Laboratory	**Analytical & Environmental Services, 350, GIDC Makarpura, Samir Tech Chem Compound, Vadodara, Gujarat**	
Accreditation Standard	**ISO/IEC 17025: 2005**	
Certificate Number	**TC-6169**	**Page 1 of 34**
Validity	**03.02.2018 to 02.02.2020**	**Last Amended on 20.02.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		BIOLOGICAL TESTING		
I.	**FOOD & AGRICULTURAL PRODUCTS**			
1.	**Milk & Dairy Product**	Total Bacterial Count	IS 5402: 2012	≥1cfu/ml or ≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥1cfu/ml or ≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥1cfu/ml or ≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml
2.	**Fruits & Fruit Products (Juices, Pulp, Salad, Fruit Chutney, Pickles, Vinegar, Fruit Cereal Flakes, Jams, Jellies)**	Total Bacterial Count	IS 5402: 2012	≥ 1cfu/ml or ≥10cfu/gm
		Yeast & Mould count	IS 5403: 1999	≥1cfu/ml or ≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥1cfu/ml or ≥ 10 cfu/gm
		E Coli(Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella (Detection)	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus ((Detection)	IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml
3.	**Herbs, Spices & Condiments (Whole, Ground &**	Total Bacterial Count	IS 5402: 2012	≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥ 10 cfu/gm

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Mixed spices) Chilly, Turmeric, Coriander, Cumin, Ajwain, Fennel, Mustard, Pepper, Ginger, Dehydrated Onion, Dehydrated Garlic, Curry Powder, Mix Masala, Chana Puri Masala, Pav Bhaji Masala, Cardomom,cinnamon, cassia, clove, fenugreek)	E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml
4.	**Bakery & Confectionary Products (Bakery products, Cookies, Biscuits, Pastries)**	Total Bacterial Count	IS 5402: 2012	≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA-2005)	Qualitative (Present/Absent) in 1 gm/ml
5.	**Snacks & Instant Mixes (Namkeen, Ready to eat food, Snacks, Sweets)**	Total Bacterial Count	IS 5402: 2012	≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA-2005)	Qualitative (Present/Absent) in 1 gm/ml
6.	**Tea & Tea Products**	Total Bacterial Count	IS 5402: 2012	≥1cfu/ml or ≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥1cfu/ml or ≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥1cfu/ml or ≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml
7.	**Beverages (Alcoholic / Non-Alcoholic) (Ready to serve fruit beverages, carbonated beverages)**	Total Bacterial Count	IS 5402: 2012	≥1cfu/ml or ≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥1cfu/ml or ≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥1cfu/ml or ≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml
8.	**Oil seeds and By products**	Total Bacterial Count	IS 5402: 2012	≥1cfu/ml or ≥ 10 cfu/gm
		Yeast & Mould Count	IS 5403: 1999 (RA 2005)	≥1cfu/ml or ≥ 10 cfu/gm
		Coliform Count	IS 5401 (Part 1): 2002	≥1cfu/ml or ≥ 10 cfu/gm
		E coli (Detection)	IS 5887 (Part 1): 1976	Qualitative

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(RA 2005)	(Present/Absent) in 1 gm/ml
		Salmonella	IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	IS 5887 (Part 2): 1976 (RA-2005)	Qualitative (Present/Absent) in 1 gm/ml
II.	**WATER**			
1.	**Drinking water**	Coliform (By MPN)	IS 1622: 1981 (RA 2003)	≥ 2 MPN< 1600 MPN / 100 ml
		E-Coli (By MPN)	IS 1622: 1981 (RA 2003)	≥ 2 MPN < 1600 MPN / 100 ml
2.	**Packaged Drinking Water / Packaged Natural Mineral Water**	Escherichia coli	IS 15185: 2002	Qualitative (Present or Absent)/ 250 ml
		Coliform bacteria	IS 15185: 2002	Qualitative (Present or Absent)/ 250 ml
		Aerobic microbial count	IS 5402: 2012	≥ 1 cfu / ml(at 20°C to 22°C for 72 hrs and at 37°C for 24 hrs)
		Yeast & Mould	IS 5403: 1999 / IS 15188: 2002	Qualitative (Present or Absent)/ 250 ml
		Salmonella	IS 15187: 2002	Qualitative (Present or Absent)/ 250 ml
		Staphylococcus aureus	IS 5887 (Part 2): 2000 /1976 IS 15188: 2002	Qualitative (Present or Absent)/ 250 ml

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
III.	**ENVIRONMENT AND POLLUTION**			
1.	**Bio Burden Estimation of Classified and Non Classified area Hygiene Swab (Sterile Cotton Swab)**	Total Bacterial Count	APHA Compendium chapter 3-5:2015 / IS 5402: 2012	≥10cfu/25/50/100 cm^2/Swab
		Yeast & Mould Count	APHA Compendium chapter 3-5:2015 / IS 5403: 1999 (RA 2005)	≥10cfu/25/50/100 cm^2/Swab
		Coliform Count	APHA Compendium chapter 3-5:2015 / IS 5401 (Part 1): 2002	≥10cfu/25/50/100 cm^2/Swab
		E coli (Detection)	APHA Compendium chapter 3-5:2015 / IS 5887 (Part 1): 1976 (RA 2005)	Qualitative (Present/Absent) in 1 gm/ml
		Salmonella	APHA Compendium chapter 3-5:2015/ IS 5887 (Part 3): 1999 (RA2005) / ISO 6579 :2002	Qualitative (Present/Absent) in 25 gm/ ml
		S.aureus (Detection)	APHA Compendium chapter 3-5 :2015/ IS 5887 (Part 2): 1976 (RA- 2005)	Qualitative (Present/Absent) in 1 gm/ml

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.**

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

CHEMICAL TESTING

I.	**FOOD & AGRICULTURAL PRODUCTS**			
1.	**Food Grains & Pulses Whole / Split/ Husked/ unhusked, Flours (Fortified /Paushtik Atta) Food grains & Milled food grain (Wheat, Maize, Jawar, Bazra, Rice, Masur, Urd, Moong, Chana, oats, Jau, Raggi, soaybean, defatedsoyaben)\ Husk and Unhusk Split pulses (Arhar ,Moong, Urd, Chanadal & Masur) Maida, Suji/Rawa, Besan & Cornflour**	Rodent Hair & Excreta (Food Grains, Pulses & flours)	Method No 1.5.1of Cereal and Cereal Product of FSSAI Manual of Method 2016) (Page 4)	Qualitative (Present/Absent)
		Insect Infestation (Whole grains & pulses)	Method No 1.4 of Cereal and Cereal Product of FSSAI Manual of Method 2016) (Page 3)	Qualitative (Present/Absent)
		Whole Insects, dead (Food Grains, Pulses & flours)	Method No 1.4of Cereal and Cereal Product of FSSAI Manual of Method 2016) (Page 3)	Qualitative (Present/Absent)
		Moisture (Food Grains & Pulses)	Cl. 7 of IS 4333(P-II):2012 (Page 2), Method No 2.0 of Cereal and Cereal Product of FSSAI Manual of Method 2016) (Page 8)	1.0% to 35%
		Foreign matter / Extraneous matter (Food Grains & Pulses)	Cl. 6.2 of IS 4333(P-I):1996, RA 2012 (Page 2), Method No 1.2, FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 2)	0.1% to 20%
		Damaged Grains (Food Grains & Pulses)	Cl. 6.3 of IS 4333 (P-I):1996, RA 2012 (Page2), Method No 1.1 & 1.4, FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal	0.1% to 20%

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Product 2016) (Page 1,4)	
		Weeviled Grains (Food Grains & Pulses)	Cl. 6.3 of IS 4333(P-I):1996: 2012 (Page 2), Method No 1.1 & 1.4, FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 1,4)	0.1% to 20%(by count)
		Other edible grains (Food Grains & Pulses)	Cl 6.3 of IS 4333(P-I):1996: 2012 (Page 2), Method No 1.2 of FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 2)	0.1% to 20%(by count)
		Uric acid (Food Grains, Pulses & flours)	Cl. 5 of IS:4333(Part-V):1970- RA 2010 (Page 5), Method No 3 (Benedict's Uric acid method) FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 9)	5 mg/kg to 100 mg/kg
		Moisture (flours)	Appendix A of IS:1155:1968 RA :2005 (Page 7), Method No 8.1 of FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 13)	0.5% to 20%(by wt)
		Total Ash (flours)	Appendix B of IS:1155:1968 RA : 2005 (Page 8), Method No 8.2 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product	0.05% to 15% (by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			2016) (Page 14)	
		Ash insoluble in HCL (flours)	Appendix C of IS:1155:1968 RA 2005 (Page 8), Method No 8.3 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 16)	0.005% to 0.5%
		Alcoholic Acidity (flours)	Appendix F of IS:1155:1968 RA : 2005 (Page 11), Method No 8.5 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 18)	0.05% to 0.5%(by wt)
		Protein (Food Grains & Pulses & flours)	Cl. 8 of IS:7219:1973 RA : 2005 (Page 6), Method No 8.7 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) (Page 25)	1% to 40%(by wt)
		Gluten (flours)	Appendix B of IS 1009:1979 RA 2010 (Page 10), Method No 8.4 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product 2016) Page 17)	2% to 20%(by wt)
		Crude Fiber (flours)	Appendix E of IS:1155:1968 RA :2005 (Page 10), Method No 8.8 FSSAI Manual of Methods of Analysis of Foods of Cereal and Cereal Product	1% to 20%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			2016) (Page 23)	
		Iron (as Fe) (flours)	ICMR67B,3.4- 1990, Method No 7.5 FSSAI Manual of Methods of Analysis of Foods of Metals 2016) 2016) (Page 51)	5 mg/kg to 100 mg/kg
		Added Coloring matter (Food Grains & Pulses & flours)	Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	Qualitative (Present/Absent)
2.	**Fruit & Vegetable Products**			
a.	**Squashs, Crushes, Fruit & Vegetable syrups/Sharbats, Barley water, Jam, Fruit Jelly, fruit Cheese, Marmalades, Dehydrated Fruits (Whole & powdered), Dehydrated Vegetables (Whole & powdered), Frozen fruits and Fruit product, Frozen Vegetable and products, Frozen curried Vegetables, Ready to Eat Vegetables, Fruit based beverages Mix)**	pH	Cl. 8 of IS: 2860:1964, RA 2008 (Page 8) / Method No 2.3 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 11)	2 to 14
		Total Ash	Cl. 12 of IS: 2860:1964, RA 2008 (Page 12), Method No 11.3 & 14.4 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 41,44)	0.05% to 25% (by wt)
		Calcium	Cl. 12 of IS: 2860:1964, RA 2008 (Page 12),	Up to 500mg/100g
		Total Soluble Solids	Cl. 7 of IS: 13815: 1993, RA 2003 (Page 2), Appendix B of IS: 5861:1993, RA 2003 (Page 4), / Method No 1.6 FSSAI Manual of Methods	5 to 75(Brix)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 4)	
		Acidity	Cl. 10 of IS: 2860:1964, RA 2008 (Page 10),/ Method No 2.4 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 12)	0.5% to 5.0%(by wt)
		Salt (as NaCl)	Cl. 11 of IS: 2860:1964, RA 2008 (Page 10), / Method No 1.7 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 9)	0.5% to 50%(by wt)
		Total Solids	Method No 2.1 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 10)	0.5% to 100%
		Water activity	AES/SOP/005-2.8 Issue dated :- 5/10/2015	0.1 to 0.95
		Sulphur Dioxide	Cl. 12 of IS 6287:1985 RA 2010 (Page 20),/ Method No 17.7 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page52)	10 mg/kg to 500 mg/kg
		Added Coloring matter	Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	Qualitative (Present/Absent)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Sugar	Method No 2.6 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 15)	2% to 90%
		Moisture	Method No 4.1 FSSAI Manual of Methods of Analysis of Foods of Fruit and Vegetable Products 2016) (Page 34)	2% to 80%
3.	**Tea / coffee**			
a.	**Tea, Masala Tea, Green Tea, flavored Tea & Coffee, Instant Tea and Coffee, Raw & Roasted Coffee beans and powder, soluble Coffee, Coffee Chicory, Soluble Tea, Chicory**	Total Ash	Cl. 7 of IS:13854-1994 RA 2009 (Page 1),Method No 1.3 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 6)	0.5% to 15%(by wt)
		Acid insoluble ash	Cl. 7 of IS:13857-1993 RA 2009 (Page 1), Method No 1.5 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 8)	0.05% to 3.0%(by wt)
		Water soluble ash	Cl. 6 of IS:13855-1993 RA 2009 (Page 1), Method No 1.4 FSSAI Manual of Methods of Analysis of Foods of Beverages	5% to 80%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 7)	
		Alkalinity of water soluble ash	Cl. 6of IS: 13856–1993 RA 2009 (Page 1), Method No 1.6 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 9),	0.2% to 5%
		Crude fibre	Cl. 9of IS:10226(P-1)-1982 RA 2010 (Page 3), Method No 5.8 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 25)	1% to 25%
		Water extract	Cl. 8 of IS:13862-1998 RA 2009 (Page 2), Method No 1.7 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory,) Sugar and sugar product & Confectionery Products 2015) (Page 10)	5% to 60%(by wt)
		Added Coloring matter	Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	Qualitative (Present/Absent)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Calcium	IS:1797:1985. RA 2009 P.12,	1 mg to 500mg
4.	**Spices & Condiments**			
a.	**Whole and powder of [Caraway Cardamom, Chillies, Cinnamon, cassia, Cloves, Coriander, Cumin, fennel, Fenugreek Ginger Mace Mustard, Nutmeg, Pepper black,Poppy, Saffron, Turmeric, Aniseed,Dhanadal , Ajowan]Curry powder,, Garam Masala, Dhanajiru power, Mixed Masala Such as Pavbhaji Masala, Sambhar Masala, Chole/ Chana Masala, chat Masala, Jiradu powder, Tea masala, Panipuri masala, Dabeli masala, sabji masala, Punjabi Sabji masala, Biryani Masala,**	Extraneous / Foreign Matter	ASTA cleanliness specifications for spices, seeds and herbs, 1999	Qualitative (Present/Absent)
		Live and Dead Insects	ASTA cleanliness specifications for spices, seeds and herbs, 1999	Qualitative (Present/Absent)
		Moisture	Cl. 9 of IS:1797-1985 RA 2009 (Page 8),Method No 3 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 2)	0.1% to 20%(by wt)
		Total ash	Cl. 6 of IS:1797-1985 RA 2009 (Page 5), Method No 4 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 12)	0.05% to 50%(by wt)
		Acid insoluble ash	Cl. 8 of IS:1797-1985 RA 2009 (Page 7), Method No 5 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 14)	0.005% to 2%(by wt)
		Alcoholic extract	Cl 10 of IS:1797-1985 RA 2009 (Page 10), Method No 7 FSSAI Manual of Methods of Analysis of	1% to 50%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	chiken masala, fish masala, Meat masala, Shrimp masala, Chinese masala, Pickle masala other mix masala, Garlic (frozen, Dry), Asafoetida, Compounded Asafoetida		Foods of Spices And Condiments Products 2016) (Page 15)	
		Crude fiber	Cl. 13 of IS:1797-1985 RA 2009 (Page 13), Method No 11 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 22)	0.5% to 40%(by wt)
		Non-volatile ether Extract	Cl. 14 of IS:1797-1985 RA 2009 (Page 14), Method No 9 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 18)	0.5% to 60%(by wt)
		Volatile oil contents	Cl. 15 of IS:1797-1985 RA 2009,(Page 15), Method No 10 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 19)	0.1% to 20%(v/w%)
		Cold water extract	IS:1797-1985: RA 2009, /Method No 6 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 15)	0.5% to 50%(by wt)
		Curcumin (Turmeric)	Appendix B of IS: 10925-1984 RA 2007 (Page 7), Method No 16.4 FSSAI Manual of Methods of Analysis of Foods of	1% to 5% by wt

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Spices And Condiments Products 2016) (Page 34)	
		Added coloring matter	Method No 4.2 & 4.3 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82 & 92)/ ICMR3.6.1-1990.P24	Qualitative (Present/Absent)
		Lead Chromate Test (Turmeric)	Method No 16.6 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 36)/& ICMR 3.6.1-1990 p24	Positive/Negative
		Total Starch (Turmeric)	Cl. 9 of IS 4706(P-2):1978 RA 2010 (Page 10), Method No 16.5 FSSAI Manual of Methods of Analysis of Foods of Spices And Condiments Products 2016) (Page 35)	5% to 70% by wt
		Calcium mg /100g	IS:1797:1985. RA :2009 P.12,	1 to 500mg/100g
		Peroxidase test	Method No 17.4 FSSAI Manual of Methods of Analysis of Foods of Fruits & Vegetable Products 2016) (Page 51)	Positive/Negative
5.	**Sugar and Sugar Based Confectionary**			
a.	**Sugar boiled confectionery, Sugar based hard boiled confectionery, Toffee, Milk toffee,**	Moisture	Cl. 4 of IS 15279:2003 RA 2008 (Page 1) / Method No A2 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa,	0.5% to 20.0% (by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Modified toffee, butter toffee, Lozenges, Chewing gum and bubble gum, All type of Chocolate, Ice Lollies, Sweets		Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 57)	
		Sucrose	Cl. 9 of IS 6287 1971 RA 2005 (Page 15) / Method No A10 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 76)	10% to 95%(by wt)
		Reducing Sugar	Cl. 8 of IS 6287 1971 RA 2005 (Page 8) / Method No A9 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 75)	10% to 85%(by wt)
		Sulphated Ash	Cl. 6 of IS 6287 1971 RA 2005 (Page 7) /Method No A3 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 59)	0.05% to 5%(by wt)
		Ash insoluble	Cl. 7 of IS 6287 1985 RA 2010 (Page 8) / Method No A5 FSSAI Manual of Methods of Analysis of	0.005% to 5%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 61)	
		Protein	Cl. 11 of IS 6287:1985 RA 2010 (Page 17)	1.0% to 20.0%(by wt)
		Total Fat	Cl. 10 of IS 6287:1985 RA 2010 (Page 15)	0.5% to 15.0%(by wt)
		Added coloring matter	Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	10 mg/Kg to 500 mg/Kg
		Artificial sweetener	FSSAI Manual of Methods of Analysis of Foods of Food Additives Products 2016)	Qualitative (Positive/Negative)
6.	**Sugar, Jaggery and Honey**			
a.	**Sugar, Refined surgar, Khandsari sugar, Bura Sugar, Cube sugar, Jaggery & Honey**	Moisture% by wt	Cl. 4 of IS 15279:2003 (Page 1) / IS: 4941- 1994/ Method No 6.2, 7.2, 9.1 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 29,40)	0.5% to 20.0%
		Sucrose	Cl. 12 of IS 15279: 2003 (P. 13) /IS: 4941 -1994 / Method No 6.4.4. FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and	Sugar 5.0% to 99.9%(by wt) Honey 1% to 50%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Sugar Products & Confectionary Products 2015) (Page 36)	
		Reducing Sugar	Cl. 7 of IS 15279:2003 (Page 6) / IS:4941-1994/ Method No 6.4 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 33)	30% to 99%(by wt)
		Total Ash	IS:4941-1994/Method No6.7 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page38)	0.05% to 10%(by wt)
		Ash insoluble	Annex A of IS: 12923, 1990, Reaff. 2008 (P. 2) / IS:4941-1994/Method No 8.1 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 52)	0.005% to 1.0%(by wt)
		Fructose/Glucose Ratio (honey)	Annex C of IS: 4941-1994 RA 2002 (Page 5) /Method No 6.5 FSSAI Manual of Methods of Analysis of	0.5 to 2

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 36)	
		Sulphur Dioxide	Cl. 13 of IS 15279:2003 (Page 14) / Cl. 12 of IS 6287:1985 RA 2010 (Page 20)Method No 7.5 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 44)	10 mg/kg to 250 mg/kg
		Extraneous matter water insoluble	IS:4941-1994	0.1% to 10%
b.	**Sugar, Jaggery & Honey**	Aniline Chloride Test (honey)	IS:4941: 1994 RA 2004/Method No 6.6.1 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products 2015) (Page 37)	Qualitative (Positive/Negative)
		Feihes Test (Honey)	IS:4941: 1994 RA 2004/Method No 6.6.2 FSSAI Manual of Methods of Analysis of Foods of Beverages (Coffee, Tea, Cocoa, Chicory) Sugar and Sugar Products & Confectionary Products	Qualitative (Positive/Negative)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			2015) (Page 37)	
		HMF(Honey)	IS:4941:1994 Annex F/F2:1994	1 mg/kg to 200 mg/kg
		Added coloring matter	Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	Qualitative (Present/Absent)
		ICUMSA Colour	IS : 15279 :2003,	10 Units to 250 Units
7.	**Milk & Milk Products**			
a.	**Raw, Processed, Flavored (All type of milk), Milk Powder, milk powders, Sweetened/Un sweetened Evaporated Condensed Milk, Cream, Curd, Flavored Curd/yogurt/lassi, Chhana or Paneer, Cheese, Ice Cream, Kulfi, Dried Ice Cream Mix, Frozen dessert, Dried Frozen Dessert, Milk Ice/Milk Lolly, Khoya, Butter, Flavored Butter, Ghee, Milk fat, Chakka, Shrikhand, Matho, Milk Based**	Moisture	IS:16072-2012/IS 11623:2008 RA :2013/IS2802:1964: RA 2009,/ FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016)	0.1% to 10%(by wt)
		Total Solids	IS:16072-2012/ IS 12333:1997 RA :2003/IS2802:1964: RA 2009 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016)	1% to 95%(by wt)
		Total Fat	Cl. 8 of IS:11721-2005 (Page 3) /IS2802:1964: RA 2009, Method No 1.3.4.2 Rose-gottlieb Method FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016)(page no 41	0.2% to 80%(by wt)
		Total Ash	IS 1479:1961 p.2 RA : 2009 / Annex B of IS:14433-2007 (Page 8), Method No 10.7 FSSAI	0.1% to 10%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	sweets, Milk based infant foods, Whey powder,		Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (page No 90)	
		Titratable Acidity	IS 11766:1986 RA :2013/IS2802:1964: RA 2009, Method No 10.4 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (page no 88)	0.1% to 35%
		sugar	ICMR 4.2.1-1990 p-27, Method No 1.2.1 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (Page no 9)	Qualitative (Present/Absent)
		starch	ICMR 4.2.2-1990 p-27, Method No 1.2.2 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (page no 11)	Qualitative (Present/Absent)
		Added coloring matter	ICMR 6.4-1990 p-56, Method No 4.2 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82)	Qualitative (Present/Absent)
		Protein	IS:1479 Part II-1961 RA 2009/IS:7219-1973: RA 2005, Method No 7.5 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (page no 63)	0.5% to 70%

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Sugar	Method No 1.2.1 FSSAI Manual of Methods of Analysis of Foods of Milk And Milk Products 2016) (Page no 9)	2% to 90%
		Milk solid Not Fat	IS:16072-2012/ IS 12333:1997 RA :2003/IS2802:1964: RA 2009	1% to 80%
8.	**Bakery Product, Bread & Biscuits,**	Total Ash	Cl.6 of IS 12711 : 1989 RA 2010 (Page 1),Method No 14 & 15 FSSAI Manual of Methods of Analysis of Cereal & Cereal products 2016(P-40 & 44)	0.1% to 15%(by wt)
		Acid insoluble ash	Annex C of IS 1011 : 2002 (Page 7), Method No 14 & 15 FSSAI Manual of Methods of Analysis of Cereal & Cereal products 2016(P-40 & 44)	0.01% to 1%(by wt)
		Acidity of extracted fat	Annex D of IS:1011-2002 (Page 7), Method No 14 .5 FSSAI Manual of Methods of Analysis of Cereal & Cereal products 2016(P-41)	0.02% to 6%
		Added Colouring matter	Method No 4.2 & 4.3 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82 & 92)	Qualitative (Present/Absent)
		Artificial sweetening agent	Method No 3 FSSAI Manual of Methods of Analysis of Foods of Food Additives	Qualitative (Present/Absent)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			2016) (Page 45 & 65)	
		Total Fat	Method No 14 FSSAI Manual of Methods of Analysis of Cereal & Cereal products 2016(P-41)	0.1% to 70%(by wt)
		Moisture	Annex B of IS 1011 : 2002 (Page 6), Method No 14 & 15 FSSAI Manual of Methods of Analysis of Cereal & Cereal products 2016(P-39 & 43)	0.1% to 30%(by wt)
		Added coloring matter	Method No 4.2 & 4.3 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82 & 92)	10 mg/Kg to 500 mg/Kg
9.	**Namkeen**	Moisture	Annex B of IS:15271-2003Ed. 1.1 (2006-02)	0.1% to 20%(by wt)
		Acid insoluble ash	Annex B of IS:15271-2003Ed. 1.1 (2006-02)	0.1% to 2% (by wt)
		Fat	Annex B of IS:15271-2003Ed. 1.1 (2006-02)	0.1% to 70%(by wt)
		Acid Value of extracted fat	Annex B of IS:15271-2003Ed. 1.1 (2006-02)	0.05 to 10
		Ash	Annex B of IS:15271-2003Ed. 1.1 (2006-02)	0.1% to 15%(by wt)
		Added coloring matter	ICMR Manual 6.2 /1990, Method No 4.2 & 4.3 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016) (Page 82 & 92)	Qualitative (Present/Absent)
10.	**Nutritional Labeling & analysis**			

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1.	whole and powder Pulses, Cereals, Ready to Eat Food, all packed food, Bakery product, Milk and Milk Product, soya milk and soya Product, fryums, fruit and fruit product, Namkeen	Energy / Calories (R.T.E Food & drinks)	FAO: Chapter-3, 2003	1 to 900 kcal/100g
		Total fat (R.T.E Food & drinks)	Cl.10 of IS:6287:1985 RA 2010 (Page 13) Cl.9 of IS:11721 : 2005 (Page 4)/Appendix B of IS : 4079:1965 RA 2011,	1% to 50% (by wt)
		Total Carbohydrates (R.T.E Food & drinks)	FAO: Chapter-2, 2003	0.1% to 99%(by wt)
		Sugars (R.T.E Food & drinks)	Annex. D of IS:1163-1992 RA 2012,(Page 9) / Cl. 8 of IS:6287-1985 RA 2010 (Page 8)	5% to 80%(by wt)
		Protein (R.T.E Food & drinks)	Cl. 11 of IS: 6287, 1985 RA 2010(Page 17)	3.5% to 50%(by wt)
		Moisture	Annex B of IS:15271-2003Ed. 1.1 (2006-02),	0.1% to 20%(by wt)
		Ash	Annex B of IS:15271-2003Ed. 1.1 (2006-02),	0.1% to 40%(by wt)
11.	Oils, fats & related products including Blended oils, Fat spreads &Vanspati (Raw & Refined Edible Oils & Fats, Blended edible vegetable oil, Interesterfied Vegetable fat/oil, hydrogenated & Partially hydrogenated	Foreign Matter	IS 548(Part I) 1964: RA :2010,	Qualitative (Present/Absent)
		Separated Water	IS 548(Part I) 1964: RA :2010	Qualitative (Present/Absent)
		Added Colour Matter	IS:548(Part-II) 1976, Amendment No1, Feb.1979/ ICMR 6.4 1990.P-56, Method No 39 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-88)	Qualitative (Present/Absent)
		Moisture	Cl.5 of IS 548 (Part I) 1964 RA .2010 (Page 18), Method No 3	0.1% to 5%(by wt)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	oils, Vanspati Margarine and fat spreads, Bakery shortening, Ghee)		FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-5)	
		Free fatty acid as oleic acid	Cl.7 of IS 548 (Part I) 1964 RA 2010 (Page 29), Method No 11 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-23)	0.1% to 7%(by wt)
		Acid value	Cl. 7 of IS 548 (Part I) 1964 RA 2010 (Page 29), Method No 11 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-23)	0.2 to 14
		Saponification value	Cl.15 of IS 548 (Part I) 1964 RA 2010 (Page 50), Method No 9 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-17)	100 to 270
		Iodine value	Cl.14 of IS 548 (Part I) 1964 RA 2010 (Page 47), Method No 12 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-26)	coconut oil 7.5 to 10 & other oils 50 to 150
		Unsaponifiable matter	Cl. 8 of IS 548 (Part I) 1964 RA 2010 (Page 31), Method No 10 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-20)	0.1% to 5%
		Peroxide value	Cl. 21 of IS 548	0.5 to 50 mEq/kg

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(Part I) 1964 RA 2010 (Page 63), Method No 38.1 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-86)	
		Polenske value	Cl.19 of IS 548 (Part I) 1964 RA 2010 p 62), Method No 13 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-30)	10 to 20
		Reichert value	IS 548 (Part I) 1964 RA 2010, Method No 13 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-30)	15 to 35
		BellierTest°C	Cl. 13 of IS 548 (Part II) 1976 RA :2010 Page13, Method No 14 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-35)	15°C to 41°C
		Cloud Point °C	ICMR-1990.P-4, Method No 17 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-40)	1°C to 25 °C
		B.R. value	Cl. 10 of IS 548 (Part I) 1964 RA 2010 (Page 35), Method No 5 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-8)	30 to 70
		Mineral oil	Cl. 12 of IS 548 (Part II) 1976 RA 2010 (Page 11), Method No 28	Qualitative (Positive/Negative)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-65)	
		Castor oil	Cl. 15 of IS 548 (Part II) 1976 RA 2010 (Page 1), Method No 29 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-67)	Qualitative (Positive/Negative)
		Argemone oil	Cl. 10 of IS 548 (Part II) 1976 RA 2010 (Page 8), Method No 30 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-69)	Qualitative (Positive/Negative)
		Cotton Seed oil	Cl. 7 of IS 548 (Part II) 1976 RA 2010 (Page 6), Method No 16 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-39)	Qualitative (Positive/Negative)
		Melting point °C	Cl.9of IS:10633-1999 RA 2009 (Page 33) / IS 548 (Part I) 1964 RA 2010, Method No 8 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-16)	30°C to 45°C
		Baudouine Test	Cl. 6 of IS 548 (Part II) 1976 RA 2010 (Page 5), Method No 15 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-38)	Qualitative (Positive/Negative)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Rancidity (Kries Test)	Method No 38.2 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-88)	Qualitative (Positive/Negative)
		Hydrocyanic acid	Cl.11 of IS 548 (Part II) 1964 RA 2006 (Page 10), Method No 32 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-74)	Qualitative (Positive/Negative)
		Vitamin A	Carr-price method: IS 5886-1970, Method No 36 FSSAI Manual of Methods of Analysis of Oils & Fats 2016(P-84)	Qualitative (Positive/Negative)
12.	**Colours and Colours preparation and Mixture**			
a.	**Food Colours Tartrazine**	Total Dye content	Annex A of IS-1694-1994 RA 1999	1% to 95% (dry basis) (by wt)
b.	**Sunset Yellow**	Total Dye content	Annex A of IS:1695 – 1994 RA 1999 (Page2)	1% to 95%(dry basis) (by wt)
c.	**Carmoisine food grade**	Total Dye content	Annex A of IS:2923 – 1995 RA 2001 (Page2)	1% to 95%(dry basis) (by wt)
d.	**Ponceau 4R food grade**	Total Dye content	Annex A of IS:2558 – 1994 (Page No.2)	1% to 95%(dry basis) (by wt)
13.	**Salts (Edible salt / Iodized Salt)**	Moisture	Annex A IS:7224:2006 (Page 3),	0.1% to 2% (by wt)
		Water insoluble matter	Annex C IS:7224:2006 (Page 4),	0.1% to 5%(by wt)
		Chloride as Cl as NaCl% by wt	Annex D IS:7224:2006 (Page 4),	1% to 100%(by wt)
		Matter soluble in water other than NaCl% Wt	Annex E IS:7224:2006 (Page 5)	0.1% to 2%(by wt)
		Iodine	Annex H IS:7224:2006	5 mg/kg to 50 mg/kg
		Alkalinity	Anne J IS:7224:2006	0.01% to 1.5%

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphate	Anne G IS:7224:2006,	0.05% to 5.0%
		Calcium	Anne F IS:7224:2006,	0.1% to 6%
		Magnesium	Anne F IS:7224:2006,	0.01% to 1%
14.	**catechu, Pan Masala**			
a.	**Catechu, Loose and packed Pan Masala**	identification (Catechu)	FSSAI regulations:2010	Qualitative (Positive/Negative)
		Loss on drying (Catechu/ Pan Masala)	IS:2962:1964 RA 2009	0.1% to 25%
		Total Ash (Catechu/ Pan Masala)	IS:2962:1964 RA 2009	0.1% to 25%
		Ash insoluble in HCl (Catechu/ Pan Masala)	IS:2962:1964 RA 2009	0.01% to 5%
		Test for starch (Catechu)	IS:2962:1964 RA 2009	Qualitative (Positive/Negative)
		Catechin (Catechu)	IS:2962:1964 RA 2009	1% to 95%
		Cold Water Extractives (Catechu)	IS:2962:1964 RA 2009	1% to 50%
		Matter insoluble in rectified spirit/ 95% alcohol (Catechu)	IS:2962:1964 RA 2009	0.1% to 60%
		Water insoluble solids at 37°±2 °C (Catechu)	IS:2962:1964 RA 2009	0.1% to 50%
		Boiling water insoluble solids (Catechu)	IS:2962:1964 RA 2009	0.1% to 50%
		Added coloring matter	Method No 4.2 & 4.3 FSSAI Manual of Methods of Analysis of Foods of Food Additives 2016)	Qualitative (Present/Absent)

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(Page 82 & 92)	
II.	**AYUSH PRODUCTS**			
1.	**Raw material, Herbs**	foreign matter	API-Part-I, Volume VI, 2008	1% to 70%
		Ash	API-Part-I, Volume VI, 2008	0.5% to 50%
		Acid insoluble ash	API-Part-I, Volume VI, 2008	0.5% to 25%
		Alcohol soluble Extractive (On dried basis)	API-Part-I, Volume VI, 2008	0.5% to 80%
		Water soluble extract	API-Part-I, Volume VI, 2008	0.5% to 80%
		Moisture content	API-Part-I, Volume VI, 2008	0.1% to 50%
		TLC test	API-Part-I, Volume VI, 2008	Qualitative
2.	**Classical medicine vati, gutica, churna,**	Total Ash	API-Part-I, Volume VI, 2008	0.5% to 50%
		Acid insoluble ash	API-Part-I, Volume VI, 2008	0.5% to 25%
		Alcohol soluble Extractive (On dried basis)	API-Part-I, Volume VI, 2008	0.5% to 80%
		Water soluble extract	API-Part-I, Volume VI, 2008	0.5% to 80%
		Moisture content	API-Part-I, Volume VI, 2008	0.1% to 50%
III.	**POLLUTION AND ENVIRONMENTAL**			
1.	**Soil**	Moisture content	IS : 2720 (Part 2) 1973 (RA -2010)	0.1% to 100%
		pH	IS : 2720 (Part 26) 1987 (RA -2011)	2.0 to 12
		Conductivity	IS: 14767, 2000 (RA -2010)	1 um/cm to 20000 um/cm
		Total Nitrogen	IS : 14684 : 1989 (RA -2009)	10% to 100%
		Organic matter	IS : 2720 (Part 22) 1972 (RA -2010)	1% to 100%
		Copper	EPA –7000B, EPA 3050B	1 mg/kg to 100 mg/kg

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron	EPA –7000B, EPA 3050B	1 mg/kg to 100 mg/kg
		Zinc	EPA –7000B, EPA 3050B	1 mg/kg to 100 mg/kg
		Manganese	EPA –7000B, EPA 3050B	1 mg/kg to 100 mg/kg
		Potassium	LAB-SOP-005/17-7 Dated 01-07-2017	1 Kg/ha to 100 Kg/ha
		Potash	LAB-SOP-005/17-7 Dated 01-07-2017	1 Kg/ha to 100 Kg/ha
2.	**Waste Water, Industrial Waste Water**	Total dissolved solids	Cl. 6 of IS 3025 (P-16): 1984:2002 (Page 1) RA :2006	10 mg/l to 50000 mg/l
		pH	Cl. 2.6 of IS 3025 (P-11): 1983, RA 2006 (Page 2)	2 to 12
		Chloride	Cl.2.5 of IS 3025(P-32): 1988, RA 2009 [Argentometric Method] (Page 2)	5 mg/l to 50000 mg/l
		Alkalinity as $CaCO_3$	Cl. 8.0 of IS 3025 (P-23) : 1986, RA 2003 (Page 2)	20 mg/l to 2000 mg/l
		Sulphate	Cl.4 of IS: 3025 (P-24)-1986 RA -1992 RA -2009 [Turbidity / Gravimetric method]	5 mg/l to 2000 mg/l
		Electrical Conductivity	IS 3025 (Part 14):2013 / ISO7888:1985	1 µS/cm to 50000 µS/cm
		Nitrate (as NO_3)	IS 3025(P-34): 1988, RA 2009 Chromotropic acid method	1 mg/l to 100 mg/l
		Nitrite (as NO_2)	IS 3025(P-34): 1988, RA 2009 Spectrophoto-metric method	0.1 mg/l to 10 mg/l
		Sodium (as Na)	IS 3025(P-45): 1993, RA 2009	0.1 mg/l to 500 mg/l

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			Flame photometry method	
		Potassium (as K)	IS 3025(P-45): 1993, RA 2009 Flame photometry method	0.1 mg/l to 500 mg/l
		Calcium (as Ca)	IS 3025(P-40): 1991, RA 2009 EDTA Titrimetric method	0.1 mg/l to 500mg/l
		COD	IS 3025(P-58): 2006 RA 2012	4.0 mg/l to 50,000 mg/l
		BOD at 27 C for 3 days	IS 3025(P-44): 1993 (RA 2003)	4 mg/l to 50,000 mg/l
		Total Suspended solid	IS 3025(P-17): 1984 (RA 1996) Gravimetric method	2.0 mg/l to 50,000 mg/l
		Ammonical Nitrogen	IS 3025(P-34): 1988, RA 2009	0.1 mg/l to 500 mg/l
		Turbidity	IS 3025(P-10): 1984 RA 2006	0.1 NTU to 500 NTU
		Oil & Grease	IS 3025(P-39): 1991 By partition gravimetric method	2 mg/l to 250 mg/l
		Dissolved oxygen	IS 3025(P-38): 1989 RA 2003	0.2 mg/l to 9.0 mg/l
		Total Hardness	IS 3025(P-21): 2009	9 mg/l to 50,000 mg/l
		Iron	IS 3025(P-53): 2003 by 1, 10 Phenathroline method	0.1 mg/l to 100 mg/l
		Magnesium	IS 3025(P-46): 1994 RA 2003, RA 2009	2 mg/l to 10,000 mg/l
		Copper	IS 3025 (Part 42) 1992 AAS method	0.02 mg/l to 100 mg/l
		Zinc	IS 3025 (Part 49) 1994 AAS method	0.01 mg/l to 100 mg/l
		Manganese	APHA : 3111B &3500MN-B 22nd Edition	0.01 mg/l to 100 mg/l

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IV.	**WATER**			
1.	**Packaged drinking water, packaged natural mineral water, water for processed food Industry, ground water, surface water**	Total dissolved solids	Cl. 6 of IS 3025 (P-16): 1984:2002 (Page 1) RA :2006	10 mg/l to 5000 mg/l
		pH	Cl. 2.6 of IS 3025 (P-11): 1983, RA 2006 (Page 2)	2 to 12
		Chloride	Cl.2.5 of IS 3025(P-32): 1988, RA 2009 [Argentometric Method] (Page 2)	5 mg/l to 1000 mg/l
		Alkalinity as $CaCO_3$	Cl. 8.0 of IS 3025 (P-23) : 1986, RA 2003 (Page 2)	20 mg/l to 2000 mg/l
		Sulphate	Cl.4 of IS: 3025 (P-24) :1986 RA -1992 RA -2009 [Turbidity / Gravimetric method]	5 mg/l to 2000 mg/l
		Electrical Conductivity	IS 3025 (Part 14):2013 / ISO7888:1985	1 µS/cm to 20000 µS/cm
		Nitrate (as NO_3)	IS 3025(P-34): 1988, RA 2009 Chromotropic acid method	1 mg/l to 100 mg/l
		Nitrite (as NO_2)	IS 3025(P-34):1988,RA 2009 Spectrophoto-metric method	0.1 mg/l to 10 mg/l
		Sodium (as Na)	IS 3025(P-45):1993,RA 2009 Flame photometry method	0.1 mg/l to 500 mg/l
		Potassium (as K)	IS 3025(P-45): 1993, RA 2009 Flame photometry method	0.1 mg/l to 500 mg/l
		Calcium (as Ca)	IS 3025(P-40): 1991, RA 2009 EDTA Titrimetric method	0.1 mg/l to 500mg/l

Laboratory	**Analytical & Environmental Services, 350, GIDC Makarpura, Samir Tech Chem Compound, Vadodara, Gujarat**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Certificate Number	**TC-6169**	**Page 34 of 34**	
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

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.**

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