

Laboratory **Reliable Analytical Laboratories Private Limited, Reliable House, 125
Indian Corpn Complex, Mankoli, Bhivandi, Thane, Maharashtra**

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

Discipline **Chemical Testing** **Issue Date** **15.09.2014**

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. Water				
1.	Packaged drinking water, Packaged natural mineral water, Raw water, Source Water, Drinking water Water for food Processing Industry, Water and Ice as per EEC directive 98/83/EC	Colour	IS 3025 : 1983 (P-4) (RA 2006) Amnd 1	1 to 50 Hazen units
		Odour	IS 3025 : 1983 (P-5) (RA 2006)	Organoleptic
		Taste	IS 3025 : 1984 (P-8) (RA 2006)	Organoleptic
		Turbidity	IS 3025 : 1984 (P-10) (RA 2006)	0.1 to 100 NTU
		Specific Conductance at 25°C	2510 APHA 22nd Ed.	0.1 µmhos/cm to 100 mmhos/cm
		TDS	IS 3025 : 1984 (P-16) (RA 2006) Amnd 1	5 to 500 mg/l Above 500 mg/l
		pH	IS 3025 : 1983 (P-11) (RA 2006)	1 to 14
		Barium	IS 13428 F : 2005, Amnd 4 IS 15302 : 2003	0.5 to 50 mg/l
		Copper	IS 3025 : 1992 (P-42) Amnd 1 IS 3025 : 2004 (P-2) (RA 2003) AAS (3113 APHA 22 nd Ed.)	0.02 to 20 mg/l
	Iron	IS 3025 : 2003 (P-53) IS 3025 : 2004 (P-2) (RA 2003) AAS (3113 APHA 22 nd Ed.)	0.05 to 1.0 mg/l	

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	Manganese		IS 3025 : 2006 (P-59) IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed.)	0.01 to 1.0 mg/l
	Chloramines (as Cl ₂)		IS 3025 (P-26) APHA 22 nd Ed. 4500-CL G	0.1 mg/l to 20 mg/l
	Molybdenum		IS 3025 (P-2)	0.1 mg/l to 20 mg/l
	Ammonia (as total ammonia-N)		IS 3025 (P-34)	0.1 to 10 mg/l 10 mg/l to 500 mg/l
	Nitrate		IS 3025 : 1988 (P-34) (RA 2005)	2 to 10 mg/l 10 mg/l to 500 mg/l
	Nitrite		IS 3025 : 1988 (P-34) (RA 2005)	0.01 to 10 mg/l 10 mg/l to 500 mg/l
	Fluoride		IS 3025 : 2008 (P-60)	0.1 mg/l to 5 mg/l
	Zinc		IS 3025 : 1994 (P-49) (RA 2003) Amnd 1 IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.01 mg/l to 20 mg/l
	Silver		IS 13428 : 2005 Annex. J AAS (3113 APHA 22 nd Ed) IS 3025 (P-2) : 2004	0.005 mg/l to 20 mg/l
	Aluminium		IS 3025 : 2003 (P-55) IS 3025 : 2004 (P-2)	0.02 mg/l to 0.3 mg/l 0.3 mg/l to 5 mg/l

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		Chloride	IS 3025 : 1988 (P-32) (RA 2003)	1 to 500 mg/l 500 mg/l to 1000 mg/l
		Selenium	IS 3025 : 2003 (P-56) IS 15303 : 2003 IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.005 mg/l to 5 mg/l
		Sulphate	IS 3025 : 1986 (P-24) (RA 2003) 1st Rev.	10 to 40 mg/l 40 mg/l to 500 mg/l
		Alkalinity	IS 3025 : 1986 (P-23) (RA 2003) 1st Rev. Amtd. 2	1 to 500 mg/l 500 mg/l to 1000 mg/l
		Calcium	IS 3025 : 1991 (P-40) Amnd 1 IS 3025 : 2004 (P-2) (RA 2003)	1 to 500 mg/l 500 mg/l to 1000 mg/l
		Magnesium	IS 3025 : 1994 (P-46) Amnd 2 IS 3025 : 2004 (P-2) (RA 2003) 1st Rev.	1 to 500 mg/l 500 mg/l to 1000 mg/l
		Sodium	IS 3025 : 1993 (P-45) (RA 2003) 1st Rev. Amnd 1 IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	1 to 100 mg/l 100 to 1000 mg/l
		Residual Free Chlorine	IS 3025 : 1986 (P-26) (RA 2003) 1st Rev. Amnd 1	0.1 mg/l to 20 mg/l
		Phenolic compounds	Cl. 6 of IS 3025 : 1992 (P-43) (RA 2003) 1st Rev. Amnd 2	0.001 mg/l to 5 mg/l

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		Anionic Surface active agents	IS 13428 - K : 2005	0.01 to 10 mg/l 10 mg/l to 50 mg/l
		Sulphide	IS 3025 : 1986 (P-29) (RA 2003)	0.02 to 10 mg/l 10 mg/l to 50 mg/l
		Mineral Oil	IS 3025 : 1991 (P-39) (RA 2003) Amnd 2	0.01 mg/l to 10 mg/l
		Antimony	Annex. G of IS 13428 : 2005 IS 15303 : 2003 IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.002 to 10 mg/l
		Borates	IS 13428 - H : 2005 IS 3025 : 2004 (P-2)	0.010 to 10 mg/l
		Mercury	IS 3025 : 1994 (P-48) (RA 2003) Amnd 1 IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.0005 to 10 mg/l
		Cadmium	IS 3025 : 1992 (P-41) (RA 2003) 1st Rev IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.02 to 10 mg/l
		Arsenic	IS 3025 : 1988 (P-37) (RA 2003) 1st Rev, IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed)	0.001 to 10 mg/l

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		Cyanide	Cl.2 of IS 3025 : 1986 (P-27) Amnd 1 APHA 4500 22 nd Ed.	0.02 to 10 mg/l
		Lead	IS 3025 : 1994 (P-47) (RA 2003) Amnd 2 1st Rev. IS 3025 : 2004 (P-2) AAS (3113 APHA 22 nd Ed.)	0.01 to 10 mg/l
		Chromium	IS 13428 - J : 2005 AAS (3113 APHA 22 nd Ed.) IS 3025 : 2004 (P-2)	0.01 to 10 mg/l
		Nickel	IS 13428 - L : 2005 AAS (3113 APHA 22 nd Ed.) IS 3025 : 2004 (P-2)	0.01 to 10 mg/l
		Bromate	APHA 22 nd Ed. RAL/CHE-WATER/36 Issue no. 3, Jan 2014	0.01 to 10 mg/l
		Oxidisable matter	APHA 22 nd Ed. Annex-A of IS 1070 : 1992	0.075 to 10 mg/l
		Ammonia (Nitrogen)	IS 3025 : 1988 (P-34) (RA 2005)	0.005 to 10 mg/l
		Conductivity	IS 3025 (P-14) : 1984	0.1 μS to 100 mmhos/cm
		Acrylamide	APHA 22 nd Ed., Sec.8032 A	0.1 μg/l to 10 mg/l

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	Poly Chlorinated Biphenyls		Annexure-M of IS 13428:2005, AOAC 974.21 19 th ED. 2012	0.01 µg/l to 10 mg/l
	Poly Aromatic Hydrocarbons		APHA 22 nd Ed. 6440	0.01 µg/l to 10 mg/l
	PESTICIDE RESIDUE			
	DDT (o,p & p,p isomers of DDT, DDE and DDD)		USEPA 508/ 525.2 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	LOQ 0.01 µg/l 0.01 µg/l to 1000 µg/l
	Gamma-HCH (Lindane)		USEPA 508/ 525.2 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	-do-
	Alpha, beta, delta HCH		USEPA 508/ 525.2 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	-do-
	Endosulphan (Alpha, Beta, Endosulphan sulphate)		USEPA 508 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	-do-
	Monocrotophos		USEPA 8141A/525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	-do-
	Ethion		USEPA 8141A/525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	-do-

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		Chlorpyrifos	USEPA 8141A/525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	LOQ 0.01 µg/l 0.01 µg/l to 1000 µg/l
		Phorate (Phorate and its oxygen analogue i.e phorate sulfoxide and phorate sulphone)	USEPA 8141A/525.2 RAL/CHE-WATER/24,25 Issue no. 5, Jan 2014	-do-
		2, 4-D	USEPA 515.1 USEPA 555 (Modified) RAL/CHE-WATER/27 Issue no. 5, Jan 2014	-do-
		Butachlor	USEPA 8141A/525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	-do-
		Isoproturon	USEPA 532 (Modified) RAL/CHE-WATER/26 Issue no. 5, Jan 2014	-do-
		Alachlor	USEPA 8141A/525.2 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	-do-
		Atrazine	USEPA 525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	-do-

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	Packaged Drinking water and Packaged Natural Mineral Water, Raw water, Source water, Drinking water, Water for food processing industry	Methyl Parathion (Methyl Parathion and its oxygen analogue i.e methylparaoxon)	USEPA 8141A/525.2 RAL/CHE-WATER/24 Issue no. 5, Jan 2014	LOQ 0.01 µg/l 0.01 µg/l to 1000 µg/l
		Malathion (Malathion and its oxygen analogue i.e Malaaxon)	USEPA 8141A/525.2 RAL/CHE-WATER/24,25 Issue no. 5, Jan 2014	-do-
		Aldrin and Dieldrin	USEPA 525.2 AOAC 990.06 2012 RAL/CHE-WATER/23 Issue no. 5, Jan 2014	-do-
		Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Diclofluanid, Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan Beta Endosulphan, Endosulphan sulphate, Heptachlor, Heptachlor Epoxide	RAL/CHE-PR/7 Issue no. 5, Sept 2012 APHA 6630B 22 nd Ed. EPA 3510 C/8010A RAL/CHE-PR/18 Issue no. 1, Feb 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
	Organophosphorus pesticides Acephate, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Etrimphos, Edifenphos, Fenclorphos, Fenitrothion, Fenthion,			

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		Fenthion sulphone and sulphoxide, Malathion, Malaoxan, Monocrotophos, Omethoate, Oxydemeton-methyl, Demeton-S-Methylsulfone, Parathion Ethyl, Parathion Methyl, Paraxone methyl, Profenophos, Phorate, Phorate sulphone, phorate sulphoxide, Phosalone, Quinalphos, Triazophos	RAL/CHE-PR/7 Issue no. 5, Sept 2012 APHA 6630B 22 nd Ed. EPA 3510 C/8010A RAL/CHE-PR/18 Issue no. 1, Feb 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Synthetic Pyrethroids Cyfluthrin (all isomers), Lambda Cyhalothrin, Cypermethrin (all isomers), Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers)		
		Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb, Methomyl, Pridaben, Thiodicarb, Bendiocarb		
		Traizoles Bitertanol, Flusilazole, Hexaconazole, Myclobutanil, Penconazole, Paclobutrazole, Propiconazole, Tebuconazole, Thiabendazole		
		Imidazoles – Fenamidone		
		Acylamino Acid Fungicides Propanil		
		Nicotinoids - Acetamiprid, Thiamethoxam		

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II. FOODS & AGRICULTURAL PRODUCTS

1. Animal Feeds & Feed Stuff (Animal health supplement or Feed, Mineral mix, Poultry feed, Probiotic cultures)	Moisture		IS 7874 : 1975 (RA 2004) Amdt. 2, DGHS Lab Manual-3	0.01% to 40%
	pH		By pH Meter, DGHS Lab Manual-5	1 to 14
	Ash		IS 7874 : 1975 (RA 2004) Amdt. 2, DGHS Lab Manual-3	0.01% to 40%
	Acid Insoluble Ash		IS 7874 : 1975 (RA 2004) Amdt. 2, DGHS Lab Manual-3	0.01 to 40%
	Crude Fat		IS 7874 : 1975 (RA 2004) Amdt. 2, IS 6492, DGHS Lab Manual-3	0.1% to 20%
	Crude Protein/Nitrogen		IS 7874 : 1975 (RA 2004) Amdt. 2, DGHS Lab Manual-3 IS 5983 (P-1)	0.5% to 60%
	Crude Fibre		IS 7874 : 1975 (RA 2004) Amdt. 2, IS 6865 : 2000 DGHS Lab Manual-3	0.1% to 25%
	Energy Value		RAL/CHE-FOOD/131	10 to 900 Kcal /100g
	Carbohydrates		IS 1656 : 2007 Amnd 2 By calculation	0.5 to 80%

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	Animal Feeds & Feed Stuff (Animal health supplement or Feed, Mineral mix, Poultry feed, Probiotic cultures)	Sodium	IS 15121 : 2002, DGHS Lab Manual-9, AAS/ICP, AOAC 966.16 19 th Ed., IS 7874 : 1975 (RA 2004) Amdt. 2	5 to 1000 mg/kg
		Potassium	IS 15121 : 2002, DGHS Lab Manual-9 AAS/ICP, AOAC 929.05,929.06 19 th Ed., IS 7874 : 1975 (RA 2004) Amdt. 2	5 to 1000 mg/kg
		Magnesium	IS 15121 : 2002, DGHS Lab Manual-9 AAS/ICP, AOAC 931.09 19 th Ed., IS 7874 : 1975 (RA 2004) Amdt. 2	1 to 1000 mg/kg
		Calcium	IS 15121 : 2002, DGHS Lab Manual-9 AAS/ICP, AOAC 929.07 19 th Ed., IS 7874 : 1975 (RA 2004) Amdt. 2	1 to 1000 mg/kg
		Salt as NaCl	IS 7874 : 1975 (RA 2004) Amdt. 2	0.01% to 20%
		Allyl Isothiocyanate	GAFTA 12.0-2003	0.1 to 1%
		Total Phosphates as P ₂ O ₅ / Phosphorus	AOAC 995.11 19 th Ed., IS 7874 : 1975 (RA 2004) Amdt. 2, Pearson 9 th Ed	0.025 to 1 g/100g as Phosphorus
		Urea Nitrogen	IS 7874 : 1975 (RA 2004) Amdt. 2, IS 13399 Amdt 1	0.1% to 60%

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2.	Snacks, Instant Mixes and Convenience Products, Ready to eat products, Farsan, Traditional sweets and sweet meats	Moisture	AOAC 19 th Edn. 925.09, 920.151, IS 2234:1989 Amnd 1, IS 12220:1987, IS 12566:1989 Amdt 1, IS 13264:1991 Amdt.1, IS 13265:1991 Amdt.1, IS 13267:1991, IS 13354:1992, DGHS Lab Manual-3	0.01% to 98%
		Ash	AOAC 19 th Edn. 940.26, IS 2234:1989 Amnd. 1, IS 12220:1987, IS 12566:1989 Amdt. 1, IS 13264:1991 Amdt.1, IS 13265:1991 Amdt.1, IS 13267:1991 IS 13354:1992, DGHS Lab Manual-3	0.01% to 40%
		Acid insoluble ash	AOAC 19 th Edn. 940.26, IS: 3880-1976 Amnd 1, IS 2234:1989 AMND 1, IS 12220:1987, IS 12566:1989 AMTD 1, IS 13264:1991 AMTD.1, IS 13265:1991 AMTD.1, IS 13267:1991 IS 13354:1992, DGHS Lab Manual-3	0.01% to 40%
		pH	DGHS Lab Manual-5	1 to 14
		Brix	By Refractometer, DGHS Lab Manual-5	0.5% to 80%

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	Protein		AOAC 19 th Edn.920.152, IS 2234:1989 AMND 1, DGHS Lab Manual-3, IS 12220:1987, IS 12566:1989 AMTD 1, IS 13264:1991 AMTD.1, IS 13265:1991 AMTD.1, IS 13267:1991 IS 13354: 1992	0.5% to 60%
	Fat content		IS 12220:1987, IS 12566:1989 AMTD 1, IS 13264:1991 AMTD.1, IS 13265:1991 AMTD.1, IS 13267:1991 AMTD.1, IS 13354: 1992, AOAC 19 th Ed 920.115, DGHS Lab Manual-3	0.1% to 60%
	Total Sugar/ Reducing sugar		AOAC, 19 th Edn. 923.09, DGHS Lab Manual-4	0.5% to 80%
	Carbohydrates		IS 1656 : 2007 Amnd 2, By calculation IS 2234 : 1989 RA 2005 Amnd 1	0.5 to 90%
	Energy Value		RAL/CHE-FOOD/131	10 to 900 Kcal/100g
	Added Starch		AOAC 19 th Edn. 925.38, DGHS Lab Manual-1	Present/Absent
	Sodium		IS : 15121 - 2002 & AAS/ICP, AOAC 966.16 19 th ED., DGHS Lab Manual 9	1 to 1000 mg/kg

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		Potassium	IS 15121 - 2002 & AAS/ICP, AOAC 929.05,929.06 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS : 15121 - 2002 & AAS/ICP, AOAC 931.09 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Calcium	IS 15121 : 2002 & AAS/ICP, AOAC 929.07 19 th Ed., DGHS Lab Manual 9	1 to 1000 mg/kg
		Vitamin C	AOAC 19 th Ed. 967.21 DGHS Lab Manual-5 IS 5838 : 1970	2 mg/100g to 1000 mg/100g
		Benzoic acid	IS 12014:1986 (P- I) RA 2002, AOAC 960.38, AOAC 963.19, DGHS Lab Manual-8, IS 3501 : 1966 Amtd.1	5 mg/kg to 2500 mg/kg
		Salt as NaCl	AOAC 19 th Ed. 935.47, DGHS Lab Manual-6, DGHS Lab Manual-1, IS 2860:1964 Amtd.1	0.1% to 20%
		Acidity as acetic acid	IS 2860:1964 RA 2001 Amnd 1 DGHS Lab Manual-5	0.1% to 10%
		Drained weight	DGHS Lab Manual-5, IS 2860 : 1964 Amtd.1	0.1 to 20 kg

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		Water activity	RAL/CHE-FOOD/252	0.01 to 1
		Sulphur dioxide	Pearson 9 th Ed, DGHS Lab Manual-5, AOAC 19 th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg
		Total Phosphates as P ₂ O ₅	AOAC 995.11 19 th Ed., RAL/CHE-FOOD/183	0.025 to 1 g/100g as Phosphorus
		Added colour	DGHS Lab Manual-8	5 mg/kg to 500 mg/kg
3.	Egg & Poultry products, Meat & Meat Products Raw, Frozen, Canned and processed, Fish & Fish Products & other marine products Raw, Frozen, Canned and processed	pH	DGHS Lab manual-5	1 to 14
		Moisture/Total solids	AOAC 19 th Ed. 925.30/925.29 952.08, IS:4723 : 1978 Amnd. 2, DGHS Lab Manual-6	0.01% to 40%
		Total ash	AOAC 938.08, 920.153 DGHS Lab Manual-6	0.01% to 40%
		Acid Insoluble Ash	AOAC 938.08, 920.153, DGHS Lab Manual-6	0.01 to 0.2%
		Fat	AOAC 19 th Edn.925.32, 948.15, 991.36, 948.16 DGHS Lab Manual-6, IS 5960, IS 4723 : 1978 AMND 2	0.1% to 60%
		Nitrogen/Protein	AOAC 19 th Edn.984.13 IS 7219 DGHS Lab Manual-6	0.5% to 60%

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	Sodium		IS 15121 - 2002 & AAS/ICP, AOAC 966.16 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Potassium		IS : 15121 - 2002 & AAS/ICP, AOAC 929.05,929.06 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Magnesium		IS 15121 - 2002 & AS/ICP, AOAC 931.09 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
	Calcium		IS : 15121 - 2002 & AS/ICP, AOAC 929.07 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Salt as Sodium chloride		AOAC-19THEd. 935.47, 937.09 A&B, DGHS Lab Manual-6	0.1% to 20%
	Total Volatile Base Nitrogen (TVBN)		Pearson's 9 th Ed., DGHS Lab Manual-6	5 to 200 mg/100g
	Trimethylamine (TMA)		AOAC 971.14 19 th Ed., Pearson's 9 th Ed., DGHS Lab manual-6	5 to 200 mg/100g
	Total Phosphates as P ₂ O ₅		AOAC 995.11 19 th Ed., Pearson 9 th Ed	0.025 to 1 g/100g as Phosphorus
	Acidity of brine		DGHS Lab Manual-6	0.1% to 5%
	Indole		AOAC 948.17 19 th Ed.	0.5 to 100 mg/kg

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		Sulphite as SO ₃	AOAC 990.28 19 th Ed., Kit method(E-Merck)	10 to 1000 mg/kg
		Histamine	LC-MS-MS, RAL/Antibiotics/07	1 to 200 mg/100 g
		Water activity	RAL/CHE-FOOD/252	0.1 to 1
		Sulphur dioxide	Pearson 9 th Ed, DGHS Lab Manual-6, AOAC 19 th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg
		Nitrate	AOAC 993.03 19 th Ed., DGHS Lab Manual-6	25 to 1000 mg/kg
		Nitrite	AOAC 973.31 19 th Ed., DGHS Lab Manual-6	1 to 1000 mg/kg
		Peroxidase test	DGHS Lab Manual-5	Positive/Negative
4.	Nut and Nut products, Dry fruits, Oilseeds	Moisture	AOAC 19 th Edn.925.40, IS 3579:1966 Amtd 1	0.01% to 40%
		Acid Insoluble Ash	IS 4684:1975 Amnd 2, DGHS Lab Manual-3	0.01% to 40%
		Ash	AOAC 19 th Edn.950.49, DGHS Lab Manual-3	0.01% to 40%
		Fat/Oil content	AOAC 19th Ed. 2012 948.22, IS 3579:1966 Amtd.1, DGHS Lab Manual-3	0.1% to 60%

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	Nut and Nut products, Dry fruits, Oilseeds	Protein	AOAC 19THEdn.950.48, DGHS Lab Manual-3	0.5% to 30%
		Crude Fibre	DGHS Lab Manual-3, AOAC 19 th Ed.935.53,	0.2% to 25%
		Free Fatty Acids/ Rancidity/ Acidity of extracted fat/Rancidity	IS 548 (P-I) : 1964 Amnd 5, DGHS Lab Manual-3, IS 4684:1975 Amtd.2	0.01% to 30%
		Carbohydrate	IS 1656 : 2007 Amnd. 2, By calculation	0.5 to 80%
		Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g
		Sodium	IS 15121:2002 & AAS/ICP, AOAC 966.16 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Potassium	IS 15121 - 2002 & AAS/ICP, AOAC 929.05,929.06 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS 15121 - 2002 & AAS/ICP, AOAC 931.09 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
	Calcium	IS : 15121 - 2002 & AAS/ICP, AOAC 929.07 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg	

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		Rancidity as peroxide value	IS 4684 : 1975 RA 2000 Amnd 2, AOAC 19 th Ed. 2012 940.28, DGHS Lab Manual-3	0.1% to 10%
		Physical tests (insect infestation, broken, damaged/discoloured, shriveled, extraneous matter, stalks, pieces of shells, sugared raisins, Rhodent hair, excreta, Mould affected)	Visual examination IS 3579 -1966 RA 2006 Amnd 1 AOAC 19 th Ed. 2012 935.28, IS 4333:1996 (P-1)	0.1% to 50%
		Sugar	AOAC, 19 th Ed. 923.09, 925.35, 925.36, DGHS Lab Manual-3	0.5% to 80%
5.	Fruits, Vegetables and its products Fresh, Raw, dried frozen, processed, Thermally processed, bottled canned, dehydrated powders	Moisture/Total solids	AOAC 19 th Ed. 920.151, DGHS MANUAL-5	0.01% to 98%
		Acidity/Acidity of cut-out syrup	IS 2860:1964 RA 2001 Amnd 1 DGHS Lab Manual-5, AOAC 19th Ed. 2012 942.15	0.1% to 10%
		Ash	AOAC 19 th Edn. 940.26, DGHS Lab Manual-5, IS:3880:1976, Amdt. 1, IS 4624:1978 AMTD.1, IS 3500:1966 AMTD.1	0.01% to 40%
		Acid insoluble ash	AOAC 19 th Ed. 940.26 / IS: 3880-1976 AMND 1, DGHS Lab Manual-5, IS 3500:1966 AMTD.1, IS 4624:1978 AMTD.1	0.01% to 40%

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		Total soluble Solids/Brix	DGHS Lab Manual-5, AOAC 19th Ed. 2012 932.12, IS 2860 : 1964 RA 2001, Amnd. 1	0.01% to 80%
		Total insoluble solids	AOAC 19 th Edn. 920.151 DGHS Lab Manual-5	0.01% to 80%
		pH	DGHS Lab Manual-5	1 to 14
		Protein	AOAC 19 th Edn.920.152	0.5% to 60%
		Crude Fibre	IS : 2234:1989 RA2005 AMND 1, DGHS Lab Manual-3, AOAC 19 th Edn.935.53	0.2% to 25%
		Carbohydrates	IS 1656:2007 Amnd 2, By calculation	0.5 to 80%
		Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g
		Sugar	AOAC, 19 th Edn. 923.09, 925.35, 925.36, DGHS Lab Manual-5	0.5% to 80%
		Added Starch	AOAC 19 th Edn. 925.38, DGHS Lab Manual-5 & 3	Present/Absent
		Sodium	IS 15121 : 2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg

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	Potassium		IS 15121 : 2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Magnesium		IS 15121 : 2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Calcium		IS 15121 : 2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Vitamin C		AOAC-19 th Ed 967.21, DGHS Lab Manual-5	2 mg/100gm to 1000 mg/100 gm
	Benzoic Acid		IS 12014 (P-I) : 1986 RA2002, AOAC 19 th Ed. 2012 963.19, DGHS Lab Manual-8	5 mg/kg to 2500 mg/kg
	Salt		AOAC-19 th Ed. 935.47 DGHS Lab Manual-5	0.1% to 20%
	Drained weight		IS 12220:1987 RA 1999, AOAC 19 th Ed. 2012 953.15, DGHS Lab Manual-5, IS 2860 : 1964 RA 2001, Amnd 1	0.1 to 5 kg
	Volatile acidity		AOAC 19th Ed. 2012 925.34, DGHS Lab Manual-5	0.1 to 10%

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		Sulphur dioxide	Pearson 9 th Ed, DGHS Lab Manual-5, DGHS Lab Manual-6, AOAC 19 th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg
		Total Phosphates as P ₂ O ₅	AOAC 995.11 19 th Ed., DGHS Lab Manual-5, Pearson 9 th Ed	0.025 to 1 g/100g as Phosphorus
		Peroxidase test	DGHS Manual Lab-5, Pearson 9 th Ed.	Positive/Negative
		Fruit juice content	DGHS Lab Manual-5 Pearson 9 th Ed.	1% to 80%
		Added Wax	DGHS Lab Manual-5	Present/Absent
		Added colouring matter/ synthetic colours	DGHS Lab Manual-5	Present/Absent
		Fat content	IS 6287:1985 (RA 1999) DGHS Lab Manual-4	0.1% to 60%
6.	Milk & Milk Powder, Whey powders	Moisture	IS 12299:1998, IS 1165:2002, IS 1166:1986, IS 10484:1983 RA2005, IS 3507:1966 Amdt.1, IS 3508:1966 Amdt. 3, IS 4049:1967 Amdt.1, IS 14433:207 Amdt. 3, IS : 11623:2008, IS 2785:1979, DGHS Lab Manual-1	0.01% to 98%

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	Milk & Milk Powder, Whey powders	Total Solids	AOAC 19 th Ed. 941.08, IS 2802:1964 RA 2000, Amnd 4, IS 1166 : 1986 (RA 2003), Amnd 3, IS 10484 : 1983 RA 2005, IS 11622:1986 (RA 2003), DGHS Lab Manual-1, IS 1479:1961 (P-2) Amtd.1	0.01% to 95%
		Milk Fat/Total fat	IS 1224 (P-I) 1977 (RA 2003), IS 1166:1986, AOAC 19 th Ed. 933.05, 920.115, IS 10484:1983 RA2005, IS 2785:1979 RA2000, IS 1479:1961 (P-2) AMTD.1	0.1% to 50%
		Milk Protein/Total Protein	IS 1479 (P-II) 1961 (RA 2003), DGHS Lab Manual-1, AOAC 19th Ed. 2012 991.20, AOAC 19th Ed. 2012 991.21	0.5% to 90%
		Crude Fibre	DGHS Lab Manual-1, AOAC 19THEdn.935.53	0.2% to 25%
		Carbohydrate	IS 1656 : 2007 AMND 2, By calculation	0.5 to 80%
		Energy Value	RAL/CHE-FOOD/131	10 - 900 Kcal/100g
		SNF (Total Solid Not Fat)	AOAC-19 th Ed. 990.21, DGHS Lab Manual-1, IS 1479:1961 (P-2) AMTD.1	1.0% to 20%

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	Milk & Milk Products, Whey powders	Titratable Acidity	IS 1479 (P-I) :1960 AMND 4, IS : 2802:1964 AMND 4, IS : 1165:2002 AMND 1, IS 1166: 1986 AMTD.3, DGHS Lab Manual-1, IS 4883:1980 RA 2005	0.01 to 5%
		Ash	IS 1165 -2002 AMND 1 DGHS Lab Manual-1	0.0 to 40%
		Acid Insoluble Ash	DGHS Lab Manual-1, IS 12299:1998 AMTD.1	0.0 to 40%
		Added Starch	IS : 1479 (P- I) 1960 Amnd 4 DGHS Lab Manual-1	Present/Absent
		Added Sugar	IS : 1479 (P- I) 1960 Amnd 4 DGHS Lab Manual-1	Present/Absent
		Sodium	IS 15121 - 2002 & AAS/ICP, AOAC 966.16 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Potassium	IS 15121 - 2002 & AAS/ICP, AOAC 929.05,929.06 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS 15121 - 2002 & AAS/ICP, AOAC 19thEd., DGHS Lab Manual-9	1 to 1000 mg/kg

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	Calcium		IS 15121 - 2002 & AAS/ICP, AOAC 929.07 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
	Added Formaldehyde		IS 1479 (P-II) : 1961 (RA 2003) DGHS Lab Manual-1	Present/Absent
	Urea		IS 1479 (P- II) 1961 (RA 2003) DGHS Lab Manual-1	Present/Absent
	pH		IS 1479 (P-I) 1960 Amnd 4 DGHS Lab Manual-1	1 to 14
	Salt		IS 1479 (P-II) 1961 (RA 2003) DGHS Lab Manual-1	0.1% to 10%
	Water activity		RAL/CHE-FOOD/252	0.1 to 1
	Added Glucose		DGHS Lab Manual-1	Present/Absent
	Carbonates		DGHS Lab Manual-1	Present/Absent
	Sucrose content		DGHS Lab Manual-1, IS 1479 (P- II) 1961 (RA 2003)	0.5 % to 60%

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7.	Stimulant/ Nutritional Foods, Nutritional Health Drinks, nutritional powders, vitamin powders, Tea, tea premix Coffee, Coffee beans, Chocolates and Cocoa Beans, Cocoa products	Moisture/ total solids	IS 1164:1986 AMND 2, IS 1163:1992 AMND 2, IS 2791:1992 AMND 4, IS 3077:1992 AMTD.4, IS 13852:1994, IS 15342:2003 AMTD.1 AOAC 19 th Ed. 927.05, 931.04, DGHS Lab Manual-4, IS 2362:1993	0.01% to 40%
Ash		IS 1164:1986 AMND 2, IS 3633:2003, IS 13854:1994, IS 2791:1992 AMND 4, IS 3077:1992 AMTD.4, IS 15342:2003 AMTD.1 DGHS Lab Manual-4	0.01% to 40%	
Acid insoluble ash		IS 1164:1986 AMND 2, IS 1163:1992 AMND 2, IS 3077:1992 AMTD.4, IS 3633:2003, IS 15342:2003 AMTD.1, IS 13857:1993, DGHS Lab Manual-4	0.01% to 5%	
Crude Fiber		IS 1164:1986 AMND 2, IS 10226 (P-I) : 1982, IS 3633:2003, DGHS Lab Manual-4	2% to 30%	
pH		AOAC 19 th Ed. 970.21, DGHS Lab Manual-5	1 to 14	

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		Water extract	IS 13862:1999, IS 3633:2003, IS 3077:1992 AMTD.4, DGHS Lab Manual-4	0.1% to 50 %
		Water-soluble/ Water insoluble ash of Total ash	IS 13855:1993, IS 3633:2003 DGHS Lab Manual-4	0.01% to 98%
		Alkalinity of water-soluble ash (as K ₂ O ₂)	IS 13856:1993, IS 3633:2003, DGHS Lab Manual-4	0.01% to 5%
		Water activity	RAL/CHE-FOOD/252	0.1 to 1
		Sulphur dioxide	Pearson 9 th Ed, DGHS Lab Manual-4, AOAC 19th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg
		Solubility in hot water	DGHS Lab Manual-4 IS 2791:1992 AMND 4	To pass the test
		Solubility in cold water	IS 2791:1992 AMND 4	1 to 10 mins
		Caffeine content	IS 2791:1992 AMND 4 DGHS Lab Manual-4 IS 3077:1992 AMTD..4	1% to 5%
		Iron Particles	IS 3633:2003 DGHS Lab Manual-4	10 to 500 mg/kg
		Freedom from extraneous matter and impurities	IS 3077 : 1992 RA 1998 AMND 4, DGHS Lab Manual-4	Qualitative

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	Petroleum ether extract		IS 3077:1992 RA1998, AMND 4, DGHS Lab Manual-4	2% to 20%
	Cocoa Solids		AOAC 19th Ed. 2012 931.05, IS 1163:1992 AMND 2, DGHS Lab Manual-4	0.2% to 95%
	Milk solids		IS 1163:1992 AMND 2, DGHS Lab Manual-4	0.2% to 95%
	Milk Fat		IS 1224 (P-I) :1977 (RA 2003) (First Revision), IS 1163:1992 AMND 2, DGHS Lab Manual-1 AOAC 19 th Ed. 920.80 2012, IS 10484:1983 RA 2005 IS 2785:1979 RA 2000	0.1% to 50%
	Total fat/Cocoa butter		IS 1163:1992 AMND 2, AOAC 19 th Ed. 933.05, IS : 10484:1983 RA 2005, DGHS Lab Manual- 1,4	0.1% to 50%
	Protein/Milk Protein		IS 1479 (P-II) :1961 (RA 2003) AMND 1, AOAC 19th Ed. 2012 991.21 DGHS Lab Manual-1	0.5% to 80%
	Carbohydrate		IS 1656 : 2007 AMND 2 By calculation	0.5 to 80%
	Energy Value		RAL/CHE-FOOD/131	10 to 900 Kcal/100g

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		Acidity/Titratable acidity	IS 1479 (P-I) : 1960 AMND 4 (RA 2003), IS 2802:1964 RA2000 AMND 4, IS 1165:2002 AMTD.. 1, IS 4883:1980 RA 2005, DGHS Lab Manual-1,4	0.01 to 5%
		Sodium	IS 15121:2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Potassium	IS 15121:2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS 15121:2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Calcium	IS 15121:2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Physical parameters (damaged, sprouted, slightly damaged, defected, insect damaged, mouldy, flat, germinated, slatty, filth, rhodent hair excreta)	DGHS Lab Manual-3	0.1% to 100%

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8.	Pulses, Cereals, flours, cereal meals, starch and starch products, cereal & cakes	Moisture	IS : 1009:1979 AMND 2, GAFTA 2 :1-2003, IS 4333:2002 ((P-)-II), DGHS Lab Manual-3 IS 4684:1975 AMTD.2 IS 1155:1968 Amdt.3, IS 1010:1968 Amdt..3, IS 4706:1978 (P-II) IS 1485:1993 AMTD.1 IS 2404:1993	0.01% to 40%
		Ash	IS : 1009:1979 Amnd 2 GAFTA 12 :1-2003 DGHS Lab Manual-3 IS 4684:1975 Amdt.2 IS 1155:1968 Amdt..3 IS 1010:1968 Amdt..3 IS 4706:1978 (P-II) IS 1485:1993 Amdt.1 IS 2639:1999 Amdt.1	0.01% to 40%
		Acid insoluble ash	IS : 1009:1979 Amnd 2 GAFTA 13 :1-2003 DGHS Lab Manual-3 IS 4684:1975 Amdt.2 IS 1155:1968 Amdt.3 IS 1010:1968 Amdt.3 IS 4706:1978 (P-II) IS 1485:1993 Amdt..1 IS 2639:1999 Amdt.1	0.01% to 40%

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	Pulses, Cereals, flours, cereal meals, starch and starch products, cereal & cakes	Fat	AOAC 19 TH Edn. 920.85 DGHS Lab Manual-3 GAFTA 3 :0-2003 IS 4684:1975 AMTD.2	0.1% to 20%
		Protein	AOAC 19 th Edn. 920.87, GAFTA 4 :0-2003 IS 1485:1993 AMND 1 DGHS Lab Manual-3 IS 4684:1975 AMTD.2 IS 4706:1978 (P-II)	0.5% to 60%
		Carbohydrate	IS 1656:2007 AMND 2 By calculation	0.5% to 90%
		Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal / 100g
		Crude Fibre	GAFTA 10 :0-2003 DGHS Lab Manual-3 IS 4706:1978 (P-II) IS 4684:1975 AMTD.2	0.2% to 25%
		Gluten (dry and wet) content	IS 1009:1979 AMND 2, IS 1010:1968 Amtd.3 IS 1155:1968 Amtd.3 DGHS Lab Manual-3 IS 8162:1998	0.5% to 30%
		Acidity/Alcoholic acidity	IS 1009:1979 AMND 2 IS 1010:1968 Amtd.3 IS 1155:1968 Amtd.3 DGHS Lab Manual-3	0.01% to 5 %

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	Pulses, Cereals, flours, cereal meals, cereal & cakes	Sodium	IS 15121 : 2002 & AAS/ICP, AOAC 966.16 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Potassium	IS 15121 : 2002 & AAS/ICP, AOAC 929.05,929.06 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS 15121 : 2002 & AAS/ICP, AOAC 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Calcium	IS 15121 : 2002 & AAS/ICP, AOAC 929.07 19 th ED., DGHS Lab Manual-9	1 to 1000 mg/kg
		Granularity/Particle size	IS 1009 : 1979 AMND 2 IS 1155 : 1968 Amtd.3 DGHS Lab Manual-3	0.1% to 100%
		Acid value/acidity of extracted fat	IS 4684 : 1975 AMTD.2 DGHS Lab Manual-3	0.1% to 10%
		Uric Acid	IS : 4333 (P-5) 1970 DGHS Lab Manual-3	0.1 mg/kg to 5 mg/kg
		1000 Kernel Weight	IS 4333 (P-4) : 2002	0.1 g to 50 g
		Salt content as NaCl	DGHS Lab Manual-3	0.1% to 10%
	Ammonium Carbonate	DGHS Lab Manual-8	5 mg/kg to 500 mg/kg	

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		Synthetic Colour	DGHS Lab Manual-3	5 mg/kg to 500 mg/kg
		Shrivelled/ShrunkenBroken (2mm sieve)	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.01% to 5%
		Insect/Weevilled Damaged	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.01% to 15%
		Damaged and Discoloured	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.01% to 10%
		Foreign Matter/Admixture	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.01% to 10%
		Other Food/ Edible grains	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.01% to 10%
		Broken	IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	1% to 35%

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	Chalky		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	1% to 20%
	Red-Streaked Kernels		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.1% to 1%
	Pecks		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.1% to 1%
	Immature Kernels		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.1% to 1%
	Yellow kernels		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.1% to 5%
	Paddy		IS 4333:1996 (P-I), DGHS Lab Manual-3 IS 2813:1995 Amdt.1 IS 3579:1966 Amdt.1	0.1% to 1%
	Starch contents		IS 4706 (P-II) : 1978 RA 2005 DGHS Lab Manual-3	1% to 80%

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		Urease Activity	GAFTA 27 : 0 - 2003	0.04 to 10 mg/g
		Physical tests (Filth, damaged, discoloured, splits, ergots, argemone, live/dead insects, rhodent, hair & excreta contamination, insect fragments, Excreta, visible mould, total defects)	IS 4706 (P-I) : 1978 Amtd. 1 DGHS Lab Manual-3, IS 4333:1996 (P-I) IS 3579:1966 Amtd. 1 IS 2813:1995 Amtd. 1	0.1% to 100%
9.	Bakery & confectionary products, Sugar and sugar based confectionary products	Moisture/Total solids	IS : 12711:1989 Amnd 1 IS 6287:1985 Amnd 1 IS 1320:1988 Amtd.1 IS 1011:2002 Amtd. 1 IS 1483:1988 Amtd. 1 IS 5982:2002 Amtd. 2 IS 1168:1973 Amnd 2 IS 873:1973 Amtd. 3 IS 8555:1988 Amtd. 2 DGHS Lab Manual-3, 4	0.01% to 40%
		pH	AOAC 19 th Ed 945.42 2012, 943.02 IS 12711:1989, Amnd 1 IS 1483:1988 Amtd. 1 IS 873:1973 Amtd. 3	0.1 to 14
		Density g/ml	IS 1162:1958 Amnd 2 Pearson's 9 th Ed.	0.08 to 1.5

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	Ash		IS 12711:1989 Amnd 1 IS 6287:1985 Amnd 1 IS 1168:1973 Amnd.2 DGHS Lab Manual-3,4	0.1% to 40%
	Sulphated ash		IS 6287:1985 Amnd 1 DGHS Lab Manual-4	0.1% to 10%
	Acid Insoluble Ash		IS : 12711:1989 Amnd 1 IS 6287:1985 Amnd 1 IS 1483:1988 Amtd. 1 IS 1011:2002 Amtd. 1 DGHS Lab Manual-3,4	0.01% to 40%
	Fat		IS : 12711:1989 Amnd 1 IS 6287:1985 Amnd 1 AOAC 19 th Ed.2012 935.38, DGHS Lab Manual-3,4	0.05% to 60%
	Crude Fiber		IS 12711:1989 Amnd 1 IS 1483:1988 Amtd 1 DGHS Lab Manual-3,4	0.1% to 30%
	Acidity of extracted fat		IS 1011:2002 Amnd 1 DGHS Lab Manual-3 IS : 12711:1989 Amnd 1	0.1% to 3%
	Protein		AOAC-19 th Ed. 950.36 2012 IS 6287:1985 Amnd 1 DGHS Lab Manual-3,4	0.5% to 50%

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	Bakery & confectionary products Sugar and sugar based confectionary products	Starch	IS 4706:1978 (P-II) DGHS Lab Manual-3,4	0.1% to 80%
		Polarization value	IS 5975:2003 Amnd 2 DGHS Lab Manual-4, Pearson's 9 th Ed.	95% to 100%
		ICUMSA colour	RAL/CHE-FOOD/219 (International Colour Unit Method for Sugar Analysis, method no. 10), DGHS Lab Manual-4	1 to 250
		Brix	IS 13815:2010, DGHS Lab Manual-5, Pearson's 9 th Ed.	10 to 75
		Alcoholic acidity/Acidity	DGHS Lab Manual-3 IS 12711:1989 Amnd 1	0.1% to 5%
		Peroxide value	IS 548 (P-I) : 1964 Amtd. 5, DGHS Lab Manual-2	0.1 to 10 Meq/kg of extracted fat
		Carbohydrate	IS 1656:2007 Amnd 2 By calculation	0.5% to 80%
		Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g

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	Sugar/Sucrose		AOAC 19 th Ed.2012 923.09 IS 1168:1973 Amnd.2 IS 6287:1985 Amnd 1 IS 5982:2002 Amtd.2, IS 1011:2002 Amtd. 1	0.5% to 95%
	Reducing sugar		AOAC 19 th Edn. 2012 923.09 IS 1168:1973 Amnd.2 IS 6287:1985 Amnd. 1 IS 5982:2002 Amtd.2 IS 1011:2002 Amtd. 1	0.5% to 95%
	Water activity		RAL/CHE-FOOD/252	0.1 to 1
	Sulphur dioxide		Pearson 9 th Ed IS 6287:1985 Amnd 1 DGHS Lab Manual-4 IS 5982:2002 Amtd.2 AOAC 19 th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg
	Sodium		IS 15121:2002 & AAS/ICP AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
	Potassium		IS 15121:2002 & AAS/ICP AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
	Magnesium		IS 15121:2002 & AAS/ICP AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg

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		Calcium	IS 15121:2002 & AAS/ICP AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Salt content as NaCl	DGHS Lab Manual-3	0.1% to 10%
		Ammonium Carbonate	DGHS Lab Manual-8	5 mg/kg to 500 mg/kg
		Synthetic Colour	DGHS Lab Manual-3	5 mg/kg to 500 mg/kg
10.	Honey and honey based products	Specific Gravity	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4	0.1 to 5.0
		Moisture	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4	0.1 % to 40%
		Refractive Index	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4	1.3 to 1.9
		Reducing Sugar	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4 AOAC 19th Ed. 2012 920.183	0.5% to 80%
		Ash	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4	0.1 to 40%
		Acidity	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4	0.01 to 2%

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	Honey and honey based products	Sucrose	IS 4941:1994 RA 2002, Amnd 1, DGHS Lab Manual-4 AOAC 19th Ed. 2012 920.184	0.5% to 80%
		pH	DGHS Lab Manual-5	0.1 to 14
		Optical Density	IS 4941:1994 RA 2002, Amnd 1	0.001 to 1.999
		Brix	By Refractometer IS 4941:1994 RA 2002, Amnd 1	10% to 60%
		Freedom from foreign matters	IS 4941:1994 RA 2002, Amnd 1	Qualitative
		Colour	IS 4941:1994 RA 2002, Amnd 1	Qualitative
		Fiche's Test	IS 4941:1994 RA 2002, Amnd 1 DGHS Lab Manual-4	Qualitative
		Glucose Fructose Ratio	IS 4941:1994 RA 2002, Amnd 1 DGHS Lab Manual-4	0.5 to 2.0
		HMF test	IS 4941:1994 RA 2002, Amnd 1 DGHS Lab Manual-4	1 to 100 mg/kg
11.	Oils and Fats products, Oil cakes and oil meals and Soya lecithin, Soya granules, Soya TVP	Moisture	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.1% to 98%
		Refractive Index	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	1.40 to 2.00

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	Oils and Fats products, Oil cakes and oil meals and Soya lecithin, Soya granules, Soya TVP	Acid Value	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.1 to 200 mg of KOH/g of sam
		Free Fatty Acids	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.01% to 30%
		Saponification Value	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	50 to 300 mg of KOH/g of sam
		Unsaponifiable Matter	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.01% to 5%
		Iodine Value	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	1 to 50 g of 12/100 g of sam 51 to 300
		Peroxide Value	DGHS Lab Manual-2, Pearson's 9 th Ed., AOAC 19th Ed. 2012 965.33 IS 548 (P-I) 1964 Amnd 5	0.1 to 50 Meq/kg 51 to 300 Meq/kg
		Reichert Meissel Value	DGHS Lab Manual-2 AOAC 19th Ed. 2012 925.41 IS: 548 (P-I) 1964 Amnd 5	0.5 to 40
		Polenske Value	DGHS Lab Manual-2, AOAC 19th Ed. 2012 925.41, IS: 548 (P-I) 1964 Amnd 5	0.5 to 40
		Hydroxyl value	IS: 548 (P-I) 1964 Amnd 5	1 to 500 mg of KOH/g of sample

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	Oils and Fats products, Oil cakes and oil meals and Soya lecithin, Soya granules, Soya TVP	Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g
		Insoluble Matter/Insoluble impurities	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.01 to 5%
		Argemone Oil test	DGHS Lab Manual-2 IS: 548 (P-II) 1976 (RA 2006) Amnd 7	Present/Absent
		Rice bran oil	DGHS Lab Manual-2, IS: 548 (P-II) 1976 (RA 2006) Amnd 7	Positive/Negative at 10%
		Linseed oil	DGHS Lab Manual-2 , IS: 548 (P-II) 1976 (RA 2006) Amnd 7	Positive/Negative at 1%
		Cotton seed oil	IS 548 (P-II) 1976 Amnd 7	Positive/Negative at 0.1%
		Semi siccative oil	IS 548 (P-II) 1976 Amnd 7 DGHS Lab Manual-2	Positive/Negative at 0.1%
		Olive pomace oil	IS 548 (P-II) 1976 Amnd 7 DGHS Lab Manual-2	Positive/Negative at 0.1%
		Teaseed oil	IS 548 (P-II) 1976 Amnd 7 DGHS Lab Manual-2	Positive/Negative at 0.1%
		Sesame oil	IS 548 (P-II) 1976 Amnd 7 DGHS Lab Manual-2	Positive/Negative at 0.1%
	Caster oil	IS 548 (P-II) 1976 Amnd 7	Positive/Negative at 1%	

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		Hydrocyanic acid	DGHS Lab Manual-2	Positive/Negative at 0.1%
		Coal tar oil soluble colours	IS 548 (P-II) 1976 (RA 2006) AMND 7, DGHS Lab Manual-2	Positive/Negative at 10 mg/kg
		Specific Gravity	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0.9 to 1.5
		Mineral Oil	DGHS Lab Manual-2	Present/Absent
		Purity as acetone insoluble residue	IS 5055:1996 Amtd 1	0.1 to 100%
		Benzene insoluble matter	IS 5055:1996 Amtd 1	0.1 to 5%
		Cloud Point	IS: 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	0 to 50°C
		Allyl isothiocyanate	IS: 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	Absent/Present
12.	Alcoholic beverages	Total Acidity as Tartaric acid	AOAC 19 th Ed. 950.15 DGHS Lab Manual-5 IS 3752:2005 IS 7585:1995	5 to 200 g/100 ltr
		Volatile Acidity as acetic acid	IS 3752:2005, DGHS Lab Manual-5 AOAC 19 th 960.16	0.5 to 200 g/100 ltr

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	Alcoholic beverages	Ethyl alcohol-Actual alcoholic and total alcoholic strength	IS 7585:1995 IS 3752:2005 IS 5286:2005 Amd. 1 IS 4450:2005 Amd. 1 IS 5287:2005 Amd. 1	0.1 to 70%
		Residue on Evaporation	IS 3752:2005 IS 7585:1995 IS 4450:2005 Amd.1 IS 5286:2005 IS 4449:2205 Amd.1	0.1 to 10%
		Esters	IS 3752:2005 IS 4450:2005 AMD.1 IS 5286:2005 IS 5287:2005 Amd..1 IS 4449:2205 Amd..1	0.05% to 10%
		Higher alcohols	IS 3752:2005, IS 5286:2005 IS 4450:2005 AMD.1 IS 4449:2205 Amd..1 IS 5287:2005 Amd..1	0.05% to 10%
		Aldehydes	IS 3752:2005 IS 5286:2005 IS 4450:2005 AMD.1 IS 4449:2205 AMTD.1 IS 5287:2005 AMTD.1	0.01% to 10%

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		Methyl alcohol	IS 3752:2005 IS 5287:2005 AMTD.1 IS 4450:2005 AMD.1 IS 5286:2005 IS 4449:2205 AMTD.1	Positive/negative at 0.1%
		Sulphur dioxide	IS 7585:1995, Pearson 9 th Ed., AOAC 19 th Ed. 2012 990.28	1 to 2500 mg/kg
13.	Non-alcoholic beverages Carbonated and non-carbonated beverages	Total Acidity as Tartaric acid	AOAC 19 th Ed. 2012 950.15 DGHS Lab Manual-5 IS 3752:2005 IS 7585:1995	5 to 200 g/100 ltr
		Fat	DGHS Lab Manual-4	0.1% to 25%
		Protein	DGHS Lab Manual-4	0.1% to 50%
		Carbohydrate	IS 1656:2007 AMND 2 By calculation	0.5% to 60%
		Energy value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g
		Sugar	AOAC 19 th Edn 923.09 DGHS Lab Manual-4 IS 2346:1992 Amnd 3	0.1% to 25%
		Salt	AOAC-19 th Ed. 935.47 DGHS Lab Manual-5	0.1% to 15%

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	Non-alcoholic beverages Carbonated and non-carbonated beverages	Sodium	IS 15121 - 2002 & AAS/ICP, AOAC 966.16 19 TH ED., DGHS Lab Manual-9	1 to 100 mg/kg
		Potassium	IS 15121 - 2002 & AAS/ICP, AOAC 929.05,929.06 19 th ED. 2012, DGHS Lab Manual-9	1 to 100 mg/kg
		Magnesium	IS 15121 - 2002 & AAS/ICP, AOAC 19 th Ed., DGHS Lab Manual-9	1 to 100 mg/kg
		Calcium	IS 15121 - 2002 & AAS/ICP, AOAC 929.07 19 th Ed. 2012, DGHS Lab Manual-9	1 to 100 mg/kg
		Vitamin C	AOAC-19 th Ed. 2012 967.21, IS 5838:1970	2 mg/ 100gm to 1000 mg/100 gm
		Benzoic Acid	IS 12014 (P-I) :1986 RA 2002 AOAC 19 th Ed 2012 963.19	5 mg/kg to 2500 mg/kg
		Total soluble solids	IS 3752:2005 DGHS Lab Manual-5	0.1% to 45%
		pH	AOAC 19 th Ed 960.19 2012, DGHS Lab Manual-5 IS 7585:1995	1 to 14

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		Fixed acidity	IS 3752:2005	5 to 200 g/100 ltr
		Sulphur dioxide	IS 7585:1995, Pearson 9 th Ed., DGHS Lab Manual-8 AOAC 19th Ed. 2012 990.28	1 to 2500 mg/kg
		Water activity	RAL/CHE-FOOD/252	0.1 to 1
14.	Spices,Condiments, Herbs and herbal products Masala/ Curry Powders, Pickels, Chutneys, Sauces, Dressings	Moisture	IS 1797:1985 RA2001 Amnd 2 IS 1907:1984 R 2001 Amnd 2 IS 2322:2010 IS: 5453 ((P-2) 1996 AOAC 19THEdn.986.21 DGHS Lab Manual-11 IS 253:1985 AMTD. 1 IS 7224:2006 AMTD.2	0.01% to 40%
		Extraneous matter/refractions	DGHS Lab Manual-11 IS 1797:1985 RA 2001 Amnd 2	0.1% to 20%
		Ash	IS 1797:1985 Amnd 2 DGHS Lab Manual-11 IS 3500:1966 Amtd.1 IS: 5453 (P-2):1996	0.01% to 40%
		Acid insoluble ash/Acid insoluble matter	IS 1797:1985 RA 2001 Amnd 2 DGHS Lab Manual--11 IS: 5453 ((P-2) : 1996 IS 253:1985 AMTD. 1 IS 7224:2006 AMTD.2	0.01% to 40%

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	Spices,Condiments, Herbs and herbal products Masala/ Curry Powders, Pickels, Chutneys, Sauces, Dressings	Water soluble ash	IS 1797:1985 RA 2001 Amnd 2 IS 1908:2008 IS 7224:2006 AMTD.2	0.01% to 30%
		Water insoluble ash/water insoluble matter	IS 1797:1985 RA2001 Amnd 2 IS 1908:2008 IS 253:1985 AMTD. 1	0.01% to 30%
		Crude fibre	IS 1797:1985 RA2001 Amnd 2 DGHS Manual-11 IS: 5453 ((P-1) 1996 AMTD 1	0.1% to 60%
		Starch	RAL/CHE-FOOD/157 IS 3576:2010	0.1% to 80%
		Non volatile ether extract	IS 1797:1985 RA 2001 Amnd 2 DGHS Lab Manual-11	0.1% to 30%
		Alcohol soluble extract	IS 1797:1985 RA 2001 Amnd 2 DGHS Lab Manual-11	0.1% to 20%
		Cold water soluble extract	IS 1797:1985 RA 2001 Amnd 2 DGHS Lab Manual-11 IS 5453 (P-1) : 1996 AMTD 1	0.1% to 20%
		Salt/Sodium chloride content	IS 1797:1985 RA2001 Amnd 2, Peerson 9 th Ed., DGHS Lab Manual-11 IS 3501:1966 AMTD.1 IS 7224:2006 AMTD.2 IS 253:1985 AMTD. 1	0.05% to 20%

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		Protein/ Nitrogen	AOAC 19 th Ed.2012 920.173, 920.152 IS 5453 (P-1) 1996 AMTD 1	0.5% to 50%
		Carbohydrate	IS 1656:2007 AMND 2 By calculation	0.5 to 80%
		Peroxide Value	DGHS Lab Manual-2 Pearson's 9 th Ed.	0.1 to 10 mEq/kg of extracted fat
		Energy Value	RAL/CHE-FOOD/131	10 to 900 Kcal/100g
		Water activity	RAL/CHE-FOOD/252	0.1 to 1
		Sodium	IS 15121 - 2002 & AAS/ICP, AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Potassium	IS 15121 - 2002 & AAS/ICP, AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Magnesium	IS 15121 - 2002 & AAS/ICP, AOAC 19 th Ed., DGHS Lab Manual-9	1 to 1000 mg/kg
		Sulphur Dioxide	Pearson 9 th Ed, DGHS Lab Manual-4, AOAC 19th Ed. 2012 990.28	10 mg/kg to 2000 mg/kg

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	Spices, Condiments, Herbs and herbal products Masala/ Curry Powders, Pickels, Chutneys, Sauces, Dressings	Calcium as Calcium Oxide/Lime as CaO	DGHS Lab Manual-11 IS 1797:1985 RA 2001 Amnd 2, IS 7224:2006 AMTD.2 IS 253:1985 AMTD. 1	1 to 100 mg/kg 0.05% to 5%
		Vitatin C	AOAC-19 th Ed. 2012 967.21	2 mg/ 100gm to 1000 mg/100 gm
		Volatile oil	DGHS Lab Manual-11 IS 1797:1985 RA 2001 Amnd 2, AOAC 19 th Ed. 2012 962.17	1% to 90%
		Physical tests (Impurities, Filth, Tendrils, Khokar mother spices, Insect damaged spices Headless, damaged, broken, visible mould, discoloured, splits, spices, mould affected, live/dead insects, rhodent contamination, insect fragments, Excreta, Defective Rhizomes)	Visual/AOAC 19 th Ed. 2012 975.48, 960.51 DGHS Lab Manual-11 IS 2322:2010 IS 3576:2010	0.1% to 20%
		Capsaicin/ Scoville Heat Units/ Pungency	RAL/CHE-FOOD/179 AOAC 19 th Ed. 2012 995.03	1 to 1000000 SHU
		Colour value/ colour oleoresins	RAL/CHE-FOOD/179 AOAC 19 th ED. 2012 971.26	1 to 1000000 SHU
		Curcumin content	RAL/CHE-FOOD/267 IS 3576:2010	0.5% to 50%

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		Piperine content	AOAC 19th Ed. 2012987.07, DGHS Lab Manual-11	0.1 to 15%
		Acidity	IS 2860:1964 AMND 1 AOAC 19 th ED. 2012 935.57	0.1% to 30%
		Total solids	AOAC 19 th Ed.2012 920.151	0.5% to 100%
		Total soluble solids	IS 3500:1966 Amnd 1, IS 2860:1964 Amnd 1	0.1% to 100%
		pH	DGHS Lab Manual-5	1 to 14
		Benzoic Acid	IS 12014 (P-I) 1986 AOAC 19th Ed. 2012 963.19 IS 3501:1966 Amtd.1	5 mg/kg to 2500 mg/kg
		Drained weight	DGHS Lab Manual-5 IS 2860:1964 Amnd 1	0.1 to 20 Kg
		Presence of Lead chromate	IS 3576:2010, DGHS Lab Manual-11	Qualitative
		Added colouring matter	DGHS Lab Manual--8	5 mg/kg to 500 mg/kg Present/Absent
15.	Tobacco & Tobacco products	Moisture/ Loss on drying/Loss on heating	IS 5643:1999 Amnd 1	0.01% o 40%
		Total Ash	IS 5643:1999 Amnd 1	0.01% to 40%
		Acid Insoluble Ash	IS 5643:1999 Amnd 1	0.01% to 40%

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Tobacco & Tobacco products	Nicotine	IS 5643:1999 Amnd 1	0.1% to 15%
		Freedom from mould and weevilled	IS 5643:1999 Amnd 1	Qualitative
		Total nitrogen	IS 5643:1999 Amnd 1	0.1% to 15%
		Total chlorides	IS 5643:1999 Amnd 1	0.1% to 15%
16.	Flavours	Appearance	Visual Examination	Qualitative
		Refractive Index at 20 °C, 25 °C	IS 548 (P-I) 1964 Amnd 5 DGHS Lab Manual-2	1.3 to 1.9
		Specific Gravity at 20 deg C, 25 deg C	IS: 548:(P-) I:1964 Amnd 5 DGHS Lab Manual-2	0.5 to 1.4
		pH	DGHS Lab Manual-5	1 to 14
17.	Intermediates, Food colours	Moisture	IS 1699 : 1995 Amtd 1	0.01% to 40%
		Water insoluble matter	IS 1699 : 1995 Amtd 1	0.0% to 30%
		Total Dye content (Mixtures or total)	IS : 1697:1994, IS 1694:1994, IS 1695:1994, IS 2923:1995, IS 6406:1994, IS 2558:1994 amtd.1, IS 5346:1994 amtd.4, IS 1699:1995 amtd. 1, IS 1698:1994 amtd.1, IS 6022:1994	0.1% to 100%

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	Intermediates, Food colours	Chlorides	IS 1699 : 1995 Amdt 1	0.1% to 30%
		Sulfates	IS 1699 : 1995 Amdt 1	0.1% to 30%
		Combined Ether extracts/Ether extract	IS 1699 : 1995 Amdt 1	0.01% to 5%
18.	Additives-Antioxidants, Preservatives, Artificial sweetners (Ready to eat products, processed foods)	BHA, Butylated hydroxyanisole	AOAC 19 th Ed. 2012 965.28 Food additives direct Ch 47 (P-2) to (P-5) DGHS Lab Manual-8	10 to 1000 mg/kg
		BHT, Butylated hydroxytoluene	AOAC 19 th Ed. 2012 965.28 Food additives direct Ch 47 (P-2) to (P-5) DGHS Lab Manual-8	10 to 1000 mg/kg
		TBHQ	AOAC 19 th Ed. 2012 983.15 Food additives direct Ch 47 (P-2) to (P-5) DGHS Lab Manual-8	Absent/Present
		Propyl Gallate	AOAC 19 th Ed. 2012 952.09 Food additives direct Ch 47 (P-2) to (P-5) DGHS Lab Manual-8	10 to 1000 mg/kg
		NDGA, Nordihydroquaiaretic acid	DGHS Lab Manual-8	Present/Absent

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	Benzoic acid		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 910.02, 960.38	10 to 1000 mg/kg
	Sorbic acid		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 974.10 2012	10 to 1000 mg/kg
	P-Hydroxy Benzoic acid		DGHS Lab Manual-8	Present/Absent
	Nitrate as NO ₃		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 993.03 2012	10 to 1000 mg/kg
	Nitrite as NO ₂		DGHS Lab Manual-8 AOAC-19 th Ed.973.31 2012	10 to 1000 mg/kg
	Salicylic acid		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 975.30	Present/Absent
	Borates		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 970.33	Present/Absent
	Sacchrine		DGHS Lab Manual-8	Present/Absent
	Ducline		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 957.11 2012	Present/Absent
	Cyclamate		DGHS Lab Manual-8 AOAC 19 th Ed. 2012 957.09	Present/Absent
	Aspartame		DGHS Lab Manual-8	Present/Absent

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PESTICIDE RESIDUE

1.	Cereals, Pulses, Cotton Grains, seeds, Husks, Flours, nut & nut products	Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor, Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Fenitrothion, Fenthion, Fenthion sulphone and sulphoxide, Iprobenphos, Malathion, Malaoxan, 4-bromo-2-chloro Phenol, Methamidophos, Monocrotophos, Omethoate, Oxydemeton-methyl, Demeton-S-Methylsulfone, Parathion Ethyl, Parathio Methyl, Profenophos, Phorate, Phorate sulphone, phorate sulphoxide, Phosalone, Phosphamidon, Pirimiphos methyl, Quinalphos, Triazophos, Mevinphos	RAL/CHE-PR/1, Issue no. 4, Sept 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nicotinoids Acetamiprid, Imidacloprid, Thiachloprid, Thiamethoxam	RAL/CHE-PR/1 Issue no. 4, Sept 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Morpholine Dimethomorph		
		Strobilurin Trifloxystrobin, Pyraclostrobin, Kresoxim-Methyl Pendimethalin, Trifluralin		
		Miscellaneous group Buprofezin, Emamectin benzoate, Spinosad (Sum of Spinosad A & B), Azoxystrobin Propargite, Chloromequat Chloride, Flufenoxuron, Oxyfluorfen, Fenpyroximate, Flubendiamide, Forchlorfenuron, Isoprothiolane, Oxadiazon, Propargite, Pyriproxyfen, Spiromesifen, Imazalil, Propoxur, Vinclozolin, Malaoxane, Methyl paraoxane, 2,4 D, Metolachlor, 6-benzyl adenine, Tetraconazole, Isoproturon, Alachlor, Copper oxy chloride Fipronil, Fipronil Sulfone		

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Fruits and Vegetables Products	<p>Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Diclofluanid, Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor, Heptachlor Epoxide</p> <p>Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Etrimphos, Edifenphos, Fenchlorphos, Fenitrothion, Fenthion, Fenthion sulphone and sulphoxide, Glufosinate ammonium, MPP, Glyphosate, Iprobenphos, Malathion, Malaoxan, 4-bromo-2-chloro Phenol, Methamidophos, Monocrotophos, Omethoate, Oxydemeton-methyl, Demeton-S-Methylsulfone, Parathion Ethyl, Parathion Methyl, Paraxone methyl, Phenthoate, Profenophos, Phorate, Phorate sulphone,</p>	RAL/FFV-PR/ 3, 4, 6, 7, 10, 11, 13, 14 Issue no. 8, Jul 2014	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Phorate sulphoxide, Phosalone, Phosphamidon, Pirimiphos methyl, Propetamphos, Quinalphos, Temephos, Thiometon, Triazophos, Bifenthrin, Ethephon, Methidathion, Mevinphos	RAL/FFV-PR/ 3,4,6,7,10,11,13,14 Issue no. 8, Jul 2014	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Synthetic pyrethroids Allithrin, Bioallithrin, Cyfluthrin (all isomers), Lambda Cyhalothrin, Cypermethrin (all isomers), Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers), Ethofenprox Fenpropathrin, tau-fluvalinate, tau-fluvalinate-1, tau-fluvalinate 2, transfluthrin		
		Carbamates Carbaryl, Carbofuran, 3-hydroxy carbofuran, Carbosulphan, Dazomet, Fenobucarb, Indoxacarb, Thiodicarb Methomyl, Bendiocarb, Iprovalicarb, Benfuracarb, Benthocarb		
		Triazoles Bitertanol, Flusilazole, Hexaconazole, Myclobutanil, Penconazole, Paclobutrazole, Propiconazole, Tebuconazole,		

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Tridemefon, Triadimenol, Difenconazole, Carbendazim, Benomyl, Thiabendazole, Thiophenate Methyl	RAL/FFV-PR/ 3,4,6,7,10,11,13,14 Issue no. 8, Jul 2014	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Dithiocarbantes as CS2 (Ferbam, Maneb, Nabam, Mancozeb, Thiram, Zineb, Ziram, Propineb, Metiram)	IS 13832-1993 AOAC 19 th Ed. 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Triazines Atrazine, Simazine, flufenzin	RAL/FFV-PR/ 3,4,6,7,10,11,13,14 Issue no. 8, Jul 2014	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Acylamino Acid Fungicides Metalaxyl and metalaxyl-M, Benalxyl and Benalxyl-M, Mefenoxam, Oxycarboxin, Propani		
		Pthalimide Captafol, Captan		
		Imidazole Iprodion, Fenamidone, Famoxadone,		
		Nicotinoids Acetamiprid, Clothianidin, Imidacloprid, Thiacloprid, Thiamethoxam,		
		Dinitrophenol Dinocap and its isomer as methyl dinocap Cymoxanil, Dimethomorph, Buprofezin, Cartap Hydrochloride, Emamectin		

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		benzoate, Spinosad (Sum of Spinosad A & B), Abamectin, Avermectin B1a, Avermectin B1b and delta-8,9 isomer, Diafenthiuron, Tridemorph, Diuron, 3,4-Dichloroaniline	RAL/FFV-PR/ 3,4,6,7,10,11,13,14 Issue no. 8, Jul 2014	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Substituted Thiourea Iodosulphuron Methyl, Linuron, AMPA, NAG, Metam, Lufenuron, Pencycuron,		
		Strobilurin Azoxystrobin, Flufenoxuron, Oxyfluorfen, Fenpyroximate,		
		Miscellaneous pesticides Chlormequat Chloride, Propargite, Homobrassinolides, Diquat, Dithianon, Dodine, Diflubenzuron, Trifloxystrobin, Pyraclostrobin, Kresoxim-Methyl, cis - 1,2,3-6 Terahydrophthalimide, Pendimethalin, Trifluralin, Azadirachtin, Bifenazate, Fenazaquin, Flubendiamide, Forchlorfenuron, Gibberellic acid, Hexythiazox, Hydrogen cyanamide, Isoprothiolane, Mandipropamid, Mepiquat		

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		Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Fenitrothion, Fenthion, Malathion, Malaoxan, Monocrotophos, Omethoate, Oxydemeton-methyl, Parathion Ethyl, Parathion Methyl, Quinalphos, Triazophos	RAL/CHE-PR/1, RAL/CHE-PR/2 RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
		Synthetic pyrethroids Cyfluthrin-(all isomers), Lambda Cyhalothrin, Cypermethrin (all isomers), Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers) Ethofenprox		
		Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb,		
		Triazoles Flusilazole, Hexaconazole, Myclobutanil, Penconazole, Propiconazole, Tebuconazole, Difenconazole		
		Acylamino Acid Fungicides Metalaxyl and metalaxyl-M, Benalxyl and Benalxyl-M, Mefenoxam, Fenamidone,		

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		Thiacloprid, Thiamethoxam Miscellaneous pesticides Tridemefon, Triadimenol, Carbendazim, Fenpyroximate, Chloromequat Chloride, Trifloxystrobin, Pyraclostrobin, Kresoxim-Methyl, Tetraconazole, Isoproturon	RAL/CHE-PR/1, RAL/CHE-PR/2 RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
4..	Fish & Sea Foods Products, Meat, Poultry & Poultry Products	Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor, Heptachlor Epoxide, Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Etrimphos, Iprobenphos, Malathion, Malaoxan, Methamidophos, Monocrotophos, Omethoate, Parathion Ethyl, Parathion Methyl, Paraxone methyl,- Profenophos, Phorate,	RAL/CHE-PR/4 RAL/CHE-PR/5 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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		Phorate sulphone, phorate sulphoxide, Phosalone, Phosphamidon, Pirimiphos methyl, Quinalphos, Triazophos, Synthetic Pyrethroids Cyfluthrin (all isomers), Lambda Cyhalothrin, Cypermethrin, Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers), Ethofenprox Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb, Methomyl, Thiodicarb, Triazoles Bitertanol, Flusilazole, Hexaconazole, Myclobutanil Triazines Atrazine, Simazine, Acylamino Acid Fingicides Metalaxyl and metalaxyl-M, Bendiocarb, Benfuracarb, Fenamidone Strobilurin Azoxystrobin, Flufenoxuron, Miscellaneous pesticides Propargite Oxyfluorfen, Fenpyroximate, Chlormequat Chloride, Trifloxystrobin, Pyraclostrobin, Kresoxim-	RAL/CHE-PR/4 RAL/CHE-PR/5 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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		Methyl, Pendimethalin, Trifluralin, Isoprothiolane, Propargite, Pyriproxyfen, Spiromesifen, Malaoxane, Methyl paraoxane, 2,4 D, Butachlor, Carboxin, Isoproturon, Alachlor	RAL/CHE-PR/4 RAL/CHE-PR/5 Issue no. 4, Sep 2012	0.01 mg/kg 0.01 mg/kg to 10 mg/kg
5.	Honey and honey products	Organochlorine pesticides Chlorbenzilate Hexachlorobenzene pp-DDT, op-DDT, op-DDE, pp-DDE, op-DDD, pp-DDD alpha-HCH, beta-HCH, Lindane Vinclozoline Aldrin, Dieldrin, Chlordane Endosulphan, Heptachlor, Heptachlor epoxide Endrin Synthetic Pyrethoids Cyfluthrin Cypermethrin Deltamethrin Cyhalothrin Permethrin Fenvalerate Fluvalinate Cyhalothrin Pyrethrin	RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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		Organophosphorus pesticides Chinomethionat Bromopropylate Coumaphos Malathion Phosalone Carbofuran Propoxur Carbaryl Cymiazole Amitraz Methoxychlor	RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
6.	Milk & Dairy Products (Milk, cheese and Milk Powder)	Organochlorine pesticides Endosulphan, Chlordane, DDT (All isomers), Lindane, HCH (All isomers) Heptachlor, Methoxychlor Aldrin, Dieldrin Organophosphorus pesticides Dichlorovos, Ethion, Diazinon, Malathion Methyl Parathion, Phosalone	RAL/CHE-PR/2 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
7.	Non alcoholic beverages, Juices, Pulps	Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta	RAL/CHE-PR/2,8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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		HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor, Heptachlor Epoxide, Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Etrimphos, Iprobenphos, Malathion, Malaoxan, Methamidophos, Monocrotophos, Omethoate, Parathion Ethyl, Parathion Methyl, Paraxone methyl,- Profenophos, Phorate, Phorate sulphone, phorate sulphoxide, Phosalone, Phosphamidon, Pirimiphos methyl, Quinalphos, Triazophos Synthetic Pyrethoids Cyfluthrin (all isomers), Lambda Cyhalothrin, Cypermethrin, Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers), Ethofenprox Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb, Methomyl, Thiodicarb, Bitertanol, Flusilazole,	RAL/CHE-PR/2,8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hexaconazole, Myclobutanil Triazines Atrazine, Simazine, Acylamino Acid Fungicides Metalaxyl and metalaxyl-M, Bendiocarb, Benfuracarb, Fenamidone Azoxystrobin, Flufenoxuron, Miscellaneous pesticides Propargite Oxyfluorfen, Fenpyroximate, Chlormequat Chloride, Trifloxystrobin, Pyraclostrobin, Kresoxim- Methyl, Pendimethalin, Trifluralin, Isoprothiolane, Propargite, Pyriproxyfen, Spiromesifen, Malaoxane, Methyl paraoxane, 2,4 D, Butachlor, Carboxin, Isoproturon, Alachlor	RAL/CHE-PR/2,8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
8.	Herbs, Spices, Condiments & its products Tea, Coffee & Cocoa Products	Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor,	RAL/CHE-PR/1, RAL/CHE-PR/2 RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Fenitrothion, Fenthion, Malathion, Malaoxan, Monocrotophos, Omethoate, Oxydemeton-methyl, Parathion Ethyl, Parathion Methyl, Quinalphos, Triazophos, Synthetic Pyrethroids Cyfluthrin-(all isomers), Lambda Cyhalothrin, Cypermethrin (all isomers), Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers), Ethofenprox Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb, Triazoles Flusilazole, Hexaconazole, Myclobutanil, Penconazole, Tetraconazole Propiconazole, Tebuconazole, Acylamino Acid Fungicides Metalaxyl and metalaxyl-M, Benalxyl and Benalxyl-M, Mefenoxam, Fenamidone	RAL/CHE-PR/1, RAL/CHE-PR/2 RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Miscellaneous pesticides Tridemefon, Triadimenol, Difenconazole, Carbendazim, , Thiachloprid, Thiamethoxam Fenpyroximate, Chlormequat Chloride, Trifloxystrobin, Pyraclostrobin, Kresoxim-Methyl, , Isoproturon	RAL/CHE-PR/1, RAL/CHE-PR/2 RAL/CHE-PR/8 Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
9.	Cereals, pulses, spices, Dry fruits, Oilseeds, nut and nut products, Processed food items, Animal feed stuffs	Aflatoxins and Contaminants, Colourants B1 B2 G1 G2	LC/MS/MS (RAL/CHE-FOOD/2) Based on AOAC 985.17, 19 th Ed. 2012 HPLC FLD (RAL/CHE-FOOD/2A) Issue No.4, March 2013 Based on AOAC 991.31, 994.08, 19 th Ed. 2012	LOQ 0.5 µg/kg 0.5 µg/kg to 1 mg/kg
10.	Milk and Milk products	M1	LC/MS/MS (RAL/CHE-AFLA/2B) Issue 4, March 2013 based on AOAC 2000.08, 19th Ed. 2012	LOQ 0.05 µg/kg 0.05 µg/kg to 1 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
11.	Spices, and Condiments, pickles, ready to eat products and processed food items	Sudan I, II, III, IV Sudan Red, Para Red	LC/MS/MS (RAL/CHE-SPICES/1) Issue 5, Jan 2014 Based on Indian Pharmacopia	LOQ 10 µg/kg 10 µg/kg to 1 mg/kg
12.	Cereals, pulses, spices, Dry fruits, Seeds and seed products, nut and nut products, Animal feed stuffs	Ochratoxins	LC/MS/MS (RAL/CHE-AFLA/2) Based on AOAC 981.44, 2000.03, 19th Ed. 2012 Issue 4, March 2013	LOQ 0.5 µg/kg 0.5 µg/kg to 10 mg/kg
13.	Milk & dairy products, Cocoa based products	Melamine	LC/MS/MS (RAL/CHE-PR/11) Issue 3, Jan 2013 based on Agilent notes	LOQ 0.1 mg/kg 0.1 to 10 mg/kg
14.	Marine products, Fish and fishery products, Meat and meat products	Oxolinic acid	LC-MS-MS RAL/ANTIBIOTICS/6 Issue 4, Jan 2012 based on Agilent notes	LOQ 25 µg/kg 25 µg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
METALS AND HEAVY METALS				
1.	Cereals, Pulses, Grains, seeds, Husks Flours, oilseeds, nut & nut products, Dry fruits, Stimulant foods & Nutritional products, health supporting powders, whey powders, Spices & spices products, condiments, Honey and honey products	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/18 Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Lab Manual-9 AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg
		Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg
2.	Fruits and vegetables	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/17 (Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Manual-9) AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fruits and vegetables	Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A (Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012)	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg
3.	Ready to eat food items, Jams, Jellies, Pickles, Sauces & Concentrates, Bakery and bakery products, Sugar & sugar products, Snacks and Instant Mixes, Juices, Pulps	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	RAL/CHE-FOOD/19 (Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Manual-9) AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21 ICP-MS RAL/CHE-FOOD/215A (Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012)	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Milk and Dairy products, Egg and egg products	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/20 (Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Manual-9) AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg
		Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A (Issue no. 2, Feb 2013 based on AOAC 19 th Ed. 2012)	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg
5.	Fish & Sea Foods Products, Meat & Meat Products, Poultry & Poultry Products	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/22 Issue no. 6, Sept 2014 based on AOAC 19 th Ed. 2012 and DGHS Lab Manual-9) AAS, AOAC 19 th Ed. 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg
		Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A (Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012)	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
6.	Alcoholic and non alcoholic beverages, Juices, Pulps	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/22A Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Manual-9) AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg
		Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012)	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg
7.	Edible Oils & other oils, Soya lecithin, Soya TVP, Granules, Soil & sediments	Copper, Iron, Zinc, Lead, Mercury, Silver, Arsenic, Cadmium, Nickel, Chromium, Tin, Selenium, Antimony, Manganese	RAL/CHE-FOOD/21 Issue no. 4, Jan 2014 based on AOAC 19 th Ed. 2012 and DGHS Lab Manual-9 AAS, AOAC 19 th Ed. 2012 999.10, 999.11, 977.15, 963.21	LOQ 0.01 mg/kg 0.01 mg/kg to 50 mg/kg
		Copper, Iron, Zinc, Lead, Mercury, Arsenic, Cadmium, Barium, Nickel, Chromium, Tin, Selenium, Antimony, Silver, Manganese, Aluminium, Boron, Berillium, Bismuth, Cobalt, Gallium, Lithium, Strontium, tellurium, Thallium, Indium	ICP-MS RAL/CHE-FOOD/215A Issue no. 2, Feb 2013 based on AOAC 993.14, 19 th Ed. 2012	LOQ 0.005 mg/kg 0.005 mg/kg to 50 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
ANTIBIOTIC RESIDUE				
1.	Meat And Meat Products, Poultry And Poultry Products , Animal Feed Stuffs, Egg And Egg Products, Fish And Marine Products, Frozen Marine Products, Honey and honey products	<u>Nitrofurans & its Metabolites</u> AOZ, AMOZ, AHD, SEM Furazolidone, Furaltadone, Nitrofurazone, Nitrofuration	LC/MS/MS (RAL/CHE-ANTIBIO/1, 13) Issue no. 4, Jun 2012 & Issue no. 2, Jun 2014 Based on AOAC 19 th Ed. 2012	LOQ 0.5 µg/kg 0.5 µg/kg to 100 µg/kg
		Tetracyclins & its isomers Oxytetracylin & 4-epiisomer Tetracycline Hydrochloride & 4-epiisomer Doxycyclin Chlortetracyclin & 4-epiisomer Chloramphenicol	LC/MS/MS (RAL/CHE-ANTIBIO/5) Issue no. 4, Jun 2012 Based on AOAC 19 th Ed. 2012	LOQ 25 µg/kg 25 µg/kg to 1000 µg/kg
			LC/MS/MS (RAL/CHE-ANTIBIO/2) Issue no. 4, Jun 2012 Based on AOAC 19 th Ed. 2012	LOQ 0.22 µg/kg 0.22 µg/kg to 10 µg/kg
		Sulphonamides Sulfadiazine Sulfadimethoxine Sulfamerazine Sulfamethazine Sulfamethoxypyridazine sulphanilamide Sulfamethoxazole Sulfathiazol Sulfadimidine Sulfadoxine Sulfathiazole Trimethoprim	LC/MS/MS (RAL/CHE-ANTIBIO/3) Issue no. 4 Jun 2012 Based on AOAC 19 th Ed. 2012	LOQ 10 µg/kg 10 µg/kg to 1000 µg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Milk and milk powder	Nitrofurans & its Metabolites AOZ, AMOZ, AHD, SEM Furazolidone, Furaltadone, Nitrofurazone, Nitrofuration	LC/MS/MS (RAL/CHE-ANTIBIO/1, 13) Issue no. 4 Jun 2012 & Issue no. 2 Jun 2014	LOQ 0.5 µg/kg 0.5 µg/kg to 100 µg/kg
		Tetracyclins & its isomers Oxytetracylin & 4-epiisomer Tetracycline Hydrochloride & 4-epiisomer Doxycyclin Chlortetracyclin & 4-epiisomer	LC/MS/MS (RAL/CHE-ANTIBIO/14) Issue no. 2 Jun 2012	LOQ 25 µg/kg 25 µg/kg to 1000 µg/kg
		Chloramphenicol	LC/MS/MS (RAL/CHE-ANTIBIO/9) Issue no. 2 Jun 2012	LOQ 0.22 µg/kg 0.22 µg/kg to 10 µg/kg
		Sulphonamides Sulfadiazine Sulfadimethoxine Sulfamerazine Sulfamethazine Sulfamethoxypyridazine sulphanilamide Sulfamethoxazole Sulfathiazol Sulfadimidine Sulfadoxine Sulfathiazole Trimethoprim	LC/MS/MS (RAL/CHE-ANTIBIO/10) Issue no. 2 Jun 2012	LOQ 10 µg/kg 10 µg/kg to 1000 µg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nitroimidazoles Ronidazole Metronidazole	LC/MS/MS (RAL/CHE-ANTIBIO/17) Issue no. 2, Jun 2012	LOQ 1.0 µg/kg 1.0 ug/kg to 1000 µg/kg
		Macrolides Erythromycin Spiramycin Tilmicosin Tylosin Thiamphenicol	LC/MS/MS (RAL/CHE-ANTIBIO/16) Issue no. 2, Jun 2012	LOQ 10 µg/kg 10 to 1000 µg/kg LOQ 5 µg/kg 5 to 1000 µg/kg
		Amino Glycosides Dihydrostreptomycin Gentamycin Kanamycin Spectinomycin	LC/MS/MS (RAL/CHE-ANTIBIO/11) Issue no. 2 Jun 2012	LOQ 100 µg/kg 100 to 5000 µg/kg
		Anthelmintics Ivermectin Albendazole Fenbendazole	LC/MS/MS (RAL/CHE-ANTIBIO/12) Issue no. 2 Jun 2012	LOQ 1 µg/kg 1 to 1000 µg/kg
3.	Meat And Meat Products, Fresh Poultry And Poultry Meat Products, Egg And Egg Products, Fish And Other Marine Products, Frozen Marine Products	Dyes Leuco malachite green Malachite Green Allura Red	RAL/CHE-ANTIBIO/8 Issue no. 2 Jun 2012 Based on AOAC 19th Ed. 2012	LOQ 1 µg/kg 1 to 100 µg/kg LOQ 1 µg/kg 1 to 100 µg/kg LOQ 10 µg/kg 10 to 1000 µg/kg

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S.No.	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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	Crystal Violet		RAL/CHE-ANTIBIO/8 Issue no. 2 Jun 2012 Based on AOAC 19th Ed. 2012	LOQ 10 µg/kg 10 to 1000 µg/kg
	Histamine			LOQ 20 mg/kg 20 to 200 mg/kg

III. POLLUTION & ENVIRONMENT

1.	Soil, Sludge & sediments	Organochlorine pesticides Aldrin, Chlorothalonil, Chlordane, DDT & its isomers (o,p, p,p, isomers of DDT, DDE, DDD), Dicofol, Dieldrin, Endrin, Endosulphan, Lindane, BCH & its isomers (Alpha, Beta Delta HCH), Alpha Endosulphan, Beta Endosulphan, Endosulphan sulphate, Heptachlor, Organophosphorus pesticides Acephate, Azinphos-methyl, Chlorfenvinphos, Chlorpyriphos, Chlorpyriphos methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Fenitrothion, Fenthion, Malathion, Malaoxan, Monocrotophos, Omethoate, Oxydemeton-methyl, Parathion Ethyl, Parathion Methyl, Quinalphos, Triazophos, Synthetic Pyrethroids Cyfluthrin-(all isomers), Lambda Cyhalothrin,	RAL/CHE-PR/3, Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cypermethrin (all isomers), Deltamethrin, Fenvalerate (Sum of RR, SS, RS and SR isomers), Permethrin (all isomers), Ethofenprox Carbamates Carbaryl, Carbofuran, Indoxacarb, Iprovalicarb, Triazoles Flusilazole, Hexaconazole, Myclobutanil, Penconazole, Tetraconazole Propiconazole, Tebuconazole, Acylamino Acid Fungicides Metalaxyl and metalaxyl-M, Benalxyl and Benalxyl-M, Mefenoxam, Fenamidone Miscellaneous pesticides Tridemefon, Triadimenol, Difenconazole, Carbendazim, , Thiacloprid, Thiamethoxam Fenpyroximate, Chlormequat Chloride, Trifloxystrobin, Pyraclostrobin, Kresoxim- Methyl, , Isoproturon	RAL/CHE-PR/3, Issue no. 4, Sep 2012	LOQ 0.01 mg/kg 0.01 mg/kg to 10 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IV. PLASTICS AND RESINS				
1.	Container for Packing of Natural Mineral Water and Packaged Drinking Water (Cups, glasses, bottles & Jars)	Migration Test	IS 9845-1998 2 nd Rev.	0 to 100 mg/l 0 to 100 mg/dm ²
		Colour Migration	IS 9845-1998 2 nd Rev.	Visual
		Material	RAL/WI/19/01.5 (FTIR)	Qualitative
2.	Polyethylene Films For Natural Mineral Water & Packaged Drinking Water	Overall Migration	IS 9845-1998 2 nd Rev.	0 to 100 mg/l 0 to 100 mg/dm ²
		Colour Migration	IS 9845-1998 2 nd Rev.	Visual
		Material	RAL/WI/19/01.5 (FTIR)	Qualitative
3.	Caps, Aluminium foils, laminates of Packing materials	Overall Migration of constituents	IS:9845-1998 2 nd Rev.	0 to 100 mg/l 0 to 100 mg/dm ²
		Colour Migration	IS:9845:1998 2 nd Rev.	Visual
4.	Packing material for food and processed food items, laminates, foils	Overall Migration of constituents	IS:9845:1998 2 nd Rev.	0 to 100 mg/l 0 to 100 mg/dm ²
		Colour Migration	IS:9845:1998 2 nd Rev.	Visual

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	High Density Polyethylene Pipes for Water supply	Colour	IS:4984:1995, AMND 6 cl.4	Visual
		Carbon Black Content	IS 2530:1963, cl.10 & IS 7328 1992, Amnd 2 Annex B, IS 4984 Cl.No.8.6	0.1 to 5%
		Carbon Black Dispersion	IS 2530:1963	Visual
6.	Unplasticized PVC Pies for Potable Water Supplies	Effect on water Lead, Tin, Cadmium, Mercury, di-n-octyl-tin-s-s-bis iso octyl mercapto acetate, Butyl state	IS 12235:2004, (P-) 4,10,11	1 to 100 mg/l
		Sulphated Ash Content	IS 4985:2000 AMND 3 Annex B	0.1% to 20%
7.	Plastic Feeding bottles	Overall Migration of constituents	IS 9845-1998 2nd Rev.	0 to 100 mg/l 0 to 100 mg/dm ²
		Colour Migration	IS 9845-1998 2nd Rev	Visual
		Lead, Arsenic, Mercury, Cadmium, Zinc, Selenium, Barium, Chromium, Antimony,	IS 9833:1981, Amnd 1 AAS, AOAC 19 TH ED. 999.10, 999.11, 977.15	5 mg/l to 2000 mg/l

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V. ORES AND MINERALS				
1.	Iron Ore	Moisture	IS:1493 (P-1)-1981	1% to 10 %
		Ash	IS:1493 (P-1)-1981	1% to 10 %
		Volatile Matter	IS:1493 (P-1)-1981	1% to 10 %
		Iron Content, Ferric Oxide as Fe ₂ O ₃	IS:1493 (P-1)-1981	10% to 90%
		Silica as SiO ₂	IS:1493 (P-1)-1981	1% to 10 %
		Alumina as Al ₂ O ₃	IS:1493 (P-1)-1981	1% to 7%
		Phosphorus as P	IS:1493 (P-1)-1981	0.02% to 0.1%
		Sulphur as S	IS:1493 (P-1)-1981	0.005% to 0.05%
VI. COAL, COKE & OTHER SOLID FUEL				
1.	Coal, Coke	Total Moisture	IS:1350 (P-1) 1984 RA 2001 Amnd 1	5% to 50%
		Inherent Moisture	IS:1350 (P-1) 1984 RA 2001 Amnd 1	1% to 20%
		Ash content	IS:1350 (P-1) 1984 RA 2001 Amnd 1	5% to 50%

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	Coal, Coke	Volatile Matter	IS:1350 (P-1) 1984 RA 2001 Amnd 1	For coal 20% to 50% For Coke 0.05% to 5%
		Fixed Carbon	IS:1350 (P-1) 1984 RA 2001 Amnd 1	25 % to 90%
		Sulphur as S	IS:1350 (P-3) 1969 RA 2000	0.1% to 10.0%

VII. SOAPS, DETERGENTS AND TOILETRIES

1. Soaps Such as transparent soaps, bathing soap, liquid toilet soap and soap products	Total fatty matter	IS 286:1978 (RA 2008)	1 to 80%
	Rosin acid	IS 286:1978 (RA 2008)	1 to 9%
	Free Caustic alkalie	IS 286:1978 (RA 2008) IS 4199:2001 Annex A	0.05 to 0.2%
	Matter insoluble in alcohol	IS 286:1978 (RA 2008)	1 to 8%
	Free Carbonated Alkalie	IS 286:1978 (RA 2008)	0.5 to 2%
	Moisture and volatile matter	IS 286:1978 (RA 2008)	1 to 80%
	Matter insoluble in water	IS 286:1978 (RA 2008)	1 to 8%
	Chloride content	IS 286:1978 (RA 2008)	1 to 5%
	Unsaponified and unsaponifiable matter	IS 286:1978 (RA 2008)	0.1 to 1%
	Titre of fatty acid	IS 286:1978 (RA 2008)	30 °C to 45 °C

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2.	Detergents and detergent based products	Active matter	IS 4955:2001 (RA 2006)	1 to 80%
		Total alkalinity	IS 4955:2001 (RA 2006)	1 to 35%
		Sodium tripolyphosphate	IS 4955:2001 (RA 2006)	1 to 15%
		Total phosphates as P ₂ O ₅	IS 4955:2001 (RA 2006)	1 to 15%
VIII. COSMETICS & ESSENTIAL OILS				
1.	Shampoos Soap based & Detergent based	Description/ Physical Appearance	IS 7669:1990 AMD 3	Qualitative
		Total Fatty Matter	IS 286:1978 RA 2006	1 to 80%
		Matter Insoluble in alcohol	IS 286:1978 RA 2008	1 to 8%
		Free Caustic alkali (as KOH)	IS 286:1978 RA 2008	0.05 to 0.2%
		Physical Characteristics	IS 7884:2004 RA 2009	Qualitative
		Volatile matter	IS 7884:2004 RA 2009	1 to 95%
		pH at 27 °C	IS 7884:2004 RA 2009	1 to 14
		Inorganic salts	IS 7884:2004 RA 2009	1 to 10%
2.	Shaving Creams	Consistency	IS 9740:1981 Amnd 5 (RA 2001)	Qualitative
		Homogeneity	IS 9740:1981 Amnd 5 (RA 2001)	Qualitative

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	Shaving Creams	Stability	IS 9740:1981 Amnd 5 (RA 2001)	Qualitative
		Effect of container	IS 9740:1981 Amnd 5 (RA 2001)	Qualitative
		Total Fatty substance	IS 9740:1981 Amnd 5 (RA 2001)	1 to 80%
		Water Content	IS 9740:1981 Amnd 5 (RA 2001)	1 to 80%
		Lathering (foaming) power	IS 9740:1981 Amnd 5 (RA 2001)	0 to 250 ml
		Free Caustic alkali	IS 9740:1981 Amnd 5 (RA 2001)	To pass the test
3.	Lipstick	Description/ Physical Appearance	IS 9875:1990 (RA 2000) Amnd 5	Qualitative
		Softening point	IS 9875:1990 (RA 2000) Amnd 5	Ambient to 100 °C
		Rancidity as peroxide number	IS 9875:1990 (RA 2000) Amnd 5	1 to 50 Meq/kg
		Freedom from grittiness	IS 9875:1990 (RA 2000) Amnd 5	Qualitative

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4.	Talc	Description/Physical Appearance	IS 1462:1985 Amnd 4	Qualitative
		Fineness-Material retained on 150 micron, 90 micron IS sieve	IS 1462:1985 Amnd 4	0 to 10%
		pH	IS 1462:1985 Amnd 4	1 to 14
		Matter soluble in water	IS 1462:1985 Amnd 4	0.05 to 10%
		Magnesium	IS 1462:1985 Amnd 4	1 to 50%
		Bulk density	IS 1462:1985 Amnd 4	0.8 to 1.2 g/ml
		Loss on ignition	IS 1462:1985 Amnd 4	0.05 to 10%
		Carbonates	IS 1462:1985 Amnd 4	Qualitative
		Acid soluble iron	IS 1462:1985 Amnd 4	0.05 to 1%
		Water soluble iron salts	IS 1462:1985 Amnd 4	Qualitative
5.	Tooth-Paste	Acid soluble matter	IS 1462:1985 Amnd 4	0.05 to 10%
		Consistency	IS 6356:2001 (RA 2006)	Qualitative
		Homogeneity	IS 6356:2001 (RA 2006)	Qualitative
		Stability	IS 6356:2001 (RA 2006)	Qualitative
		Effect of container	IS 6356:2001 (RA 2006)	Qualitative

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	Tooth-Paste	Fineness	IS 6356:2001 (RA 2006)	0 to 10%
		pH	IS 6356:2001 (RA 2006)	1 to 14
		Hard and sharp-edged abrasive particles	IS 6356:2001 (RA 2006)	Absent
		Foaming powder	IS 6356:2001 (RA 2006)	0 to 250 ml
6.	Skin Cream	Description/ Physical Appearance	IS 6608:2004	Qualitative
		Thermal Stability	IS 6608:2004	Qualitative
		pH	IS 6608:2004	1 to 14
		Total fatty substance content	IS 6608:2004	1 to 80%
		Water content	IS 6608:2004	1 to 80%
7.	Hair Oils	Description/ Physical Appearance	IS 7123:1993 (RA 1998)Amnd 5	Qualitative
		Acid value	IS 7123:1993 (RA 1998) Amnd 5	0.1 to 5 mg of KOH/g
		Peroxide value	IS 7123:1993 (RA 1998) Amnd 5	0.1 to 10 Meq/kg

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IX. TEXTILE & TEXTILE AUXILIARIES

1.	Textiles & Garments	Identification (Nature) of fibre present in the textile	IS 667:1981 AATCC 20: 2011	Qualitative
		Blend Composition of different fibres present	IS 9889 -1988 (Silk & wool) IS 1889 -1979 ((P-) 4) Amendment 1 (Cotton+Viscose) IS 6503 -1988 - Amendment 1 and IS 2005 -1988 Amendment 1 & 2 (Nylon + Others) IS 2006 -1988 Amendment 1 & 2 (Wool + Others) IS 3416-1988 (P-I) Amendment 1 & 2 - (Polyester + Cotton) and (Polyester + Viscose) IS 3421-1988 - Amendment 1 (Acrylic + Others) - DMF method AATCC 20A: 2011 ISO 1833:2006/2007/2009	0.1% to 100 %
		Dimensional Stability (Relaxation Shrinkage)	IS: 2977-1989 - Amendment 1 (other than wool - woven & knitted) IS 665 -1989 (for fabrics containing wool) IS 10099:1982 ISO 7771:1985	(-) 50% to (+) 30%

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Textiles & Garments	pH of aqueous extract	IS: 1390-1983 AATCC 81:2006 ISO 3071:2005 EN 1413 : 1998	1 to 14
		Colour Fastness to Washing/ Laundering	IS/ISO 105 C 10:2006 AATCC 61:2010 ISO 105 C 10:2006 ISO 105 C 06:2010	Grade 1 to 5
		Colour Fastness to Rubbing/ Crocking	IS 766-1988 AATCC-8:2007 ISO 105 X 12:2001	Grade 1 to 5
		Colour Fastness to Water	IS 767-1988 AATCC- 107: 2009 ISO 105 E 01:2013	Grade 1 to 5
		Colour Fastness to Sea Water	IS 690-1988 AATCC-106: 2009 ISO 105 E 02:2013	Grade 1 to 5
		Colour Fastness to Chlorinated pool water	ISO 105 E 03:2010	Grade 1 to 5
		Colour Fastness to Perspiration	IS 971-1983 - Amendment 1 AATCC- 15:2009 ISO 105 E 04:2013	Grade 1 to 5

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	Textiles & Garments	Colour Fastness to Dry Cleaning	IS 4802-1988 AATCC- 132: 2009 ISO 105 D 01:2010	Grade 1 to 5
		Colour Fastness to bleaching - Hypochlorite	ISO 105 N 01:1993	Grade 1 to 5
		Colour Fastness to bleaching - Peroxide	ISO 105 N 02:1993 AATCC- 101:2009	Grade 1 to 5
		Colour Fastness to Organic Solvent	IS 688-1988 ISO 105 X 05:1994	Grade 1 to 5
		Colour Fastness to domestic and commercial laundering oxidative bleach response using a non phosphate reference detergent incorporating a low temperature leach activator	ISO 105 C 09: 2001 Amd-1:2003	Grade 1 to 5
		Colour Fastness to Phenolic Yellowing	ISO 105 X 18:2007	Grade 1 to 5
		Colour Fastness to artificial Light (Xenon Lamp)	IS 2454:1985 - Amendment 1 AATCC-16.3:2012 ISO 105 B 02:2013 (E)	Grade 1 to 5 BWS Rating 1 to 8
		Test for Water Repellency - Spray test	IS 390:1975 AATCC 22: 2010 ISO 4920:2012	Qualitative

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	Textiles & Garments	Dimensional Stability to machine Washing/ Laundering ISO method	ISO 6330:2012 ISO 5077:2007 ISO 3759:2011	(-) 50% to (+) 30%
		Dimensional Stability to machine Washing / Laundering AATCC method	AATCC 135: 2010 AATCC 150: 2010	(-) 50% to (+) 30%
		Absorbency of Textiles.	AATCC 79:2010	1 to 600 seconds
		Wettability	IS 2349:1963 - Amendment 1	1 to 600 seconds
		Water soluble matter	IS 3456:1966	0.1% to 30%
		Bow and Skew and Spirality	ASTM D 3882-08 AATCC 179:2010 ISO 16322-2-2005	(-)20% to (+)20%
		Moisture Content	IS 199:1989	0.1% to 50%
		Colour fastness to Saliva and Perspiration	DIN 53160:2010	Grade 1 to 5
		Formaldehyde	ISO 14184- 1-2011 ISO 14184- 2-2011 AATCC 112: 2008 BSEN ISO 14184- 1-2011 BESN ISO 14184- 2-2011	10 to 10,000 mg/kg
		Flammability	ASTM D 1230-2011 16 CFR 1610:2008	Flame spread time: 0 to 5 min

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METAL RESIDUE				
1.	Textiles & Garments and accessories	Total Lead Content in Surface Coating or paint	ASTM E 1645-01, ASTM E 1613-04	0.5 to 10000 mg/kg
		Determination of Extractable Heavy Metals - Antimony, Arsenic, Lead, Cadmium, Mercury, Copper Chromium, Cobalt, Nickel, Zinc	EN-71 (P-3) 2013	0.5 to 10000 mg/kg
		Determination of Soluble Heavy Metals Antimony, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium	ASTM F963-11 (4.3.5 & 8.3)	0.5 to 10000 mg/kg
		Determination of Migration of Heavy Metals Antimony, Arsenic, Barium, Cadmium Chromium, Lead, Mercury, Selenium	EN 71 (P-3) : 2013	0.5 to 10000 mg/kg
2.	Textiles & Garments and metal and plastic accessories	Cadmium content	EN 1122:2001,	0.5 to 10000 mg/kg
3.	Metallic accessories of Textiles & Garments	Nickel Release	BS EN 1811:2011	0.5 to 10000 ug/cm ² /week

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4.	Textiles & Garments	Determination of Chlorophenols Pentachlorophenol (PCP) Tetrachlorophenol (TeCP) Orthophenylphenol (OPP) Trichlorophenol (TCP) 2,3,5,6-tetrachlorophenol NP (Nonylphenol) OP (Octylphenol) Bisphenol	RALPL/ANA-Textile/08-2012 (Based on DIN 53313)	0.1 to 1000 mg/kg
5.	Textiles & Garments and accessories	Determination of Phthalates) Di-iso-nonylphthalate (DINP)) Di-n-octylphthalate (DNOP)) Di-isobutyl phthalate (DIBP)) Di(2-ethylhexyl)-phthalate(DEHP)) Di-iso-decylphthalate(DIDP)) Butylbenzylphthalate(BBP)) Dibutylphthalate(DBP)	RALPL/ANA-Textile/02-2012 (Based on CPSC CH C1001-09.3, 2010)	1 to 10000 mg/kg
6.	Textiles & Garments and Dyes	Determination of certain aromatic amines derived from Azo Colorants: 1) 4-Aminobiphenyl 2) Benzidine 3) 4-Chloro-O-Toluidine 4) 2-Naphthylamine 5) O-Aminobenzene 6) 5-Nitro-o-toluidine. 7) 4-Chloroaniline 8) 2,4 – Diaminoanisole. 9)4,4'Diaminodiphenyl methane.	RALPL/ANA-Textile/05-2012 (Based on BS EN 14362-1:2012 BS EN 14362 – 1 : 2003, ISO 17234-1 (2010) ISO 17234-2 (2011) LFGB 82.02 (P-)S 2,4)	5 to 1000 mg/kg

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		10) 3,3 Dichlorobenzidine 11) 3,3 Dimethoxybenzidine 12) 3,3 Dimethylbenzidine 13) 3,3 Dimethyl-4,4' Diaminodiphenylmethane. 14) p-Cresidine. 15) 4,4' Methylene -bis- (2 Chloroaniline) 16) 4,4' Oxydianiline 17) 4,4' Thiodianiline 18) 0-Toluidine 19) 2,4 – Toluyldiamine. 20) 2,4,5 Trimethylaniline. 21) 0-Anisidine 22) 4-Aminoazobenzene. 23) 2,4 Xylidine. 24) 2,6 Xylidine.	RALPL/ANA-Textile/05-2012 (Based on BS EN 14362-1:2012 BS EN 14362 – 1 : 2003, ISO 17234-1 (2010) ISO 17234-2 (2011) LFGB 82.02 (P-)S 2,4)	5 to 1000 mg/kg
7.	Textiles & Garments and Coloured accessories	Detection of Allergenic Disperse Dyestuff in textiles 1) Disperse Blue-1 2) Disperse Blue-3 3) Disperse Blue-7 4) Disperse Blue-26 5) Disperse Blue -35 6) Disperse Blue-102 7) Disperse Blue-106 8) Disperse Blue-124 9) Violet 1 9) Disperse Orange-1 10) Disperse Orange-3	RALPL/ANA-Textile/ 06 -2012 (Based on DIN 54231)	5 to 1000 mg/kg

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		11) Disperse Orange-37 / 76 12) Disperse Brown-1 13) Disperse Red-1 14) Disperse Red -11 15) Disperse Red-17 16) Disperse Yellow-1 17) Disperse Yellow-3 18) Disperse Yellow-9 19) Disperse Yellow 23 20) Disperse Yellow-39 21) Disperse Yellow-49 22) Orange 149	RALPL/ANA-Textile/ 06 -2012 (Based on DIN 54231)	5 to 1000 mg/kg
8.	Textiles & Garments and Textile auxiliaries	Polycyclic Aromatic Hydrocarbons (PAH) 1. Naphthalene 2. Acenaphthylene 3. Acenaphthene 4. Fluorene 5. Phenanthrene 6. Anthracene 7. Fluoranthene 8. Pyrene 9. Benzo[a]anthracene 10. Chrysene 11. Benzo[a]pyrene 12. Benzo[e]pyrene 13. Indeno[1,2,3-cd]pyrene 14. Dibenzo(a,h)anthracene 15. Benzo[g,h,i]perylene 16. Benzo[b]fluoranthene 17. Benzo[j]fluoranthene	RALPL/ANA-Textile/01-2012 (Based on ISO 18287 : 2006)	0.1 to 1000 mg/kg

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		18.Benzo[k]fluoranthene 19.Pyrene D10 20.Benzo[a]pyrene D12		
9.	Textiles & Garments	PESTICIDES RESIDUE 2,3,5,6-tetrachlorophenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) 2,4-Dichlorophenoxyacetic acid (2,4-D) Acetameprid Aldrin Atrazine Azinphos Azinphos-methyl Alpha- and beta-Endosulfan Beta-Endosulfan Bifenthrin Bendiocarb Bioresmethrin Bromophos-ethyl Buprofezin Captafol Carbaryl Carbosulfan Clethodim Chlordane Chlordimeform, Chlordimeform free base	RALPL/ANA-Textile/07-2012 (LC-MS-MS/GC-MS-MS METHOD)	0.1 to 1000 mg/kg

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	Textiles & Garments	Chlordimeform HCl Chlorpyrifos-ethyl Chlorpyrifos Chlorpyrifos-methyl Chlorfenapyr Chlorfenvinphos Chlorfluazuron Coumaphos Cyfluthrin Cyhalothrin lambda-Cyhalothrin Cypermethrin DDD (op- and pp-) 2,4'-DDD 4,4'-DDD DDE (op- and pp-) 2,4'-DDE 4,4'-DDE DDT, o,p DDT, p,p- 2,4'-DDT 4,4'-DDT DEF/ 2,4 Dichlorodiphenyldichloroethane Deltamethrin Diafenthiuron Diazinon	RALPL/ANA-Textile/07-2012 (LC-MS-MS/GC-MS-MS METHOD)	0.1 to 1000 mg/kg

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	Textiles & Garments	Dichlofenthion Dicrotophos Dichlorprop Dichlorvos Dieldrin Diflubenzuron Dimethoate Dinoseb and salts Diuron Endosulfan sulfate Empenthrin Endrin Esfenvalerate Ethion Fenchlorphos Fenitrothion Fenthion Fenpropathrin Fenvalerate Fipronil Flumethrin Heptachlor Heptachlor epoxide Hexachlorobenzen (HCB) Hexachlorocyclohexane – a- Lindane	RALPL/ANA-Textile/07-2012 (LC-MS-MS/GC-MS-MS METHOD)	0.1 to 1000 mg/kg

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	Textiles & Garments	Imidacloprid Lindane Lufenuron Malathion MCPA MCPB Mecoprop Metolachlor Methomyl Mevinphos Methamidophos Methoxychlor Mirex Monocrotophos Parathion-ethyl Parathion-methyl Pendimethalin PCP/ Pentachlorophenol Permethrin Perthane Phosmet Phoxim / Baythion Pirimiphos-ethyl Pirimiphos-methyl Profenophos Prometryn	RALPL/ANA-Textile/07-2012 (LC-MS-MS/GC-MS-MS METHOD)	0.1 to 1000 mg/kg

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Textiles & Garments	Pymetrozine Propetamphos Pyrethrum Quinalphos Quintozine Teflubenzuron Thiamethoxam Tetrachlorvinphos Toxaphene Telodrin Strobane Transfluthrin Trifluralin Triflumuron Thiodicarb Thidiazuron Tolclofos-methyl Trifloxysulfuron-sodium	RALPL/ANA-Textile/07-2012 (LC-MS-MS/GC-MS-MS METHOD)	0.1 to 1000 mg/kg
		Determination of Chlorinated Organic Carriers		
		1. 2-Chlorotoluene 2. 3-Chlorotoluene 3. 4-Chlorotoluene 4. 2,3-Dichlorotoluene 5. 2,4-Dichlorotoluene 6. 2,5-Dichlorotoluene 7. 2,6-Dichlorotoluene 8. 3,4-Dichlorotoluene 9. 2,3,6-Trichlorotoluene 10. 2,4,5-Trichlorotoluene	RALPL/ANA-Textile/04-2012 (Based on DIN 54232)	0.5 to 500 mg/kg

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Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.09.2014
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection		
	Textiles & Garments	11. Pentachlorotoluene	RALPL/ANA-Textile/04-2012 (Based on DIN 54232)	0.5 to 500 mg/kg		
		12. 1,2-Dichlorobenzene				
		13. 1,3-Dichlorobenzene				
		14. 1,4-Dichlorobenzene				
		15. 1,2,3-Trichlorobenzene				
		16. 1,2,4-Trichlorobenzene				
		17. 1,3,5-Trichlorobenzene				
		18. 1,2,3,4-Tetrachlorobenzene				
		19. 1,2,3,5-Tetrachlorobenzene				
		20. 1,2,4,5-Tetrachlorobenzene				
		21. Pentachlorobenzene				
		22. Hexachlorobenzene				
		Detection of Carcinogenic Disperse Dyestuff in textiles				
		Acid Red 26			RALPL/ANA-Textile/06-2012 (Based on DIN 54231)	5 to 1000 mg/kg
		Direct Black 38				
		Direct Red 28				
		Direct Brown 95				
		Acid Violet 49				
		Disperse Blue 1				
		Disperse Yellow 3				
		Solvent Yellow 2				
		Solvent Yellow 3				
	Basic Red 9					
	Basic Violet 14 HCL					
	Disperse orange 11					

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
X.	TOYS			
1.	Safety requirements for toys	<u>Migration of elements</u>		
		Antimony	IS 9873 (P-3) : 1999, Amnd 3	1 to 60 mg/kg
		Arsenic	IS 9873 (P-3) : 1999, Amnd 3	1 to 25 mg/kg
		Barium	IS 9873 (P-3) : 1999, Amnd 3	1 to 1000 mg/kg
		Cadmium	IS 9873 (P-3) : 1999, Amnd 3	1 to 75 mg/kg
		Chromium	IS 9873 (P-3) : 1999, Amnd 3	1 to 60 mg/kg
		Lead	IS 9873 (P-3) : 1999, Amnd 3	1 to 90 mg/kg
		Mercury	IS 9873 (P-3) : 1999, Amnd 3	1 to 60 mg/kg
		Selenium	IS 9873 (P-3) : 1999, Amnd 3	1 to 500 mg/kg
		Bis-(2-ethyl hexyl) Phthalate (DEHP)	IS 9873 (P-3) : 1999, Amnd 3	0.5 to 1000 mg/kg
		Dibutyl Phthalate (DBP)	IS 9873 (P-3) : 1999, Amnd 3	0.5 to 1000 mg/kg
		Benzyl Butyl Phthalate (BBP)	IS 9873 (P-3) : 1999, Amnd 3	0.5 to 1000 mg/kg
		Di-n-Octyl Phthalate (DNOP)	IS 9873 (P-3) : 1999, Amnd 3	0.5 to 1000 mg/kg
		Di-isononyl Phthalate (DINP)	IS 9873 (P-3) : 1999, Amnd 3	2 to 1000 mg/kg

-X-X-X-X-X-X-X-X-X-X-X-X-

NOTE: The Laboratory has demonstrated competence for the stated scope for **WATER**. This however **does not fully cover** the specification requirements of **BIS for the Packaged Drinking Water as per IS:14543 and the Packaged Natural Mineral Water IS:13428**.