

**Laboratory** CSIR–Central Food Technological Research Institute, Cheluvamba Mansion, Mysore, Karnataka

**Accreditation Standard** ISO/IEC 17025: 2005

**Certificate Number** TC-5253 (In lieu of T-0380 & T-0379) **Page 1 of 26**

**Validity** 08.12.2016 to 07.12.2018 **Last Amended on** 08.02.2017

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.	<b>Beverages (Beverages Including Fruit Based and Synthetic Soft Drinks. rts Beverages, Milk Based Beverages)</b>	Lactic Acid Bacteria	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 19.51, 19.52	≥10 CFU/g or mL
		Listeria Monocytogenes	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 35.51, 35.52	Presence/ Absence in 25 g/ml
		Salmonella sp.	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 36.4, 36.51-36.53	Presence/ Absence in 25 g/ml
		Shigella sp.	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 37.51, 37.53	Presence/ Absence in 25 g/ml
		Staphylococcus Aureus	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 39.63, 39.63, 39.66	≥10 CFU/g or ml or MPN <1.1/g (ml) or Presence/Absence
		Vibrio Parahaemolyticus	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 40.6112-40.6125, 40.6222	Presence/ Absence in 25g/ml
		Aerobic Mesophilic Plate Count	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 2.531, 8.71, 8.72	≥10 CFU/g or ml
		Fermentation Tests/Incubation Test	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 61.31	Positive or Negative
		Yeasts and Moulds	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 21.51, 21.6	≥10 CFU/g or ml
			Coliforms	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 8.81, 9.7
	E.Coli	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 9.91-9.93	Present / Absent	
2.	<b>Foods, Food Products, Prepared Food and Adjuncts</b>			
a.	<b>Food Includes Both Raw and Processed Food Products</b>	Lactic Acid Bacteria	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 19.51, 19.52	≥10 CFU/g or ml
		Listeria Monocytogenes	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 35.51, 35.52	Presence/ Absence/ 25 g

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	<b>Prepared Food Includes all Processed Natural Agricultural Products, Dairy Products, Poultry Products, Meat Products, Marine Products</b>	Coliforms	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 9.51, 9.7, 9.74	≥10 CFU/g or ml or MPN < 3/g (mL) or Presence/Absence
		Faecal Coliforms and E. coli	9.81, 9.99 9.91, 9.92, 9.931, 9.932	
		Salmonella spp.	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 36.4, 36.51-36.53	Presence/ Absence in 25 g
		Shigella spp.	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 37.51, 37.53	Presence/ Absence in 25 g
		Staphylococcus Aureus	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 39.63, 39.63, 39.66	≥10 CFU/g or ml or MPN <3/g (mL)
		Vibrio Parahaemolyticus	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 40.6112-40.6125, 40.6222	Presence/ Absence in 25 g
		Yeasts and Moulds	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 21.51, 21.6	≥10 CFU/g or ml
		Bacillus Cereus	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 31.61, 31.651-31.653, 31.66	≥10 CFU/g or ml or MPN <3/g in foods
		Enterobacteriaceae Count	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 9.51, 9.61, 9.62	≥10 CFU/g or ml
		Aerobic Mesophilic Plate Count	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 2.531, 8.71, 8.72	≥10 CFU/g or ml
	Aerobic Mesophilic Spore Formers	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 23.511, 23.512, 23.72	≥10 CFU/g or ml	
	Aciduric Flat Sour Spore Formers	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 25.524	Presence/ Absence, /g	
	Clostridium Perfringens	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 33.71, 33.73, 33.8	≥10 CFU/g or ml	
	Anaerobic Mesophilic Spore Formers	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 24.511, 24.522	Presence/ Absence in or MPN <3/g	
<b>b.</b>	<b>Tomato Sauce, Ketchup, Puree, Chutneys</b>	Howard mould Count	AOAC 20 <sup>th</sup> Edn. 2016, 16.17.01	% positive fields
<b>c.</b>	<b>Canned Foods</b>	Fermentation Tests/Incubation Test	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 61.31	Positive or negative
		Anaerobic Mesophilic	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015,	Presence/ Absence

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		Spore Formers	24.511, 24,522	
		Yeasts and Moulds	(APHA) <sup>a</sup> 5 <sup>th</sup> Edn. 2015, 21.51, 21.6	Presence/Absence
<b>II.</b>	<b>WATER</b>			
<b>1.</b>	<b>Water (Packaged Drinking Water)</b>	<b>Coliforms</b>	APHA, AWWA, WEF <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9221 B, 9221 C (1 & 2), 9222 B	MPN 1.1/100ml or CFU/unit volume
		E. coli	APHA, AWWA, WEF <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9221 B, 9221F	MPN 1.1/100 ml or CFU /unit volume
		Salmonella spp & SHIGELLA spp	APHA, AWWA, WEF) <sup>b</sup> 21 <sup>th</sup> Edn. 2005, Salmonella – 9260 B Shigella – 9260 E	Presence/Absence
		Clostridium Perfringens	IS 13428.2005 & (APHA) <sup>a</sup> 34.7	Presence/Absence
		Faecal Streptococci	APHA, AWWA, WEF) <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9230 C	Presence/Absence
		Staphylococcus Aureus	IS 13428. 2005	Presence/Absence
		Pseudomonas Aeruginosa	(APHA, AWWA, WEF) <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9213 E)	Presence/Absence
		Sulphite Reducing Anaerobes	IS: 13428-2005	Presence/Absence
		Pathogenic Vibrios	APHA, AWWA, WEF) <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9260.H	Presence/Absence
		Aerobic Mesophilic Plate Count	APHA, AWWA, WEF) <sup>b</sup> 21 <sup>th</sup> Edn. 2005, 9215 A&B	≥1 CFU/ml
<b>III.</b>	<b>GENETICALLY MODIFIED FOOD GRAINS : GM-Soya (Roundup Ready) and GM-Maize (MON 810)</b>			
<b>1.</b>	<b>Glycine max (Soya bean)</b>	Detection of taxon specific lectin gene for Soybean.	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)

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2.	<b>Glycine max (Soybean) &amp; Roundup Ready Soya (GTS 40-3-2)</b>	Screening method for the detection of CaMV 35S promoter in Herbicide Tolerant Soya (Roundup Ready Soya).	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)
		Screening method for the detection of <i>Agrobacterium tumefaciens</i> NOS terminator in Herbicide Tolerant Soya (Roundup Ready Soya).	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)
		Detection of CP4-EPSPS gene in Herbicide Tolerant Soya. (Roundup Ready Soya)	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)
3.	<b>Zea mays (Maize)</b>	Detection of Taxon Specific Invertase gene for Maize.	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)
4.	<b>Zea mays (Maize) &amp; Mon 810 Insect resistant Maize</b>	Screening method for the detection of CaMV 35S promoter in Insect Resistant Maize.	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)
		Event Specific Detection of CaMV 35S promoter - Maize genome in Insect Resistant Maize	IS/ISO 21571:2005 (Reaff. 2012) for DNA extraction & IS/ISO 21569: 2005 (Reaff. 2012) for Qualitative detection by PCR.	Qualitative (Presence / Absence) (LOD=1.0%)

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**CHEMICAL TESTING**

I.	FOOD AND AGRICULTURAL PRODUCT			
1.	<b>Beverages (Alcoholic/Non Alcoholic)</b>			
a.	<b>Alcoholic beverages</b>	Ethyl Alcohol	IS: 3752: 2005/ IS: 7585:1995	0.50 % to 70 %
		Residue on evaporation	IS: 3752: 2005/ IS: 7585:1995	0.1 % to 50 %
		Ash content	IS: 3752: 2005	0.10 % to 1%
		Total Acidity	IS: 3752: 2005/ IS: 7585:1995	0.2 % to 10 %
		Volatile Acidity	IS: 3752: 2005/ IS: 7585:1995	0.2 % to 5 %
		Fixed Acidity	IS: 3752: 2005	0.2 % to 5 %
		Methyl alcohol	IS: 3752: 2005 AOAC 20th Edn. 2016, 972.11	Positive/negative 50 mg/L to 500 mg/L
		Sulphur dioxide	IS:7585:1995	20 mg/L to 300 mg/L
		Copper	AOAC 20th Edn. 2016, 985.35	0.10 mg/L to 1 mg/L
		Caramel (Qualitative)	AOAC 20th Edn. 2016, 948.07	Qualitative test
b.	<b>Non alcoholic beverages (RTS Beverages)</b>	Caffeine	JAOAC, Vol. 71, 5, 1988, P. 934-937	5 mg/L to 500 mg/L
		Total soluble Solids	AOAC 20th Edn. 2016, 932.12 / 987.08	1 % to 80 %
		Acidity	AOAC 20th Edn. 2016, 950.15, 942.15	0.10 % to 1 %
		Benzoic Acid	AOAC 20th Edn. 2016, 994.11, 963.19; JAOAC, Vol. 71, 5, 1988, P. 934-937, AOAC 20th Edn. 2016 910.02 (Qualitative)	10 mg/L to 500 mg/L

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		Sulphur Dioxide	Qualitative by AOAC 20th Edn. 2016, 975.32 IS:7585:1995	Positive/Negative 20 mg/kg to 300 mg/kg
		Phosphorous	AOAC 20th Edn. 2016, 940.13	0.01 % to 1 %
		Saccharin	AOAC 20th Edn. 2016, 941.10(Qualitative)	Qualitative Test
		Sugar (Lane - Eynon) Reducing Sugar Invert Sugar	AOAC 20th Edn. 2016, 968.28	1 % to 20 % 1% to 20 %
		Saccharin	JAOAC Vol 71, 5, 1988, p-934-937 & AOAC 20th Edn. 2016, 979.08	5 mg/kg to 500 mg/kg
		Aspartame	JAOAC Vol 71, 5, 1988, p-934-937 & AOAC 20th Edn. 2016, 979.08	5 mg/kg to 750 mg/kg
		Acesulfame K	JAOAC Vol 71, 5, 1988, p-934-937 & AOAC 20th Edn. 2016, 979.08	5 mg/kg to 750 mg/kg
		Caramel (Qualitative)	AOAC 20th Edn. 2016, 948.07	Qualitative Test
<b>2.</b>	<b>Tea / Coffee</b>	Alkalinity of Soluble ash	AOAC 20th Edn. 2016, 920.93 / 900.02E	0.2 % to 5 % as K <sub>2</sub> O
		Aqueous extract & Cold Water Extract	AOAC 20th Edn. 2016, 920.104	0.1 % to 2 %
		Caramel (Qualitative)	AOAC 20th Edn. 2016, 948.07	Qualitative test
		Water Soluble ash	AOAC 20th Edn. 2016, 900.02D	45% to 60 %
		Caffeine	AOAC 20th Edn. 2016, 960.25	0.20% to 2 %
		Iron Fillings	IS 3633: 1972	0.1 mg/kg to 1000 mg/kg

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<b>3.</b>	<b>Bakery &amp; Confectionery</b>			
<b>a.</b>	<b>Boiled sugar confectionery, Toffees, chocolates</b>	Sulphur Dioxide (Qualitative)	AOAC 20th Edn. 2016, 975.32	Qualitative Test
		Sulphur Dioxide (Quantitative)	IS:7585:1995	20 mg/kg to 300 mg/kg
		Sulphated ash	AOAC 20th Edn. 2016, 900.02	0.10 % to 2 %
		Sugar (Lane- Eynon) Reducing Sugar Invert Sugar	AOAC 20th Edn. 2016, 968.28	0.2 % to 98 %
		Fat Content Rose Gottleib Method	AOAC 20th Edn. 2016, 952.06	0.20 % to 50 %
<b>b.</b>	<b>Chewing gum and Bubble gum</b>	Gum Base Content	IS: 6747-1981	0.50 % to 5 %
<b>c.</b>	<b>Confectionery</b>	Moisture	AOAC 20th Edn. 2016, 925.45	0.10 % to 6 %
		Total ash	AOAC 20th Edn. 2016, 900.02	0.10 % to 2 %
		Acid Insoluble ash	IS: 6287:1971	0.10 % to 1.5 %
		Sulphated ash	AOAC 20th Edn. 2016, 900.02	0.10 % to 2 %
		Fat	AOAC 20th Edn. 2016, 920.177	0.1 % to 30 %
		Sulphur Dioxide (Quantitative)	IS:7585:1995	20 mg/kg to 300 mg/kg
<b>d.</b>	<b>Biscuits</b>	Moisture	IS: 1011-2002	0.10 % to 10 %
		Total ash	IS: 1011-2002	0.10 % to 2 %
		Acid Insoluble ash	IS: 1011-2002	0.10 % to 1.5 %
		Sugar (Lane - Eynon) i. Reducing Sugar ii. Invert Sugar	AOAC 20th Edn. 2016, 968.28	0.2 % to 30 %
		Acidity of Extracted fat as Oleic Acid	IS: 1011-2002	0.01 % to 10 %

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4.	<b>Cereals, Pulses, Dry Fruits, Nuts And Their Products</b>			
a.	<b>Wheat flour (Maida), Whole wheat flour (Atta), Semolina (Soji), Wheat</b>	Sedimentation Test by Zeleny's Method	AACC 11 <sup>th</sup> Edn., 1999, 56-61.02	15 ml to 40 ml
		Hagberg's Falling Number	AACC 11 <sup>th</sup> Edn., 1999, 56-81.03	140 sec. to 700 sec.
		Damaged Starch in Wheat Products	AACC 11 <sup>th</sup> Edn., 1999, 76-30.02 & 80-60.01	5 % to 25 %
		Farinograph Characteristics of Wheat Flour - Water Absorption Dough Development Time Dough Stability Mixing Tolerance Index	AACC 11 <sup>th</sup> Edn., 2011, 54-21.02	55% to 78 % 1 % to 8 % 1% to 10 % 20 BU to 80 BU
		Extensograph Characteristics of Wheat Flour Resistance to Extension Extensibility Ratio, Area	AACC 11 <sup>th</sup> Edn., 1999, 54-10.01	200 BU to 1000 BU 100 BU to 300BU
		Amylograph Characteristics of Wheat Flour Peak Viscosity Gelatinization Temp.	AACC 11 <sup>th</sup> Edn., 1999, 22-10.01 ICC Standards, 1982	500 AU to 1500 AU 56 deg C to 64 deg C
		Test Baking of Bread by Remix Procedure Weight Volume Specific Volume	TM/FMBCT/4.10/ 23/04.2012 (2)	100 g to 200 g 400ml to 600ml 2 ml/g to 6 ml/g (specific volume)



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b.	Wheat flour (Maida), Whole wheat flour (Atta), Semolina (Soji), Wheat	Gluten Content by Hand Washing	IS: 1009 – 1979 & AACC 11 <sup>th</sup> Edn., 38 – 10	5% to 15 %
		Moisture	AOAC 20th Edn. 2016, 925.10 AACC 11 <sup>th</sup> Edn., 1999, 44 – 15.02	6 % to 15 %
c.	Wheat flour (Maida), Whole wheat flour (Atta), Semolina (Soji)	Crude fiber	AOAC 20th Edn. 2016, 962.09	0.10 % to 30 %
d.	Wheat and wheat products like flour, atta, semolina	Alcoholic Acidity	IS: 1009-1979	0.10 % to 2 %
e.	Atta, Maida and Suji	Total ash	AOAC 20th Edn. 2016, 923.03	0.10 to 5 %
		Ash Insoluble in dil. HCl	AOAC 20th Edn. 2016, 941.12	0.10 % to 2 %
		Protein	AOAC 20th Edn. 2016, 984.13	0.10 % to 20 %
f.	Food grains, Dry Fruits and Nuts	Moisture	AOAC 20th Edn. 2016, 925.10	0.10 % to 20 %
		Total Ash	AOAC 20th Edn. 2016, 923.03	0.10 % to 5 %
		Ash Insoluble in Dil. HCl	AOAC 20th Edn. 2016, 941.12	0.10 % to 2 %
		Aflatoxin, B1, B2, G1, G2	AOAC 20th Edn. 2016, 970.44, 971.22, 968.22, 2005.08	TLC: 20µg/kg to 500 µg/kg B1,G1:1µg/kg to 500µg/kg B2,G2:5µg/kg to 500µg/kg
		Foreign Matter / Extraneous Matter	IS : 4333-Part-I, 1977 DGHS / FSSAI Lab Manual of methods of Analysis of Food (3). 2012	Min 0.1%

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g.	<b>Food grains, Dry Fruits and Nuts</b>	Other Edible Grains	IS : 4333-Part-I, 1977 / DGHS / FSSAI Lab Manual of methods of Analysis of Food (3). 2012	0.1% to 90%
		Damaged Units Insect Damaged Units, Discoloured Units	IS : 4333toPart-I, 1977 / DGHS / FSSAI Lab Manual of methods of Analysis of Food (3). 2012	0.1% to 90%
		Weevilled Grains	IS : 4333-Part-I, 1977 / DGHS / FSSAI Lab Manual of methods of Analysis of Food (3). 2012	0.1 % to 90%
		Uric Acid	IS : 4333-Part-V, 1977 / DGHS / FSSAI Lab Manual of methods of Analysis of Food (3). 2012	10 mg/kg to 1000 mg/kg
		Shrivelled Grains	IS : 4333-Part-I, 1977 / DGHS/ FSSAI Lab Manual of methods of Analysis of Food (3). 2012	0.1 % to 90%
<b>5.</b>	<b>Milk And Dairy Products</b>			
a.	<b>Milk and Milk Products</b>	Qualitative Tests for Detection of Preservatives And Adulterants in Milk and Milk Products Test for Cane Sugar Test for Starch Test for Detergents Test for Nutralizers Test for Urea	IS: 1479-1960	Qualitative tests
		Total Solids	AOAC 20th Edn. 2016, 990.19	0.10 % to 30 %
		Fat in Milk and Milk Products	AOAC 20th Edn. 2016, 932.06	0.1 % to 40 %

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		Milk Fat (Gerber Test)	IS: 1224: 1977	0.10 % to 25 %
		Fat by Acid Digestion Method	AOAC 20th Edn. 2016, 933.05	0.1 % to 50 %
		Total Solids in Curds	TM/FSAQCL/9A-7/19.02.2014(1)	0.1 % to 30 %
		Total Solids in Condensed Milk	AOAC 20th Edn. 2016, 920.115	0.1 % to 50 %
		Sorbic Acid	AOAC, 19th Edn. 2012, 974.10	20 mg/kg to 5000 mg/kg
		Sucrose in Sweetened Condensed Milk	IS : 4079: 1967	1.0 % to 50 %
		Titrate Acidity in Milk Powder	AOAC 20th Edn. 2016, 947.05	0.10 % to 5 %
		Solubility Percent in Milk Powder	IS: 1547: 1985	0.2 % to 100%
		Fat Content Rose Gottlieb Method	AOAC, 19 <sup>th</sup> Edn , 2012, 932.06 & 905.02	0.2 % to 50%
		Aflatoxin M1	AOAC 20th Edn. 2016, 980.21, 2000.08	0.5 µg/kg to 50µg/kg
<b>b.</b>	<b>Table creamery, Butter</b>	Fat, Curd Content in Table Butter	AOAC 20th Edn. 2016, 938.06 & 920.117	0.1 % to 10 %
		Salt Content in Table Butter	AOAC 20th Edn. 2016 920.117 & 960.29	0.10 % to 10 %
<b>c.</b>	<b>Ice cream</b>	Sugar (Lane-Eynon) i. Reducing Sugar ii. Invert Sugar	IS : 4079: 1967	0.2 % to 30%
		Total Solids	AOAC 20th Edn. 2016, 941.08	0.10 % to 50%
		Fat	AOAC 20th Edn. 2016, 952.06	0.10 % to 25 %
		Protein	AOAC 20th Edn. 2016, 991.20	0.1 % to 10 %
<b>6.</b>	<b>Food Additives/ Preservatives/ Antioxidants</b>			
<b>a.</b>	<b>Bakers yeast – wet and dry</b>	Dough Raising Capacity	IS:1320-1988 (Reaffirmed 2005)	80 % to 140 %

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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
b.	Vinegar	Mineral Acid	TM/FSAQCL/9-C5-17/01.11.2005 (1)	Qualitative test
c.	Vitamin A Concentrate	Vitamin A	AOAC 20th Edn. 2016, 2001.13 & 2011.07	0.15 µg/g to 1000 µg/g
d.	Sweetening Agents	Moisture	AOAC 20th Edn. 2016, 925.45	0.10 % to 6 %
		Total ash	AOAC 20th Edn. 2016, 900.02	0.10 % to 3 %
		Acid Insoluble ash	IS: 6287:1971	0.10 % to 2 %
		Sulphated ash	AOAC 20th Edn. 2016, 900.02	0.10 % to 2 %
		Sugar (Lane-Eynon) i. Reducing Sugar ii. Invert Sugar	AOAC 20th Edn. 2016, 968.28	0.2 % to 99% 0.2 % to 99%
e.	Sweetening agent	Colour (Water Soluble)	TM/FS&AQCL/9.D.7/01.11.2005 (1) Official Methods of Analysis of the Associate of Official Agricultural Chemists, 7 <sup>th</sup> Edition. 34.2, 34.29.	Qualitative test 5 mg/kg to 500 mg/kg
		Sulphur Dioxide (Qualitative)	AOAC 20th Edn. 2016, 975.32	Qualitative test
		Sulphur Dioxide (Quantitative)	IS:7585:1995	20 mg/kg to 300 mg/kg
7.	<b>Honey And Honey Products</b>			
a.	Honey	Moisture	AOAC 20th Edn. 2016, 969.38	0.10 % to 6 %
		Total ash	AOAC 20th Edn. 2016, 920.93	0.10 % to 5 %
		Reducing Sugars	IS: 4941-1968 , AOAC 20th Edn. 2016, 968.28	0.2 % to 90 %
		Total Reducing Sugars and Sucrose	AOAC 20th Edn. 2016, 968.28	1 % to 90 %

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		Fructose	AOAC 20th Edn. 2016, 977.2 & 935.63	0.1% to 20 %
		Fiehe's Test	IS: 4941-1968	Positive / negative (Qualitative)
<b>8.</b>	<b>Fruit And Vegetable Products</b>			
<b>a.</b>	<b>Fruit pulps, fruit juice, dispersions, Squash, chutney, nectar, cordial And other Fruit products</b>	Synthetic Food Colour	TM/FS&AQCL/9.D.7/ 01.11.2005 (1)	5 mg/kg to 500 mg/kg
		Total Soluble Solids	AOAC 20th Edn. 2016 932.12 / 987.08	1.0 % to 80 %
		Acidity	AOAC 20th Edn. 2016, 950.15, 942.15	0.10 % to 5 %
		Benzoic Acid	AOAC 20th Edn. 2016, 994.11, 963.19	10 mg/kg to 1000 mg/kg
		Phosphorous (in Malt Vinegar)	AOAC 20th Edn. 2016, 940.13	0.001 % to 0.1 %
		Saccharin	Qualitative by AOAC 20th Edn. 2016, 941.10 Quantitative by HPLC – JAOAC, Vol 71, 1988, p 934	10 mg/kg to 300 mg/kg
<b>b.</b>	<b>Dehydrated fruits and vegetables</b>	Benzoic Acid	AOAC 20th Edn. 2016, 994.11, 963.19	10 mg/kg to 2500 mg/kg
<b>c.</b>	<b>Pickles</b>	Fluid Portion	TM/FSAQCL/9.C6.20/ 01.11.2005 (1)	30 % to 50%
<b>d.</b>	<b>Fruit and Vegetable products</b>	Sulphur Dioxide	Qualitative by AOAC 20th Edn. 2016, 975.32 Quantitative by IS:7585:1995	20 mg/kg to 300 mg/kg
<b>9.</b>	<b>Spices and Condiments</b>			
<b>a.</b>	<b>Spice powders</b>	Crude Fiber	AOAC 20th Edn. 2016, 962.09	0.1% to 40 %

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		Synthetic Food Colour	TM/FS&AQCL/9.D.7/01.11.2005 (1)	Qualitative test
<b>b.</b>	<b>Turmeric</b>	Total Starch	IS 4706: 1978	1.0 % to 70 %
		Lead Chromate	IS: 3576: 1994	Qualitative test
<b>c.</b>	<b>Spices</b>	Extraneous Matter	AOAC 20th Edn. 2016, 960.51	0.1 % to 10 %
		Cold Water/ Alcohol Extract	AOAC 20th Edn. 2016, 898.03	0.01 to 5 %
		Volatile Oils	AOAC 20th Edn. 2016 962.17	0.2 % to 5 %
		Moisture (Toluene Distillation)	AOAC 20th Edn. 2016, 986.21	0.5 % to 20 %
		Moisture (vacuum oven)	AOAC 20 <sup>th</sup> Edn. 2016 979.12/934.06	0.1 % to 20 %
		Non-Volatile Ether Extract	IS: 1797-1985	0.1 to 40 %
		Total ash	AOAC 20th Edn. 2016, 941.12/923.03	0.1 to 5 %
<b>d.</b>	<b>Saffron</b>	Extraneous Matter	IS 5454 (Part-II): 1996	0.1 % to 5%
		Floral Waste	IS 5454 (Part-II): 1996	0.1 % to 20%
		Solubility in Cold Water	IS 1797: 1985	20 % to 80 %
		Bitterness as Picrocrocin at 257nm	IS 5454 (Part-II): 1996	10 % to 90 %
		Safranal at 330nm	IS 5454 (Part-II): 1996	10 % to 60 %
		Colouring Strength at 440nm	IS 5454 (Part-II): 1996	50 % to 250 %
<b>e.</b>	<b>Iodized/Common Salt</b>	Sodium Chloride Content	IS: 7224:2006	80 % to 100 %
		Iodine Content	IS: 7224:2006	1 mg/kg to 300 mg/kg
		Matter Soluble in Water	IS: 7224:2006	0.1 % to 3 %
		Matter Soluble in Water Other than NaCl	IS: 7224:2006	0.1% to 10 %
<b>f.</b>	<b>Asafoetida</b>	Alcoholic EXTRACT (with 90% alcohol)	IS 7807:1975	1 % to 30 %

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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
g.	Black and white pepper	Light Berries	IS-1798-1982	0.1% to 100%
		Bulk Density	IS-1798-1982	100g/L to 500g/L
		Pin Heads	IS-1798-1982	0.5% to 100%
h.	Chilli	Extractable and Colour Value	AOAC 20th Edn. 2016, 971.26 EOA 239, 1975	1,000 units to 10,000 units
10.	<b>Sugar and Sugar Products</b>			
a.	Jaggery & Sugar	Moisture	IS: 12923:1990	0.10 % to 20 %
		Total ash	IS: 12923:1990	0.10 % to 5 %
		Acid insoluble ash	IS: 12923:1990	0.10 % to 2 %
		Extraneous Matter	IS: 12923:1990	0.1 % to 20 %
		Sugar i) Reducing Sugar ii) Invert Sugar	IS: 12923:1990 & AOAC 20th Edn. 2016, 968.28	0.2 % to 99 %
		Sulphur Dioxide	IS: 12923:1990 & IS:7585:1995	20mg/kg and above
11.	Food, Food Products & Adjuncts	Detection Threshold / Stimulus Threshold	Sensory Testing Methods, 2nd Ed. ASTM, 1996; IS 5126, 2008	Qualitative
		Recognition Threshold	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 5126, 2008	Qualitative
		Difference Threshold	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 5126, 2008	Qualitative
		Scoville Test Pungency	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 8104, 2009; IS 8105, 2009	Qualitative
		Paired Comparison	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 6273 (III/1) 2008	Qualitative
		Duo-Trio	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 6273 (III/1) 2008	Qualitative

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		Triangle Test	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 6273 (III/1) 2008	Qualitative
		Intensity Ranking	Sensory Testing , Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
		Flavour Profiling	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996; IS 15315, 2009; IS 8639, 2008	Qualitative
		Texture Profiling	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
		Quantitative Descriptive Analysis	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
		Time intensity Study	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
		Hedonic Tests	Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
		Acceptance Tests	IS: 6273 (II) 2008 Sensory Testing Methods, 2 <sup>nd</sup> Ed. ASTM, 1996	Qualitative
<b>12.</b>	<b>Oils and Fats</b>			
<b>a.</b>	<b>Cholesterol</b>	GC Method	AOAC 20 <sup>th</sup> Edn. 2016 993.08, 970.51	50 mg to 1000 mg/100g
<b>b.</b>	<b>Oils &amp; Fats</b>	Moisture	AOAC 20th Edn. 2016, 953.071, 925.10	0.01 % to 2 %
		Refractive index / Butyro Refractometer Reading (BRR)	AOAC 20th Edn. 2016 921.08 41.1.07	1.4 % to 1.5 % 30 % to 75%
		Colour Lovibond Tintometer	AOCS 5 <sup>th</sup> Edn., Cc 13e – 92	Positive / negative Yellow and Red Units
		Melting Point of Fat	AOAC 20th Edn. 2016 920.157 41.1.09	28 °C to 50°C
		Saponification Value	AOAC 20th Edn. 2016, 920.160 41.1.18	150 % to 300 %



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		Acid Value/ Free Fatty Acid	AOAC 20th Edn. 2016, 940.28 41.1.21	0.1 % to 12% 0.1 % to 4%
		Reichert – Meissl (RM) / Polensky Value	AOAC 20th Edn. 2016, 925.41 41.1.23	20 % to 30% 12 % to 20 %
		Vitamin A	AOAC 20th Edn. 2016 2001.13 & 2011.07	0.15 µg/g to 1000 µg/g
		Unsaponifiable Matter	AOAC 20th Edn. 2016, 933.08 41.1.39	0.1 % and above
		Iodine Value (Wij's Method)	AOAC 20th Edn. 2016, 993.20 – 41.1.15	6.0 to 180
		Fatty acid Composition	AOCS Official method (1998) 5 <sup>th</sup> Ed. Ce 1.62 and Ce2 –66	0.1 % to 99 %
		Trans fat	AOCS Official method (1998) 5 <sup>th</sup> Ed. Ce 1.62 and Ce2 –66, AOAC 20th Edn. 2016, 985.21	0.1 % to 15%
		Peroxide Value	AOAC 20th Edn. 2016, 965.33 -41.1.16	Min 3.0 meq/kg
		Free Fatty Acid	AOAC 20th Edn. 2016, 940.28	0.1 % to 10 %
		<b>Identity Tests</b>		
		Groundnut oil – Bellier's Turbidity Test	IS: 548 Part II, 1976	15 °C to 41 °C
		Sesame oil Boudouin test	IS: 548 Part II, 1976	Positive/negative
		Palmolein in Groundnut oil	AOCS Ce 11.53, 1997	Positive/negative
		Ricebran oil	IS: 548 Part II, 1976	Positive/negative
		Linseed oil (Hexabromide Test)	IS: 548 Part II, 1976	Positive/negative
		<b>Detection of Adulterants</b>		
		Mineral oil	IS: 548 Part II, 1976	Positive/negative
		Castor oil	IS: 548 Part II, 1976	Positive/negative
		Test for Argemone oil	IS: 548 Part II, 1976	Positive/negative

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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
		Cotton Seed oil	IS: 548 Part II, 1976	Positive/negative
		Test for Rancidity	IS: 548 Part II, 1976	Positive / Negative
		Hydrocyanic Acid	IS: 548 Part II, 1976	Positive/negative
		Tricrecylphosphate and Tricresyl-Ortho-Phosphate	IS: 548 Part II, 1976	Positive/negative
		Coal Tar oil Soluble Colours	IS: 548-1976	Positive/negative
c.	Oil seeds, seed cakes	Fat Content, Soxhlet Method	AOAC 20th Edn. 2016, 991.36	0.1 % to 50 %
d.	Oils and Fats, butter oil	Phenolic Antioxidants (BHA, BHT, TBHQ, PG)	AOAC 20th Edn. 2016, 983.15 Food Additives Direct Ch-47, P-2 to P-5	10 mg/kg to 3000 mg/kg
13.	Agri, food and Processed / Prepared Foods	Dietary Fibre	AOAC 20th Edn. 2016, 991.43	1.0 % to 30 %
		Vitamin E	AOAC 20th Edn. 2016, 992.03 IUPAC 1987, 172-182	0.01 mg / g to 100 mg / g
		Thiamine	AOAC 20th Edn. 2016, 957.17 & J.Chromatography A, 1070, 49,2005	0.1 mg / 100g to 200 mg / 100g
		Niacin and Niacinamide	AOAC 20th Edn. 2016, 961.14 & J.Chromatography A, 1070, 49,2005	0.1 mg / 100g to 100 mg / 100g
		Riboflavin	AOAC 20th Edn. 2016, 970.65 & J.Chromatography A, 1070, 49,2005	0.1 mg /100g to 100 mg /100g
		Folic Acid	AOAC 20th Edn. 2016, 2011.06 & J.Chromatography A, 1070, 49,2005, JAOAC (1992) , 75:891-898	0.1 mg / 100g to 100 mg / 100g

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		Ascorbic Acid	AOAC 20th Edn. 2016, 967.21 2.0 mg/100g & JAOAC (1992) 75: 887-891	2 mg/100g to 300 mg/100g
		Vitamin A (Retinol)	AOAC 20th Edn. 2016, 2001.13 & 2011.07	0.15 µg/g to 1000 µg/g
		Vitamin D	AOAC 20th Edn. 2016, 995.05 & 2002.05	0.1 µg/g to 12 µg/g
		Amino Acid Composition	J.AOAC 70, 241-247, STP 434	0.1 % to 20 % of protein content for individual amino acid
		Fat Content, Soxhlet Method	AOAC 20th Edn. 2016, 991.36 / 945.39	0.1 % to 50%
14.	<b>Agri, food and Processed Foods</b>	Aflatoxin, B1, B2, G1, G2	AOAC 20th Edn. 2016, 970.44, 971.22, 968.22, 2005.08	TLC: 20µg/kg to 500µg/kg HPLC: B1,G1:1µg/kg to 500µg/kg B2,G2: 5µg/kg to 500µg/kg
		Trans Fat	AOCS Official method (1998) 5 <sup>th</sup> Ed. Ce 1.62 and Ce2 –66 & AOAC 20th Edn. 2016, 985.21	0.1% to 20%
15.	<b>Foods and Processed/Prepared Foods</b>	Cadmium	AOAC 20th Edn. 2016, 999.11 , 990.08, 999.10	0.3 mg/kg to 100 mg/kg (0.03 mg/100g to 10mg/100g)
		Copper	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	0.75 mg/kg to 200 mg/kg (0.075 mg/100g to 20 mg/100g)
		Iron	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	1.5 mg/kg to 500 mg/kg (0.15 mg/100g to 50 mg/100g)
		Zinc	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	1.5 mg/kg to 200 mg/kg (0.15 mg/100g to 20 mg/100g)
		Lead	AOAC 20th Edn. 2016, 999.11 , 990.08, 999.10	1.5 mg/kg to 100 mg/kg (0.15 mg/100g to 10 mg/100g)

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		Potassium	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	1.5 mg/kg to 500 mg/kg (0.15 mg/100g to 50 mg/100g)
		Calcium	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	3 mg/kg to 1000 mg/kg (0.03 mg/100g to 100 mg/100g)
		Magnesium	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	0.3 mg/kg to 1000 mg/kg (0.03 mg/100g to 100 mg/100g)
		Phosphorus	AOAC 20th Edn. 2016, Sec. 24.014 , 990.08, 999.10, 935.45	0.15 mg/kg to 1000 mg/kg (0.015 mg/100g to 100 mg/100g )
		Sodium	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	1.5 mg/kg to 1000 mg/kg (0.15 mg/100g to 100 mg/100g)
		Arsenic	AOAC 20th Edn. 2016, 986.15 , 990.08, 999.10, 912.02	0.06 mg/kg to 200 mg/kg (0.006 mg/100g to 20 mg/100g)
		Manganese	AOAC 20th Edn. 2016, 985.35 , 990.08, 999.10	1.5 mg/kg to 500 mg/kg (0.15 mg/100g to 50mg/100g)
		Chromium	AOAC 20th Edn. 2016, 974.27 , 990.08, 999.10	1.5 mg/kg to 100 mg/kg (0.15 mg/100g to 10 mg/100g)
		Mercury	AOAC 20th Edn. 2016, 971.21 , 990.08, 999.10	0.06 mg/kg to 100 mg/kg (0.006 mg/100g to 10mg/100g)
		Water Activity	APHA 2001, 64.21	0.1 % to 0.99 %
16.	<b>Processed foods Foods, adjuncts Foods &amp; Plantation Products Foods &amp; Meals</b>	Phenolic Antioxidants (BHA, BHT, TBHQ, PG)	AOAC 20th Edn. 2016, 983.15 Food Additives Direct Ch-47, P-2 to P-5	10 mg/kg to 200 mg/kg
		Moisture 100°C & 130°C Vaccum Oven Method	AOAC 20th Edn. 2016, 953.07/925.10 , 934.06	0.10 % to 50 %

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		Total ash	AOAC 20th Edn. 2016, 941.12/923.03	0.10 % to 5 %
		Acid insoluble ash	AOAC 20th Edn. 2016, 941.12	0.10 % to 2 %
		Fat	AOAC 20th Edn. 2016, 991.36	0.50 % to 30%
		Crude Fibre	AOAC 20th Edn. 2016, 962.09	0.10 % to 30 %
		Protein	AOAC 20th Edn. 2016, 984.13	0.10 % to 95%
		Carbohydrates (by Difference )	TM/FSAQCL/9.B.45/5.5.14 (1) Nutritive Value of Indian Foods, Gopalan et al, NIN, ICMR, 1996	0 to 100 %
		Calorific value (By Calculation)	TM/FSAQCL/9.B.45/5.5.14 (1) Nutritive Value of Indian Foods, Gopalan et al, NIN, ICMR, 1996	0.5 Kcal and Above
		Moisture	AOAC 20th Edn. 2016, 953.071, 925.10	0.1 % to 50 %
		Synthetic Food Colour	TM/FS&AQCL/9.D.7/ 01.11.2005 (1)	5 mg/kg to 500 mg/kg
<b>17.</b>	<b>Food Packaging Tests</b>			
<b>a.</b>	<b>Plastic materials</b>	Overall Migration	IS: 9845-1998, (Reaffirmed 2004) & US-FDA CFR 21 170-199, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>
<b>b.</b>	<b>Resinous and polymeric coatings</b>	Overall Migration / Extraction	USFDA: 175-300, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>
<b>c.</b>	<b>Components of paper and paper boards in contact with aqueous and fatty foods</b>	Overall Migration / Extraction	USFDA: 176-170, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>

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d.	Olefin polymers	Overall Migration / Extraction	USFDA: 177-1520, April 1, 2011 USFDA: 176-170, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>
e.	Polyethylene phthalate polymers	Overall Migration / Extraction	USFDA: 177-1630, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>
f.	Closures with sealing gaskets for food containers	Overall Migration / Extraction	USFDA: 177-1210, April 1, 2011	0.1 mg/dm <sup>2</sup> to 100 mg/dm <sup>2</sup>
<b>II. RESIDUE IN FOOD PRODUCT</b>				
a.	Pulses & cereals, Fruits & Vegetables, Spices & condiments, oil and oilseeds and Processed Foods	Organochlorine Pesticides $\alpha$ -BHC $\gamma$ -BHC $\beta$ -BHC $\delta$ -BHC $\alpha$ -Chlordane $\lambda$ -Chlordane Chlorothalonil 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan-I Endosulfan-II Endosulfan sulfate Endrin Endrin Aldehyde Hexachlorobenzene Heptachlor Heptachlor Epoxide Methoxychlor Aldrin	SOP No. CFTRI/ FSAQCL/TM-PR/9B (for Fruits & Vegetables) Based on AOAC 2007.01 AOAC 20th Edn. 2016, For pulses & Cereal, Spices & Condiments, Oil & Oil Seeds, Processed Foods AOAC 970.52 AOAC 20th Edn. 2016	LOQ/Range 0.1 mg/kg to 10 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
		Organophosphorus Pesticides		
		Atrazine		LOQ/Range 0.1 mg/kg to 10 mg/kg (for oils) 0.025 mg/kg to 5 mg/kg (for fruits & vegetables) 0.01 to 10mg/kg (for all other food matrix)
		Diazinon		
		Dichlorovos		
		Simazine		
		Acephate		
		Captafol		
		Phosphamidon		
		Phosalone		
		Monocrotophos		
		Dimethoate		
		Fenitrothion		
		Chlorpyrifos		
		Fenthion		
		Parathion		
		Methyl parathion		
		Ethion		
		Malathion		
		Alachlor		
		Methyl Paraoxon		
		Propazin		
		Disulfoton		
		Phorate		
		PYRETHROIDS		
		Cypermethrin	AOAC 20th Edn. 2016, 998.01	0.05 mg/kg
		Deltamethrin		
		Fenvelerate		
		Permethrin	AOAC 20th Edn. 2016, 998.01	0.05 mg/kg
		Cis- permethrin		
		Trans permethrin		

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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
<b>III.</b>	<b>ANIMAL FEED</b>			
<b>1.</b>	<b>Feeds</b>	Crude Fiber	AOAC 20th Edn. 2016, 962.09	0.25% to 20 %
		Aflatoxin, B1, B2, G1, G2	AOAC 20th Edn. 2016, 970.44, 971.22, 968.22, 2005.08	TLC: 20µg/kg to 500 µg/kg HPLC: B1,G1:1µg/kg to 500µg/kg B2,G2: 5µg/kg to 500µg/kg
<b>IV.</b>	<b>WATER</b>			
<b>1.</b>	<b>Water (Packaged Drinking Water)</b>	Colour	APHA 22 <sup>nd</sup> Edition 2012, 2120 B	Qualitative
		Taste	APHA 22 <sup>nd</sup> Edition 2012, 2160	Qualitative
		Odour	APHA 22 <sup>nd</sup> Edition 2012, 2150	Qualitative
		Turbidity	APHA 22 <sup>nd</sup> Edition 2012, 2130 B	1.0 NTU to 500 NTU
		pH	APHA 22 <sup>nd</sup> Edition 2012, 4500 B	5 % to 10 %
		Total Dissolved Solids	APHA 22 <sup>nd</sup> Edition 2012, 2540 B	5 mg/L to 3000 mg/L
		Nitrate	APHA 22 <sup>nd</sup> Edition 2012, 4500 B	0.2 mg/L to 500 mg/L
		Chloride	APHA 22 <sup>nd</sup> Edition 2012, 4500 B	0.5 mg/L to 500 mg/L
		Fluoride	APHA 22 <sup>nd</sup> Edition 2012, 4500 D	0.5 mg/L to 50 mg/L
		Residual Chlorine	APHA 22 <sup>nd</sup> Edition 2012, 4500 B	0.5 mg/L to 200 mg/L
		Sulphate	APHA 22 <sup>nd</sup> Edition 2012, 4500 C	10 mg/L to 500 mg/L
		Phenolic Compounds	APHA 22 <sup>nd</sup> Edition 2012, 5530 D	0.1 mg/L to 100 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
		Hardness	APHA 22 <sup>nd</sup> Edition 2012, 2340 C	5 mg/L to 1000 mg/L
		Sodium	APHA, 22 <sup>nd</sup> Edn. 2012, 3111 B	0.06 mg/L to 20 mg/L
		Calcium	APHA, 22 <sup>nd</sup> Edn. 2012, 3111 B	1.5 mg/L to 50 mg/L
		Iron	APHA, 22 <sup>nd</sup> Edn. 2012, 3111 B	1.5 mg/L to 50 mg/L
		Magnesium	APHA, 22 <sup>nd</sup> Edn. 2012, 3111 B	0.06 mg/L to 30 mg/L
		Manganese	APHA, 22 <sup>nd</sup> Edn. 2012, 3120 A	1.5 mg/L to 50 mg/L
		Zinc	APHA, 22 <sup>nd</sup> Edn. 2012, 3111 B	0.06 mg/L to 20 mg/L
		Arsenic	APHA, 22 <sup>nd</sup> Edn. 2012, 3114 B	0.06 mg/L to 2 mg/L
		Mercury	APHA, 22 <sup>nd</sup> Edn. 2012, 3112 B	0.06 mg/L to 10 mg/L
<b>V.</b>	<b>RESIDUE IN WATER</b>			
<b>1.</b>	<b>Water (Packaged Drinking Water)</b>	Organochlorine Pesticides	SOP No. CFTRI/ FSAQCL/TM-PR/9B	0.1µg/L to 5 mg/L
		Hexachlorobenzene	AOAC 20th Edn. 2016, 990.06 & 991.07	
		α- BHC		
		γ-BHC		
		β-BHC		
		δ-BHC		
		α- Chlorodane		
		Chlorodane		
		4,4'-DDD		
		4,4'-DDE		
		4,4'-DDT		
		Dieldrin		
		Endosulfan-I		
		Endosulfan-II		

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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
		Endosulfan Sulfate Endrin Endrin aldehyde Hexachlorobenzene Heptachlor Heptachlor Epoxide		
		Methoxychlor Aldrin		
		Organophosphorus Pesticides		
		Atrazine Simazine Captafol Phosphamidon Phosalone Monocrotophos Dimethoate Fenitrothion Chlorpyrifos Fenthion Parathion Methyl parathion	SOP No. CFTRI/ FSAQCL/TM-PR/9B Based on AOAC 20th Edn. 2016, 990.06 & 991.07	0.1µg/L to 5 mg/L
		Ethion Malathion Alachlor Methyl paraoxon Phorate	SOP No. CFTRI/ FSAQCL/TM-PR/9B Based on AOAC 20th Edn. 2016, 990.06 & 991.07	0.1µg/L to 5 mg/L

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