

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

Page 1 of 22

**Validity** 16.03.2018 to 15.03.2020

Last Amended on 27.03.2018

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.	WATER			
1.	<b>Packaged Drinking Water/ Packaged Natural Mineral Water</b>	Aerobic Microbial Count	IS 5402:2012	1 to 200 cfu per plate per ml
		Yeast & mould count	IS5403:1999 (RA 2013) IS 15188:2012	Presence/Absence per 250 ml
		Escherichia coli	IS 15185:2016	Presence/Absence per 250 ml
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2013) IS 15188:2012	Presence/Absence per 250 ml
		Salmonella spp.	15187:2016	Presence/Absence per 250 ml
		Shigella spp.	IS 5887 (Part 7): 1999 (RA 2013) IS 15188:2012	Presence/Absence per 250 ml
		Vibrio cholerae	IS 5887 (Part 5): 1976 (RA 2013) IS 15188:2012	Presence/Absence per 250 ml
		Vibrio parahaemolyticus	IS 5887 (Part 5): 1976 (RA 2013) IS 15188:2012	Presence/Absence per 250 ml
		Faecal streptococci	IS 15186:2002 (RA 2014)	Presence/Absence per 250 ml
		Total Coliforms	IS 15185:2016	Presence/Absence per 250 ml
		Sulphite Reducing Anaerobes	IS 13428:2005 (RA 2014) Annex C	Presence/Absence per 50 ml

**Sandeep Singh Tomar**  
Convenor

**N. Venkateswaran**  
Program Director

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 2 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Pseudomonas aeruginosa	IS 13428:2005 (RA 2014) Annex D	Presence/Absence per 250 ml
2.	<b>Drinking Water</b>	Total Coliforms	IS 1622:1981 (RA 2014) (MPN Technique)	Presence/Absence per 100 ml, 1 to 1600 MPN/100ml
		Total Coliforms	IS 1622:1981 (RA 2014) (MF Technique)	Presence/Absence per 100ml, 1 to 150 cfu per plate in 100 ml sample filtered
		E. coli	IS 1622: 1981, RA 2014 (MPN Technique)	Presence/Absence per 100ml, 1 to 1600 MPN/100ml
II.	<b>FOOD &amp; AGRICULTURAL PRODUCTS</b>			
1.	<b>Carbonated Beverages</b>	Coliforms	IS 5401 (Part 1): 2012	1 to 150 cfu per plate per ml
		Total Plate Count	IS 5402:2012	1 to 200 cfu per plate per ml
		Yeast & Moulds	IS 5403:1999 (RA 2013)	1 to 150 cfu per plate per ml
2.	<b>Fruit Beverages</b>	Coliforms	IS 5401 (Part 1): 2012	1 to 150 cfu per plate per ml
		Total Plate Count	IS 5402:2012	1 to 200 cfu per plate per ml
		Yeast & Moulds	IS 5403:1999 (RA 2013)	1 to 150 cfu per plate per ml
3.	<b>Alcoholic Drinks</b>	Coliforms	IS 5401 (Part 1): 2012	1 to 150 cfu per 100 ml
		Total Plate Count	IS 5402:2012	1 to 200 cfu per plate per ml
		Yeast & Moulds	IS 5403:1999, RA 2013	1 to 150 cfu per plate per ml

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 3 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
<b>4.</b>	<b>Milk &amp; Dairy Products</b>			
<b>a.</b>	<b>Skimmed Milk Powder/ Condensed Milk</b>	Bacterial Count (Aerobic microbial count)	IS 5402:2012	≥ 10 cfu/gm
		Coliforms	IS 5401 (Part 1):2012	Present/Absent/0.1 g
		Salmonella	IS 5887 (Part 3): 1976 (RA 2013)	Present/ Absent in 25 g
		Staphylococcus aureus	IS 5887 (Part 2): 1976 (RA 2013)	Present/Absent/0.1 g
		Shigella	IS 5887 (Part 7): 1999 (RA 2013)	Present/Absent/25 g
<b>b.</b>	<b>Flavored Milk/ Butter Milk</b>	Total Colony Count	IS 1479 (Part 3): 1977 (RA 2013) Cl. 5	1 to 200 cfu/per plate/ml
		Coliforms	IS 5401 (Part 1): 2012	1 to 150 per plate/ml
<b>5.</b>	<b>Spices</b>			
<b>a.</b>	<b>Whole and Ground</b>	Salmonella	IS 5887 (Part 3): 1976 (RA 2013)	Present/Absent in 25 g
<b>6.</b>	<b>Cereal and Cereal Products</b>			
<b>a.</b>	<b>Maida</b>	Total Bacterial Count	IS 5402:2012	≥ 10 cfu/ gm
		Yeast & Moulds	IS 5403:1999 (RA 2013)	≥ 10 cfu/ gm
		E. coli	IS 5887 (Part 1): 1976 (RA 2013)	Present/Absent/1 g
		Coliforms	IS 5401 (Part 1): 2012	≥ 10 cfu/ gm

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 4 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

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.	WATER			
1.	<b>Packaged Drinking water, Packaged Natural Mineral Water &amp; Drinking Water, Water Purifiers with UV Disinfection, Water for food Industries, Swimming Pool Water</b>	Alkalinity (as HCO <sub>3</sub> )	IS 3025 (Part 23) :1986 RA 2014	1 mg/l to 1000 mg/l
		Aluminium (as Al)	CL 5.0 of IS 3025 (Part 55): 2003, RA 2014	0.02 mg/l to 0.3 mg/l
		Antimony as Sb	Annex G of IS 13428: 2005	0.002 mg/l to 100 mg/l
		Arsenic as As	IS 3025 (Part 37):1988, RA 2003	0.001 mg/l to 0.2 mg/l
		Barium as Ba	Annex F of IS 13428: 2005 APHA-23RD Edition-2017 (3030-D)	0.2 mg/l to 100 mg/l
		Borate (as B)	Annex H of IS 13428 : 2005	0.1 mg/l to 5.0 mg/l
		Cadmium (as Cd)	Cl. 5.0 of IS 3025 (Part 41): 1992, RA2014 , APHA-23RD Edition-2017 (3030-D)	0.001 mg/l to 2.0 mg/l
		Calcium (as Ca)	Cl. 5.0 of IS 3025 (Part 40) :1991 RA 2014	1 mg/l to 500 mg/l
		Chloride (as Cl)	IS 3025(Part -32):1988 RA 2014	1 mg/l to 1000 mg/l
		Chromium as Cr	Annex J of IS 13428 : 2005 APHA-23RD Edition-2017 (3030-D)	0.02 mg/l to 10 mg/l
		Colour, true colour	CL.2.0 OF IS 3025 (P-4):	1 Hazen Unit to

**Sandeep Singh Tomar**  
Convenor

**N. Venkateswaran**  
Program Director

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

Page 5 of 22

**Validity** 16.03.2018 to 15.03.2020

Last Amended on 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		units, Max	1983 RA 2012	5 Hazen Units
		Total dissolved solid, mg/l, Max	IS 3025 (P 16):1984 RA 2012	1 mg/l to 2000 mg/l
		Copper as Cu	Cl.6.0 of IS 3025 (Part 42):1992 RA 2014 , APHA-23RD Edition-2017 (3030-D)	0.02 mg/l to 5 mg/l
		Fluoride as F	Cl. 5.0 & 6.0 of IS 3025 (Part 60):2008,RA2013	0.05 mg/l to 10 mg/l
		Iron as Fe	Cl. 6.0 & 7.0 of IS 3025 (Part 53):2003 ,RA2014 , APHA-23RD Edition-2017 (3030-D)	0.05 mg/l to 10 mg/l
		Lead as Pb	Cl. 7.0 of IS 3025 (Part 47) :1994 RA 2014 , APHA-23RD Edition-2017 Edition (3030-D)	0.005 mg/l to 2.0 mg/l
		Magnesium as Mg	Cl. 6.0 of IS 3025 (Part 46):1994 RA 2014	1 mg/l to 1000 mg/l
		Manganese as Mn	Cl. 5.0 of IS 3025 (Part 59):2006, RA2012 , APHA-23RD Edition-2017 (3030-D)	0.05 mg/l to 10.0 mg/l
		Mercury as Hg	Cl. 5.0 of IS 3025 (Part 48) :1994 RA 2014	0.0005 mg/l to 0.5 mg/l
		Mineral Oil	Cl. 5.0 of IS 3025 (Part 39):1991 RA 2014	0.025 mg/l to 100 mg/l
		Cyanide as CN	IS 3025 (Part 27):1986 RA 2014	0.02 mg/l to 10 mg/l
		Nickel as Ni	Annex L of IS 13428:2005 , APHA-23RD Edition-2017 (3030-D)	0.01 mg/l to 50 mg/l
		Nitrate as NO <sub>3</sub>	Cl. 3.0 of IS 3025 (Part 34): 1988 RA 2014	0.01 mg/l to 100 mg/l

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 6 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nitrite as NO <sub>2</sub>	Cl.4.0 of IS 3025 (Part 34):1988 RA 2014	0.01 mg/l to 100 mg/l
		Odour	IS 3025 (P -5): 1983, RA 2012	Agreeable/ disagreeable
		pH	IS 3025(P-11):1983, RA 2012	1-12
		Phenolic Compounds as C <sub>6</sub> H <sub>5</sub> OH	Cl. 5.0 of IS 3025 ( Part 43):1992, RA 2014	0.001 mg/l to 100 mg/l
			Cl. 3.0 of IS 3025 (Part 26):1986 RA 2014	0.005 mg/l to 10.0 mg/l
		Silver as Ag	Annex J of IS 13428:2005 , APHA-23RD Edition-2017 (3030-D)	0.005 mg/l to 20 mg/l
		Sulphate as SO <sub>4</sub>	Cl. 4.0 of IS 3025 (Part 24):1986 RA 2014	1 mg/l to 200 mg/l
		Sulphide as H <sub>2</sub> S	Cl. 2.0 & 3.0 of IS 3025 (Part 29):1986 RA 2014	0.05 mg/l to 100 mg/l
		Taste	IS 3025 (P 8): 1984 RA 2012	Agreeable/ disagreeable
		Turbidity	IS 3025 (Part 10):1984 RA 2012	0.1 NTU to 1000 NTU
		Zinc as Zn	Cl. 6.0 of IS 3025 (Part 49):1994, RA 2014 , APHA-23RD Edition-2017 (3030-D)	0.05 mg/l to 5.0 mg/l
		Selenium as Se	Cl. 7.0 of IS 3025 (Part 56):2003,RA 2014	0.005 mg/l to 0.05 mg/l
		Sodium as Na	Cl. 5.0 of IS 3025 (Part - 45):1993, RA 2014	1 mg/l to 1000 mg/l
		Total Hardness	IS 3025 (Part 21): 2009,RA2014	4 mg/l to 200 mg/l
		Anionic Surface Active Agents	Annex – K of IS 13428:2005	0.20 mg/l to 10 mg/l

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 7 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chloride (as Cl), mg/l, Max	APHA-23RD Edition-2017 (4110 B)	0.5 mg/l to 50 mg/l
		Fluoride as F	APHA-23RD Edition-2017 (4110 B)	0.04 mg/l to 5 mg/l
		Mineral Oil	IS 3025 (Part 39):1991 RA 2014	0.025 mg/l to 1.0 mg/l
		Nitrate as NO <sub>3</sub>	APHA-23RD Edition-2017 (4110 B)	0.04 mg/l to 5 mg/l
		Nitrite as NO <sub>2</sub>	APHA-23RD Edition-2017 (4110 B)	0.01 mg/l to 5 mg/l
		Sulphate as SO <sub>4</sub>	APHA-23RD Edition-2017 (4110 B)	1.0 mg/l to 5 mg/l
		Bromates as BrO <sub>3</sub>	ISO 15061:2001	0.005 mg/l to 1 mg/l
<b>II.</b>	<b>RESIDUE IN WATER</b>			
<b>1.</b>	<b>Packaged Drinking water, Packaged Natural Mineral Water &amp; Drinking Water</b>	<b>Poly Aromatic Hydrocarbons</b>		
		Acenaphthene	APHA-23RD Edition-2017 (6440 B)	0.1 µg/L to 100 µg/L
		Acenaphthalene		
		Anthracene		
		Benzo(A) Anthracene		
		Benzo(A) Pyrene		
		Benzo (B) Fluranthene		
		Benzo (G,H,I) Perylene		
		Chrysene		
		Dibenzol (A,H) Anthracene		
		Fluranthene		
		Fluorene		
		Indo (123 CD) Pyrene		
		Napthalene		
	Phenanthrene			
	Pyrene			

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 8 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		2- Bromonapthalene		
		<b>Poly Chloro Biphenyls</b>		
		2 - Chlorobiphenyl	Annex M of IS 13428: 2005 APHA-23RD Edition-2017 (6431 B)	0.05 µg/L to 1000 µg/L
		2,2',3,3',4,4',6 Heptachlorobiphenyl		
		2,2',3,3',4,5',6,6' Octachlorobiphenyl		
		2,2',3',4,6 Pentachlorobiphenyl		
		2,2',4,4' Tetrachlorobiphenyl		
		2,2',4,4',5,6' Hexachlorobiphenyl		
		2,4,5 Trichlorobiphenyl		
		<b>DDT (o, p &amp; p,p – isomers of DDT, DDE &amp; DDD)</b>		
		PP DDE	USEPA 508, Rev01, 1994	0.05 µg/L to 1000 µg/L
		PP DDD		
		PPDDT		
		OPDDT		
		OP DDD		
		OP DDE		
		α, β γ and δ - HCH		0.05 µg/L to 1000 µg/L
		Endosulfan (α, β and Sulphate)		0.05 µg/L to 1000 µg/L
		Aldrin and dieldrin		0.05 µg/L to 1000 µg/L
		Monocrotophos	USEPA 8141A, Rev 01, 1994	0.05 µg/L to 1000 µg/L
		Ethion		0.05 µg/L to 1000 µg/L
		Chlorpyrifos		0.05 µg/L to 1000 µg/L
		Phorate		0.05 µg/L to 1000 µg/L
		Butachlor		0.05 µg/L to 1000 µg/L
		Alachor		0.05 µg/L to 1000 µg/L
		Atrazine		0.05 µg/L to 1000 µg/L



**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 9 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Methyl Parathion		0.05 µg/L to 1000 µg/L
		Malathion		0.05 µg/L to 1000 µg/L
		2, 4 – D	USEPA 515.1, Rev 4.1, 1995	0.05 µg/L to 1000 µg/L
		Isoproturon	USEPA 8321 A, Rev01, Dec 1996	0.05 µg/L to 1000 µg/L
<b>III.</b>	<b>POLLUTION AND ENVIRONMENT</b>			
<b>1.</b>	<b>Waste Water</b>	Acidity	APHA-23RD Edition-2017 (2310 B)	1.0 mg/L to 1000 mg/l
		Alkalinity	APHA-23RD Edition-2017 (2320 B)	4.0 mg/L to 1000 mg/l
		Aluminium	APHA-23RD Edition-2017 (3500-AI-B)	0.01 mg/L to 0.3mg/l
		Ammonical Nitrogen	APHA-23RD Edition-2017 (4500-NH3-C)	0.03 mg/L to 1400 mg/l
		Arsenic as As	APHA-23RD Edition-2017 (3114 C)	0.01 mg/L to 100 mg/l
		Biochemical Oxygen Demand	APHA-23RD Edition-2017 (5210 B)	1.0 mg/L to 10000mg/l
		Bromide	APHA-23RD Edition-2017 (4500-Br-B)	0.1 mg/l to 50mg/l
		Total Hardness	APHA-23RD Edition-2017 (2340 C)	1.0 mg/l to 1000 mg/l
		Cadmium	APHA-23RD Edition-2017 (3111 B)	0.001 mg/l to 100 mg/l
		Calcium	APHA-23RD Edition-2017 (3500-Ca-B)	1.0 mg/l to 1000mg/l
		Chemical Oxygen Demand	APHA-23RD Edition-2017 (5220 B)	5.0 mg/l to 20000 mg/l
		Chloride	APHA-23RD Edition-2017 (4500-Cl-B)	1.0 mg/l to 1000 mg/l
		Chromium Hexavalent	APHA-23RD Edition-2017	0.05 mg/l to 1.0 mg/l

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 10 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(3500-Cr-B)	
		Chromium Total	APHA-23RD Edition-2017 (3111 C)	0.01mg/l to 100 mg/l
		Copper	APHA-23RD Edition-2017 (3111 B )	0.01 mg/l to 100mg/l
		Electrical Conductivity	APHA-23RD Edition-2017 (2510 B)	0.01 ms/cm to 10 ms/cm
		Fixed and Volatile Solids	APHA-23RD Edition-2017 (2540 E)	1.0 mg/l to 1000 mg/l
		Fluoride	APHA-23RD Edition-2017 (4500-F-D/4500-F-C)	0.1 mg/l to 10 mg/l
		Iron	APHA-23RD Edition-2017 (3500-Fe-B , 3111 B )	0.01 mg/l to 100 mg/l
		Lead	APHA-23RD Edition-2017 (3111 B )	0.01 mg/l to 100 mg/l
		Magnesium	APHA-23RD Edition-2017 (3500-Mg-B)	1.0 mg/l to 1000mg/l
		Manganese	APHA-23RD Edition-2017 (3500 Mn B)	0.1 mg/l to 100 mg/l
		Mercury	APHA-23RD Edition-2017 (3112 B)	0.001 mg/l to 100 mg/l
		Nickel	APHA-23RD Edition-2017 (3111 B )	0.01 mg/l to 100 mg/l
		Nitrate	APHA-23RD Edition-2017 (4500-NO <sub>3</sub> <sup>-</sup> -E)	0.05 mg/l to 50mg/l
		Nitrite	APHA-23RD Edition-2017 (4500-NO <sub>2</sub> <sup>-</sup> -B)	0.01 mg/l to 50mg/l
		pH	APHA-23RD Edition-2017 (4500-H <sup>+</sup> -B)	2 to12
		Phosphate	APHA-23RD Edition-2017 (4500-P-D)	0.5 mg/l to 1000 mg/l
		Potassium as K	APHA-23RD Edition-2017 (3500-K-B)	1.0 mg/l to 1000 mg/l
		Residual free chlorine	APHA-23RD Edition-2017	0.04 mg/l to 10mg/l

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 11 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(4500-Cl-B)	
		Salinity	APHA-23RD Edition-2017 (2520 B)	10 mg/l to 20000 mg/l
		Settelable Solid	APHA-23RD Edition-2017 (2540 F)	1.0 mg/l to 500 ml/l
		Silica	APHA-23RD Edition-2017 (4500-SiO <sub>2</sub> - C)	1.0 mg/l to 100 mg/l
		Silver	APHA-23RD Edition-2017 (3111 B)	0.01 mg/l to 100mg/l
		Sludge volume index (SVI)	APHA-23RD Edition-2017 (2710 D)	1.0 to 250
		Sodium	APHA-23RD Edition-2017 (3500-Na-B)	1.0 mg/l to 1000mg/l
		Sulphate	APHA-23RD Edition-2017 (4500-SO <sub>4</sub> <sup>2-</sup> -E)	1.0 mg/l to 1000mg/l
		Sulphide	APHA-23RD Edition-2017 (4500-S <sup>2-</sup> -F)	0.05 mg/l to 100mg/l
		Total dissolved solids	APHA-23RD Edition-2017 (2540 C)	1.0 mg/l to 2000mg/l
		Total Kjeldhal Nitrogen	APHA-23RD Edition-2017 (4500-N <sub>org</sub> -B)	0.1 mg/l to 100mg/l
		Total solids at 105°C	APHA-23RD Edition-2017 (2540 B)	0.4 mg/l to 2000 mg/l
		Total Suspended Solids (TSS)	APHA-23RD Edition-2017 (2540 D)	0.4 mg/l to 100mg/l
		Turbidity	APHA-23RD Edition-2017 (2130 B)	0.1 NTU to 1000 NTU
		Carbonates & Bicarbonates	APHA-23RD Edition-2017	4.0 mg/l to 1000 mg/l
		DO	APHA-23RD Edition-2017 (4500-O-C)	0.1 mg/l to 12 mg/l
		Zinc	APHA-23RD Edition-2017 (3111 B)	0.01 mg/l to 100mg/l
		Selenium	APHA-23RD Edition-2017	0.01 mg/l to 100mg/l

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 12 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(3114 C)	
2.	Soil/Sediments	pH	IS 2720 (Part 26): 1987 (RA 2011)	2 to 12
		Electrical Conductivity	IS 14767: 2000 (RA 2010)	0.10 µs/cm to 10000 µs/cm
		Moisture Content	IS 2720 (Part 2): 1973 (RA 2015)	1 % to 50 %
		Available Sodium As Na	KLPL/SOP/Soil-18, Issue No. 01, Date- 1.11.2017	0.05 % to 2.5 %
		Available Potassium As K	KLPL/SOP/Soil-19, Issue No. 01, Date- 1.11.2017	0.05 % to 2.5 %
		Available Calcium As Ca	KLPL/SOP/Soil-02, Issue No. 01, Date- 1.11.2017	50 mg/kg to 1000 mg/kg
		Available Magnesium As Mg	KLPL/SOP/Soil-02, Issue No. 01, Date- 1.11.2017	30 mg/kg to 1000 mg/kg
		Total Nitrogen As N	IS 14684: 1999 (RA 2014)	14 mg/kg to 2100 mg/kg
		Total Organic Carbon	KLPL/SOP/Soil-09, Issue No. 01, Date- 1.11.2017	0.05 % to 2.5 %
		Organic Matter	KLPL/SOP/Soil-09, Issue No. 01, Date- 1.11.2017	0.05 % to 4.0 %
		Chloride	KLPL/SOP/Soil-12, Issue No. 01, Date- 1.11.2017	07 mg/kg to 1000.0 mg/kg
		Available Sulphates as SO <sub>4</sub>	KLPL/SOP/Soil-20, Issue No. 01, Date- 1.11.2017	15 mg/kg to 375 mg/kg
		Available Phosphorus As P	KLPL/SOP/Soil-14, Issue No. 01, Date- 1.11.2017	4 mg/kg to 500 mg/kg
		Sodium Adsorption Ratio	KLPL/SOP/Soil -15, Issue No. 01, Date- 1.11.2017	0.06 to 2.0
		Bulk Density	IS 2720 (Part 29): 1975 (RA 2015)	1 g/cc to 2.5 g/cc
<b>IV.</b>	<b>ATMOSPHERIC POLLUTION</b>			
1.	Ambient Air	PM <sub>10</sub> (Particulate)	IS 5182 (Part 23):2006	10 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 13 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Matter < 10 µm) / Respirable Suspended Particulate Matter		
		PM2.5 (Particulate Matter < 2.5 µm)	KLPL/SOP/AIR-02, Issue No. 01, Date- 1.11.2017	10 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Sulphur Dioxide As (SO <sub>2</sub> )	IS 5182(Part 2) :2001	4 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Nitrogen Dioxide As (NO <sub>2</sub> )	IS 5182 (Part 6):2006	6 µg/m <sup>3</sup> to 750 µg/m <sup>3</sup>
		Ammonia As (NH <sub>3</sub> )	KLPL/SOP/AIR-05, Issue No. 01, Date- 1.11.2017	10 µg/m <sup>3</sup> to 700 µg/m <sup>3</sup>
		Arsenic As As	KLPL/SOP/AIR-10, Issue No. 01, Date- 1.11.2017	1 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
		Lead As Pb	KLPL/SOP/AIR-10, Issue No. 01, Date- 1.11.2017	0.02 µg/m <sup>3</sup> to 10 µg/m <sup>3</sup>
		Nickel As Ni	KLPL/SOP/AIR-10, Issue No. 01, Date- 1.11.2017	4 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
<b>2.</b>	<b>Stack Emission</b>	Particulate Matter	IS 11255 (Part 1): 1985 (RA 2014)	5 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>
		Sulphur Dioxide As SO <sub>2</sub>	IS 11255 (Part 2): 1985, (RA 2014)	3.4 mg/Nm <sup>3</sup> to 80000 mg/Nm <sup>3</sup>
<b>3.</b>	<b>Vehicle Emission</b>	Oxides of Nitrogen	KLPL/SOP/AIR-18, Issue No. 01, Date- 1.11.2017	1 ppm to 10,000 ppm
		Oxygen	KLPL/SOP/AIR-18, Issue No. 01, Date- 1.11.2017	1 % to 25 %
		Hydrocarbons	KLPL/SOP/AIR-18, Issue No. 01, Date- 1.11.2017	1 ppm to 15000 ppm
		Carbon Monoxide	KLPL/SOP/AIR-18, Issue No. 01, Date- 1.11.2017	0.01 % - 5 %
		Carbon Dioxide	KLPL/SOP/AIR-18, Issue No. 01, Date- 1.11.2017	1% to 20 %
<b>4.</b>	<b>Ambient Noise</b>	Sound Pressure Level	IS 9989: 1981 (RA 2014)	35 dB(A) to 134 dB(A)

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 14 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Levels (Excluding Vibration)			
<b>V.</b>	<b>FOOD &amp; AGRICULTURAL PRODUCTS</b>			
<b>1.</b>	<b>Milk &amp; Dairy Products</b>			
<b>a.</b>	<b>Milk</b>	Total milk solids	Appendix-B of IS:1166-1986,Reaff.2013	8 % to16%
		Fat	IS:11762-2005/IS 1224 (Part 1):1977	1% to 10%
		Titratable acidity as lactic acid	Appendix-D of IS 1166:1986 ,Reaff.2013	0.1 % to 3%
		SNF	IS 10083: 1982,RA2013	7 % to 9 %
		<b>Neutralizers</b>		
		Carbonates	IS1479(Part2):1961, RA2013 Method 22.1	Qualitative test (Present / Absent)
		Alkalinity of ash	IS1479(Part2):1960, RA2012 Method 22.2	Qualitative test (Present / Absent)
		<b>Adulterants</b>		
		Nitrate	Manual of Analysis of Milk Product- 2016, FSSAI Method 1.2.1.0	Qualitative test (Present / Absent)
		Cane sugar	IS1479(Part1):1960, RA2012	Qualitative test (Present / Absent)
		Starch	IS1479(Part1):1960, RA2012	Qualitative test (Present / Absent)
		Urea	Manual of Analysis of Milk Product- 2016, FSSAI Method 1.2.4.1	Qualitative test (Present / Absent)
		<b>Preservatives</b>		

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 15 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Benzoic acid	IS 1479 (Part 1): 1960 (RA 2012)	Qualitative test (Present / Absent)
<b>b.</b>	<b>Milk Powder</b>	Moisture	IS 11623:2008 ,RA 2013	1 % to 10%
		Total solid	IS 11623:2008,RA 2013	96 % to 100%
		Fat	IS 11721:2005, RA 2005	0.1 % to 1%
		Insolubility index	IS 12759:1989,RA 2010	0.05 ml/100 g to 5 ml/100 g
		Total ash on dry basis	Annex-A of IS 1165:2002, RA2013 Annex B of IS 14433 (part 1): 2007,RA2012	1 % to 10%
		Titratable acidity as lactic acid	IS: 11766– 1986; Reaff. 2008,RA2012 Annex B of IS 1165:2002,RA2013	0.1 % to 2%
		Protein (Nx6.38)	FSSAI, Lab Manual, 2016, Method 19.1	5 % to 30%
<b>c.</b>	<b>Flavored Milk</b>	Creaming index	Appendix A of IS 4238-1967,RA2014	3 % to 30 %
<b>d.</b>	<b>Condensed Milk</b>	Total Milk Solid	Manual of Analysis of Milk Product- 2016, FSSAI Method-9.2	20 % to 98 %
		Fat	Manual of Analysis of Milk Product- 2016, FSSAI Method 9.3	0.5 % to 10 %
		Acidity Test as Lactic acid	Appendix-D Of IS 1166-1986	0.1 % to 4.0 %
<b>e.</b>	<b>Paneer</b>	Moisture	Appendix A,IS 10484-1983(RA 2014)	20 % to 50 %
		Fat As dry Basis	Appendix –B ,IS 10484-1983	5.0 to 60 %
		Titratable acidity as lactic Acid	Appendix –C ,IS 10484-1983	0.05 % to 1.0 %
<b>f.</b>	<b>Butter</b>	Fat	Clause -6 of IS 3507-	60 % to 90 %

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 16 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			1966,RA2013	
		Moisture	Clause -4 of IS 3507-1966,RA2013	10 % to 20 %
		Acidity as lactic acid	Clause -8 of IS 3507-1966,RA2013	0.05 % to 1 %
		Common Salt	Clause -7 of IS 3507-1966,RA2013	1 % to 3 %
<b>2.</b>	<b>Herbs, Spices &amp; Condiments</b>			
<b>a.</b>	<b>Curry Powder</b>	Non Volatile Ether Extract	Clause 14 of IS 1797:1985 Reaff. 2009	1.0 % to 12 %
		Moisture	Clause 9 of IS 1797:1985 Reaff. 2009	1% to 15 %
		Total ash (on dry basis)	Clause 6 of IS 1797:1985 Reaff. 2009	1 % to 10 %
		Acid insoluble ash	Clause 8 of IS 1797:1985 Reaff. 2009	0.2 % to 3%
		Crude fibre on dry basis	Clause 13 of IS 1797:1985 Reaff. 2009	1 % to 20%
		Bulk density	Clause 3 of IS 1797:1985, Reaff. 2009	1 % to 20 %
<b>b.</b>	<b>Turmeric Powder</b>	Total ash on dry basis	Clause 6 of IS 1797:1985 Reaff. 2009	0.5 % to 10%
		Dilute HCL insoluble ash	Clause 8 of IS 1797:1985 Reaff. 2009	0.2 % to 3%
		Curcumin content on dry basis	Annex B of IS 10925: 1984 Reaff. 2012	2.0 % to 8%
		Starch on dry basis	Clause 9 of IS 4706 (Part 2): 1978,RA2015	10 % to 70%
		Presence of chromates	Annex-A of IS 3576:2010	Present/Absent
<b>c.</b>	<b>Black Pepper Whole &amp; Powder</b>	Moisture	Clause 9 of IS 1797:1985 Reaff. 2009	1 % to 15%
		Total ash on dry basis	Clause 6 of IS 1797:1985 Reaff. 2009	1 % to 10%



Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 17 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Non Volatile ether extract	Clause 14 of IS 1797:1985 Reaff. 2009	1.0 % to 20%
		Acid insoluble ash	Clause 8 of IS 1797:1985 Reaff. 2009	0.2 % to 3%
		Crude Fiber on dry basis	Clause 13 of IS 1797:1985 Reaff. 2009	5 % to 30%
<b>d.</b>	<b>Chilli / Coriander/ Cumin Powder</b>	Moisture	Clause 9 of IS 1797:1985, RA2009	0.5 % to 20%
		Total Ash on dry basis	Clause 6 of IS 1797:1985, RA2009	0.5 % to 15 %
		Acid insoluble Ash	Clause 8 of IS 1797:1985, RA2009	0.1 % to 5 %
		Crude Fibre dry basis	Clause 13 of IS 1797:1985, RA2009	0.5 % to 10%
		Non volatile Ether extract	Clause 14 of IS 1797:1985, RA2009	1.0 % to 30 %
<b>e.</b>	<b>Spices (Whole)</b>	Moisture	Clause-9 of IS 1797:2010	1 % to 20 %
		Total Ash on dry basis	Clause-6 of IS 1797:2010	1 % to 10 %
		Acid in soluble Ash	Clause-8 of IS 1797:2010	0.1 % to 2 %
		Volatile Oil	Clause-15 of IS 1797:2010	0.5 % to 10 %
<b>3.</b>	<b>Beverages (Alcoholic &amp; Non - Alcoholic)</b>			
<b>a.</b>	<b>Carbonated Drink (Non Alcoholic Beverages)</b>	pH at 25 °C	IS 3865:2001,Reaff. 2009	4.0 to 7.5
		Residue on evaporation	IS 3752:2005,RA2009	0.5% to 10 %
<b>4.</b>	<b>Bakery &amp; Confectionery Products</b>			
<b>a.</b>	<b>Biscuit</b>	Moisture	Annex –B of IS 1011:2002.RA2009	0.02 % to 10 %
		Acid insoluble ash	Annex –C of IS 1011:2002,RA2009	0.05 % to 1%
		Acidity of extracted fat as Oleic acid	Annex –D of IS 1011:2002,RA2009	0.1 % to 3.0%
<b>5.</b>	<b>Honey &amp; Honey Products</b>			
<b>a.</b>	<b>Honey</b>	Acidity as formic acid	Annex-E of IS	0.05 % to 5%

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 18 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			4941:1994,RA2008	
		Ash	Annex-D of IS 4941:1994,RA2008	0.01 % to 5%
		Specific gravity at 27 <sup>o</sup> c/ 27 <sup>o</sup> c	Annex-A of IS 4941:1994,RA2008	1.21 to 1.50
		Moisture	Annex-B of IS 4941:1994,RA2008	10 % to 30%
		Fiehe's Test	Annex F of IS 4941: 1994 RA 2008	Qualitative (Positive / Negative)
<b>6.</b>	<b>Others</b>			
<b>a.</b>	<b>Iodized Salt</b>	Moisture	Annex A of IS 7224: 2006	0.1 % to 10 %
		Water insoluble matter	Annex C of IS 7224: 2006	0.1 % to 10 %
		Chloride (as NaCl) on Dry Basis	Annex D of IS 7224: 2006	80 % to 99.5 %
		Iodine	Annex H of IS 7224: 2006	10 mg/kg to 50 mg/Kg
<b>7.</b>	<b>Sugar &amp; Sugar Products</b>			
<b>a.</b>	<b>Refined Sugar</b>	Loss on Drying	Clause-4 of IS 15279:2003,RA2013	0.1 % to 5 %
		Conductivity ash	Clause-9 of IS 15279: 2003,RA2013	0.01 % to 2.0 %
<b>8.</b>	<b>Jams, Juices, Sauces &amp; Concentrates</b>			
<b>a.</b>	<b>Tomato Ketchup</b>	Total soluble solids	Appendix B IS 2860:1964,RA2008	25.0 % to 80.0 %
		Specific gravity at 25 °C	Clause 9 of IS 2860:1964,RA2008	1.111 to 1.233
		Acidity(Acetic acid)	Clause 10 of IS 2860:1964,RA2008	0.2 % to 10 %
<b>b.</b>	<b>Fruit Juice</b>	Total soluble solid	FSSAI Manual 2016	6 % to 85 %
		Acidity as Citric acid	FSSAI Manual 2016	0.01 % to 2 %
<b>9.</b>	<b>Cereals, Pulses &amp; Cereals Products</b>			
<b>a.</b>	<b>Wheat Atta</b>	Moisture	Appendix-A of IS 1155:1968,RA2015	1% to 13%
		Total ash on dry basis	Appendix-B of IS 1155:1968.RA2015	0.5 % to 3%

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 19 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Acid Insoluble ash (on dry basis)	Appendix-C of IS 1155:1968,RA2015	0.1 % to 2%
		Crude Fiber (on dry basis)	Appendix-E of IS 1155:1968,RA2015	0.3 % to 10%
		Gluten (on dry basis)	Appendix-D of IS 1155:1968,RA2015	4.2 % to 15%
		Protein	FSSAI Manual 2016	5.0 % to 30%
<b>b.</b>	<b>Rice, Corn / Maize &amp; Chana Daal</b>	Moisture	Appendix –A of IS 1009:1979 ,RA2015	0.5 % to 15 %
		Total Ash on dry basis	Appendix- B of IS, 1009:1979, RA 2015	0.1 % to 10 %
		Acid in soluble Ash	Appendix – C of IS 1009:1979, RA 2015	0.01 to 5%
		Protein	IS 7219:1973, RA 2010	0.5 % to 30 %
		Alcoholic Acidity expressed as H <sub>2</sub> SO <sub>4</sub>	Appendix- E of IS 1009:1979, RA 2015	0.01 to 1.0%
<b>c.</b>	<b>Semolina and Suzi</b>	Moisture	Appendix-Bof IS1010:1968, RA 2015	0.1 % to 25.0 %
		Total Ash on dry basis	Appendix-C of IS 1010:1968, RA 2015	0.1 % to 5.0 %
		Acid in soluble Ash	Appendix-D of IS 1010:1968, RA 2015	0.01 % to 1 %
		Gluten	Appendix-E of IS 1010:1968, RA 2015	1 % to 10 %
		Alcoholic acidity as H <sub>2</sub> SO <sub>4</sub>	Appendix-F of IS 1010:1968, RA 2015	0.01 % to 2 %
<b>d.</b>	<b>Grains and Pulses</b>	Moisture	Manual of methods of analysis of foods (Cereal and cereal products ), FSSAI, 2016 Method 2.0	1 % to 20 %
		Foreign matter	Manual of methods of analysis of foods (Cereal and cereal products ), FSSAI, 2016 Method1.2	0.1 % to 10 %

Laboratory **Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha**

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

Certificate Number **TC-7043**

Page 20 of 22

Validity **16.03.2018 to 15.03.2020**

Last Amended on **27.03.2018**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Added Synthetic Colour	Adulteration of Food Quality & Safety	Qualitative test (Present / Absent)
		Total Ash on dry basis	Manual of methods of analysis of foods (Cereal and cereal products ), FSSAI, 2016 Method 8.2	0.4 % to 10 %
		Crude Protein	Manual of methods of analysis of foods (Cereal and cereal products ), FSSAI, 2016 Method 8.7	1 % to 25 %
		Acid Insoluble Ash	Manual of methods of analysis of foods (Cereal and cereal products ), FSSAI, 2016 Method 8.3	0.01 % to 1 %
10.	Tea	Water extract	Manual for analysis of Beverages (Cofee, Tea, Cocoa, Chicory), Sugar and Sugar Products and Confectionary products, 2015, Method 1.7	5.0 % to 50 %
		Total Ash on dry basis	Manual for analysis of Beverages (Cofee, Tea, Cocoa, Chicory), Sugar and Sugar Products and Confectionary products, 2015 Method 1.3	1 % to 10 %
		Water soluble Ash	Manual for analysis of Beverages (Cofee, Tea, Cocoa, Chicory), Sugar and Sugar Products and Confectionary products, 2015 Method 1.4	10 % to 90 %
		Alkalinity of water	Manual for analysis of	1 % to-10 %

**Laboratory** Kalyani Laboratories Private Limited, Plot No. 78/944, Balianata, Pahal, Bhubaneswar, Odisha

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

**Certificate Number** TC-7043

**Page 21 of 22**

**Validity** 16.03.2018 to 15.03.2020

**Last Amended on** 27.03.2018

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		soluble Ash	Beverages (Cofee, Tea, Cocoa, Chicory), Sugar and Sugar Products and Confectionary products, 2015 Method 1.6	
		Acid insoluble Ash	Manual for analysis of Beverages (Cofee, Tea, Cocoa, Chicory), Sugar and Sugar Products and Confectionary products, 2015 Method 1.5	0.2 % to 5.0 %

---

**Sandeep Singh Tomar**  
Convenor

---

**N. Venkateswaran**  
Program Director

Laboratory Kalyani Laboratories Private Limited, Plot No. 78/944, Baliana, Pahal, Bhubaneswar, Odisha

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7043

Page 22 of 22

Validity 16.03.2018 to 15.03.2020

Last Amended on 27.03.2018

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

**RADIOLOGICAL TESTING**

I.	WATER			
1.	Packaged Drinking Water, Packaged Natural Mineral Water & Drinking Water	$\alpha$ emitters	IS 14194 (Part 2): 2013	0.01 Bq/l to 6000 Bq/l
		$\beta$ emitters	IS 14194 (Part 1): 2013	0.03 Bq/l to 6000 Bq/l