARC/PR/04,issue date 01/02/2015 AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Phthalimide Captafol Captan	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Benzimidazole	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Thiophanate-methyl	SOP/MAARC/PR/04,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Nicotinoids	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Acetamiprid		
		Clothianidin (see thiamethoxam)		
		Imidacloprid		
		Thiacloprid		
		Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Dinotefuran		
		Flonicamid (sum of flonicamid, TNFG and TNFA)		
		Morpholine	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Dimethomorph		
		Tridemorph	SOP/MAARC/PR/04,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Substituted Thiourea	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Difenthiuron		

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		Diuron (Diuron including all components containing 3,4-dichloroaniline moiety expressed as 3,4-dichloroaniline)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Iodosulfuron-methyl (iodosulfuron-methyl including salts, expressed as iodosulfuron-methyl)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Isoproturon		
		Linuron		
		pencycuron		
		lufenuuron		
		Benzoylphenyl Urea	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Flufenoxuron		
		Strobilurin	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Azoxystrobin		
		Kresoxim methyl		
		Pyraclostrobin		
		Trifloxystrobin		
		Phenyl Pyrazole	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	5 to 10000 µg/kg
		Fipronil (sum of fipronil + sulfone metabolite (MB46136) expressed as fipronil)		
		Chlorantraniliprole		
		Pyrazole	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Fenpyroximate		

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		Nitrophenyl ether	AOAC 2007.01 19th Edition(SOP/MAARC/PR/01),issue date 01/02/2015	10 to 10000 µg/kg
		Dinitroaniline		10 to 10000 µg/kg
		Pendimethalin	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04),issue date 01/02/2015	10 to 10000 µg/kg
		Trifluralin	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Anilide/acetanilide and chloroacetanilide	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Alachlor		
		Butachlor		
		Carboxin		
		Flufenacet (sum of all compounds containing the N fluorophenyl-N-isopropyl moiety expressed as flufenacet equivalent)		
		Metolachlor (with S-Metolachlor)		
		Novaluron		
		Miscellaneous	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Abamectin (sum of avermectin B1a, avermectinB1b and delta-8,9 isomer of avermectin B1a)		
		Bifenazate	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04),issue date 01/02/2015	10 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Buprofezin	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Diflubenzuron		
		Dithianon		
		Dodine	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04),issue date 01/02/2015	10 to 10000 µg/kg
		Emamectin Benzoate	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Fenazaquin		
		Flubendiamide		
		Hexythiazox		
		Isoprothiolane	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Mandipropamid		
		Metribuzin		
		Milbemectin (sum of MA4+8,9Z-MA4, expressed as milbemectin)	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	20 to 10000 µg/kg
		Oxadiazon		10 to 10000 µg/kg
		Propargite		
		Pyriproxyfen	SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		pyridaben		
		Spinosad (Sum of Spinosyn A+D)		
		Spiromesifen		
			SOP/MAARC/PR/01,issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Spirodiclofen		
		Trichlorfon		
		Tricyclazole		
		Cymoxanil	AOAC 2007.01 19th Edition	

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fluopyram		
		Fluxapyroxad		
		Metrafenone		
		Fluopicolide		
		Nerestoxin		
		Thiocyclam	SOP/MAARC/PR/04, issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Etoxazole	SOP/MAARC/PR/01, issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	
		Cyflumetofen		
		Ethiprole		
		Tolfenpyrad		
		chlorfluazuron		
		Picoxystrobin		
		spinetoram		
		2-Bromo-2-nitropropane-1,3-diol Bronopol	SOP/MAARC/PR/01, issue date 01/02/2015 Based on AOAC 2007.01 19th Edition	10 to 10000 µg/kg
		Streptomycin	AOAC 2007.01 19th Edition (SOP/MAARC/PR/08), issue date 01/01/2017	
		Tetracycline		
6.	Grapes & Pomegranate	Dithiocarbamates (Mancozeb, Maneb, Propineb, Metiram, Thiram, Zineb and Ziram collectively estimated as CS ₂)	(SOP/MAARC/PR/02), issue date 01/02/2015	10 to 10000 µg/kg
		Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap)	AOAC 2007.01 19th Edition (SOP/MAARC/PR/03), issue date 01/02/2015	10 to 10000 µg/kg
		Meptyldinocap		

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		Plant Growth Regulators	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04), issue date 01/02/2015	
		Gibberellic acid		10 to 10000 µg/kg
		1-Naphthylacetamide and 1-Naphthylacetic acid (sum of 1-Naphthylacetamide and 1-Naphthylacetic acid and its salts expressed as 1 naphthyl acetic acid)		20 to 10000 µg/kg
		2,4-D (sum of 2,4-D and its esters expressed as 2,4-D)		10 to 10000 µg/kg
		6-Benzyl adenine		10 to 10000 µg/kg
		Mepiquat Chloride		10 to 10000 µg/kg
		Ethephon		10 to 10000 µg/kg
		Paraquat		10 to 10000 µg/kg
		Diquat		10 to 10000 µg/kg
		Chlormequat Chloride (CCC)		10 to 10000 µg/kg
		Homobrassinolide		10 to 10000 µg/kg
		Fosetyl-Al (sum fosetyl + phosphorous acid and their salts, expressed as fosetyl)		10 to 10000 µg/kg
		Uracil		50 to 10000 µg/kg
		Azadirachtin		50 to 10000 µg/kg
		Forchlorfenuron (CPPU)		10 to 10000 µg/kg
		4 – CPA (4 Chlorophenoxy acetic acid)		10 to 10000 µg/kg
		Inorganic compound	AOAC 2007.01 19th Edition (SOP/MAARC/PR/05), issue	500 to 10000 µg/kg
		Sulphur		

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			date 01/02/2015	
		Hydrogen cyanamide (Cyanamide including salts expressed as cyanamide)	AOAC 2007.01 19th Edition (SOP/MAARC/PR/06), issue date 01/02/2015	10 to 10000 µg/kg
		Polar Compounds	AOAC 2007.01 19th Edition (SOP/MAARC/PR/07), issue date 01/02/2015	50 to 10000 µg/kg
		Glufosinate-ammonium (sum of glufosinate, its salts, MPP and NAG expressed as glufosinate equivalents) Glyphosate		
		Heavy Metals	AOAC 973.34 19th Edition (SOP/MAARC/HM/APEDA), issue date 01/02/2015	20 to 10000 µg/kg
		Cadmium		
		Lead	AOAC 972.25 19th Edition (SOP/MAARC/HM/APEDA), issue date 01/02/2015	50 to 10000 µg/kg
7.	Fruit crush, Fruit squash Jam Ketchup	Aldrin (expressed as Dieldrin)	AOAC 2007.01 19th Edition (SOP/MAARC/PR/01)	10 to 10000 µg/kg
		Chlordane (cis& trans)		10 to 10000 µg/kg
		DDT (all isomers, sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE (DDD) expressed as DDT)		10 to 10000 µg/kg
		Dicofol (sum of p, p' and o,p' isomers)		10 to 10000 µg/kg
		Endosulphan (All isomers, sum of <i>alpha</i> - and <i>beta</i> -isomers and endosulphan sulphate expressed as endosulphan)		10 to 10000 µg/kg
		HCH (sum of isomers,		10 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		except the <i>gamma</i> isomer)		
		Lindane (<i>gamma</i> -HCH)		10 to 10000 µg/kg
		Chlorpyrifos methyl & chlorpyrifos		10 to 10000 µg/kg
		Dichlorvos		10 to 10000 µg/g
		Dimethoate (Including Omethoate)		10 to 10000 µg/kg
		Ethion		10 to 10000 µg/kg
		Fenitrothion		10 to 10000 µg/kg
		Malathion (sum of malathion and malaoxon expressed as malathion)		10 to 10000 µg/kg
		Monocrotophos	AOAC 2007.01 19th Edition (SOP/MAARC/PR/01)	10 to 10000 µg/kg
		Parathion methyl (sum of Parathion methyl and paraoxon methyl expressed as Parathion methyl)		10 to 10000 µg/kg
		Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)		10 to 10000 µg/kg
		Phosalone		10 to 10000 µg/kg
		Phosphamidon		10 to 10000 µg/kg
		Thiometon		10 to 10000 µg/kg
		Benomyl (see carbendazim)		10 to 10000 µg/kg
		Carbendazim (Including Benomyl)		10 to 10000 µg/kg
		Trichlorfon	AOAC 2007.01 19th Edition (SOP/MAARC/PR/02)	10 to 10000 µg/kg
		Dithiocarbamates (Mancozeb, Maneb, Propineb, Metiram,		50 to 10000 µg/kg

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Thiram, Zineb and Ziram collectively estimated as CS ₂)		
		2,4-D (sum of 2,4-D & its esters expressed as 2,4-D)	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04)	10 to 10000 µg/kg
		Formathion	AOAC 2007.01 19th Edition (SOP/MAARC/PR/01)	10 to 10000 µg/kg
		Pyrethrins	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04)	10 to 10000 µg/kg
		Paraquat Dichloride	AOAC 2007.01 19th Edition (SOP/MAARC/PR/04)	10 to 10000 µg/kg
		Chlorbenzilate	AOAC 2007.01 19th Edition (SOP/MAARC/PR/01)	10 to 10000 µg/kg
8.	Almond	Chlorbenzilate	AOAC 2007.01 19th Edition (SOP/MAARC/PR/01)	10 to 10000 µg/kg
IV.	PESTICIDE RESIDUES IN WATER			
1.	Drinking Water, Packaged Drinking Water, Packaged Natural Mineral Water, Water for Food Processing Industries and Raw Water	Trace Metals Elements		
		Barium (as Ba)	Annex F of IS 13428:2005 Reaffirmed 2009 / IS 15302:2003 / APHA 3113B 22 nd edition	0.5 to 5.0 mg/L
		Copper (as Cu)	IS 3025 (Part 42):1992-Cl. 6 Reaffirmed 2009	0.04 to 5 mg/L
		Iron (as Fe)	IS 3025 (Part 53):2003-Cl. 7 Reaffirmed 2009	0.05 to 10 mg/L
		Manganese (as Mn)	IS 3025 (Part 59):2006	0.05 to 10 mg/L
		Zinc (as Zn)	IS 3025 (Part 49):1994-Cl. 6 Reaffirmed 2009	0.2 to 10 mg/L
		Silver (as Ag)	Annex J of IS 13428:2005 Reaffirmed 2009	0.005 to 2 mg/L
		Aluminium (as Al)	IS 3025 (Part 55):2003-Cl. 5 Reaffirmed 2009 / IS 15302:2003	0.02 to 5 mg/L
		Selenium (as Se)	IS 3025 (Part 56):2003-Cl. 6 Reaffirmed 2009	0.005 to 0.5 mg/L

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Antimony (as Sb)	Annex G of IS 13428:2005 Reaffirmed 2009 / IS 15303:2003	0.002 to 0.5 mg/L
		Borate (as B)	Annex H of IS 13428:2005 Reaffirmed 2009 / IS 3025 (Part 57):2005	0.05 to 10 mg/L
		Mercury (as Hg)	IS 3025 (Part 48):1994-Cl. 5 Reaffirmed 2009	0.0005 to 0.1 mg/L
		Cadmium (as Cd)	IS 3025 (Part 41):1992-Cl. 5 Reaffirmed 2009	0.002 to 0.5 mg/L
		Arsenic (as As)	IS 3025 (Part 37):1988-Cl. 3/2 Reaffirmed 2009	0.005 to 1 mg/L
		Cyanide (as CN)	IS 3025 (Part 27):1986-Cl. 2 Reaffirmed 2009	0.005 to 0.1 mg/L/ Absent
		Lead (as Pb)	IS 3025 (Part 47):1994-Cl. 7 Reaffirmed 2009	0.005 to 1 mg/L
		Chromium (as Cr)	IS 3025 (Part 52):2003-Cl. 7 Reaffirmed 2009 / Annex J of IS 13428 Reaffirmed 2009	0.04 to 5 mg/L
		Nickel (as Ni)	Annex L of IS 13428:2005 Reaffirmed 2009/IS 3025 (Part 54)	0.01 to 5 mg/L
		Molybdenum (as Mo)	APHA 3113B 22 nd edition	0.05 to 1 mg/L
		Pesticide residue		
		2,4 'D	USEPA 555:1962	0.1 to 100 µg/L
		2,4'DDT	USEPA 525.2:1995	0.1 to 100 µg/L
		4,4'DDT	USEPA 525.2:1995	0.1 to 100 µg/L
		2,4'DDD	USEPA 525.2:1995	0.1 to 100 µg/L
		4,4'DDD	USEPA 525.2:1995	0.1 to 100 µg/L
		Butaclor	USEPA 525.2:1995	0.1 to 100 µg/L
		2,4'DDE	USEPA 525.2:1995	0.1 to 100 µg/L
		4,4'DDE	USEPA 525.2:1995	0.1 to 100 µg/L
		α-HCH	USEPA 525.2:1995	0.01 to 100 µg/L

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		β-HCH	USEPA 525.2:1995	0.04 to 100 µg/L
		δ-HCH	USEPA 525.2:1995	0.04 to 100 µg/L
		γ-HCH	USEPA 525.2:1995	0.1 to 100 µg/L
		Alchlor	USEPA 525.2:1995	0.1 to 100 µg/L
		Aldrin	USEPA 525.2:1995	0.03 to 100 µg/L
		Atrazine	USEPA 525.2:1995	0.1 to 100 µg/L
		Dieldrin	USEPA 525.2:1995	0.03 to 100 µg/L
		Endosulfan I	USEPA 525.2:1995	0.1 to 100 µg/L
		Endosulfan II	USEPA 525.2:1995	0.1 to 100 µg/L
		Endosulfan Sulfate	USEPA 525.2:1995	0.1 to 100 µg/L
		Isoproturon	USEPA 532:2000	0.1 to 100 µg/L
		Malathion	USEPA 525.2:1995	0.1 to 100 µg/L
		Malaxon	USEPA 525.2:1995	0.1 to 100 µg/L
		Methyl Parathion	USEPA 525.2:1995	0.1 to 100 µg/L
		Methyl Paraxon	USEPA 525.2:1995	0.1 to 100 µg/L
		Monocrotophos	USEPA 525.2:1995	0.1 to 100 µg/L
		Ethion	USEPA 525.2:1995	0.1 to 100 µg/L
		Chlorpyrifos	USEPA 525.2:1995	0.1 to 100 µg/L
		Phorate	USEPA 525.2:1995	0.1 to 100 µg/L
		Phorate Sulfone	USEPA 525.2:1995	0.1 to 100 µg/L
		Phorate Sulfoxide	USEPA 532:2000	0.1 to 100 µg/L
		PCB	USEPA 525.2:1995	Present/Absent
		PAH	USEPA 525.2:1995	Present/Absent
		Trihalomethanes	APHA 22 nd edition 6232/EPA 551.1	0.05 to 0.5 mg/L
		Bromoform,		
		Dibromochloromethane,		
		Bromodichloromethane,		
		Chloroform		

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MECHANICAL TESTING

I.	PLASTIC & PLASTIC PRODUCTS			
1.	Plastic bottles or Container and Caps for Packaged Drinking water and Packaged mineral Water.	Finish & Appearance	IS 15410:2003, RA 2013	Qualitative
		Dimension	IS 2798:2009, Cl. 4 RA 2013	10 cm to 60 cm
		a. Height		1 cm to 30 cm
		b. Diameter/breadth		1 cm to 30 cm
		c. Length		
		Capacity/ Brimful capacity	IS 2798:2009, Cl. 5 RA 2013	100 ml to 25000 ml
		Wall Thickness	IS 2798:2009, Cl. 4.5 RA 2013	0.01 mm to 2.0 mm
		Transparency	IS 15410:2003, Annex A RA 2013	85% to 100%
		Leakage test	IS 2798:2009, Cl.6 RA 2013	Qualitative
		a. Closure leakage		
		b. Vibration leakage		
		c. Air pressure leakage		
		Drop test	IS 2798:2009, Cl.8 RA 2013	Qualitative
		Migration test	IS 9845:1998 RA 2015	0.1 to 10 mg/dm ² & above for Caps and Jar.
				0.1 to 10 mg/L & above for bottles.
		Water Portability Test	Annex B of IS 15410:2003 RA 2013	Qualitative