

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	1 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	AIR , GASES AND ATMOSPHERE			
1.	Ambient Air Monitoring	Dust fall Rate	IS 5182 (Part 1): 2006 (RA 2008)	10 to 10000 mg/m ² /day
		Sulphur dioxide	IS 5182 (Part 2): 2001 (RA 2006)	5 to 1050 µg/m ³
		Suspended Particulate matter (SPM)	IS 5182 (Part 4): 1999 (RA 2005)	5 to 2000 µg/m ³
		PM ₁₀ - Particulate matter (≤10 µm)	IS 5182 (Part 23): 2006 (RA 2009)	5 to 1000 µg/m ³
		PM _{2.5} - Particulate matter (≤ 2.5 µm)	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	5 to 500 µg/m ³
		Nitrogen oxides	IS 5182 (Part 6): 2006 (RA 2009)	5 to 740 µg/m ³
		Hydrogen sulphide	IS 5182 (Part 7): 1973 (RA 2009)	6 to 600 µg/m ³
		Carbon monoxide	IS 5182 (Part 10): 1999 (RA 2009)	0.02 to 100 mg/m ³
		Benzene	IS 5182 (Part 11): 2006 (RA 2009)	0.3 to 100 µg/m ³
		PAH's- Benzo (a) Pyrene (BaP)	IS 5182 (Part 12): 2004 (RA 2009)	0.1 to 2000 ng/m ³
		Total fluorides	IS 5182 (Part 13): 1991 (RA 2009)	1 to 100 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	2 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Hydrocarbons (as CH ₄)	IS 5182 (Part 17): 1979 (RA2003)	0.2 to 100 mg/kg(v/v)
		Methane	IS 5182 (Part 17): 1979 (RA2003)	0.2 to 100 mg/kg(v/v)
		Chlorine	IS 5182 (Part 19): 1982 (RA 2009)	10 to 2900 µg/m ³
		Lead	IS 5182 (Part 22): 2004 (RA 2009)	0.02 to 20 µg/m ³
		Nickel	ASTM D4185-2006	0.2 to 10000 ng/m ³
		Arsenic	ASTM D4185-2006	0.2 to 10000 ng/m ³
		Ozone	ISC, Method No. 417, ASTM D5156-2008	10 to 2000 µg/m ³
		Ammonia	ISC Method -401	0.5 to 1000 µg/m ³
2.	Emission from Stationary Sources (From Stack/ Ducts)	Particulate matter	IS 11255 (Part 1): 1985 (RA2003)	5 mg/m ³ to 100 g/Nm ³
		Flow rate	IS 11255 (Part 3): 2008	3 - 30 m/s
		Carbon dioxide	IS 13270 : 2003	0.2 - 100 %v/v
		Oxygen	IS 13270 : 2003	0.2 to 100 %v/v
		Carbon monoxide	IS 13270 : 2003	0.2 to 100 % v/v
		Nitrogen	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 (By Difference)	Max. 79 %v/v (By Calculation)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	3 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Carbon monoxide	USEPA (Part 10)	0.1 to 1000 mg/Nm ³
		Oxides of Nitrogen	IS 11255 (Part 7): 2005	10 to 2500 mg/Nm ³
		Total Hydrocarbons	USEPA (Part 25A)	0.2 to 1000 mg/Nm ³
		Moisture	IS 11255 (Part 3): 2008	0.1 to 50 %
		Sulphur dioxide	IS 11255 (Part 2): 1985 (RA2003)	2 to 12500 mg/Nm ³
		Hydrogen sulphide	IS 11255 (Part 4): 2006	1 to 100 mg/Nm ³
		Ammonia	IS 11255 (Part 6): 1999 (RA2003)	5 to 100 mg/Nm ³
		Total fluorides	IS 11255 (Part 5): 1990 (RA2003)	0.1 to 200 mg/Nm ³
		Hydrogen Chloride	US EPA Method-51 & 9057	0.1 to 200 mg/Nm ³
		Hydrogen Fluoride	US EPA Method-26	0.1 to 200 mg/Nm ³
		Lead	US EPA Method -12	0.1 to 50 mg/Nm ³
		Mercury	US EPA Method- 29	0.005 to 50 mg/Nm ³
		Acid mist	USEPA Method -8	2 to 200 mg/Nm ³
		Sulphur trioxide	USEPA Method -8	2 to 15000 mg/Nm ³
3.	Fugitive Emission Monitoring	Sulphur dioxide	IS 5182 (Part 2): 2001 (RA 2006)	5 to 1000 µg/m ³
		Suspended Particulate matter (SPM)	IS 5182 (Part 4): 1999 (RA 2005)	5 to 2000 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	4 of 275

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		PM _{2.5} - Particulate matter ($\leq 2.5 \mu\text{m}$)	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	5 to 500 $\mu\text{g}/\text{m}^3$
		PM ₁₀ - Particulate matter ($\leq 10 \mu\text{m}$)	IS 5182 (Part 23): 2006 (RA 2009)	5 to 1000 $\mu\text{g}/\text{m}^3$
		Nitrogen oxides	IS 5182 (Part 6): 2006 (RA 2009)	5 to 740 $\mu\text{g}/\text{m}^3$
		Hydrogen sulphide	IS 5182 (Part 7): 1973 (RA 2003)	6 to 1000 $\mu\text{g}/\text{m}^3$
		Carbon monoxide	IS 5182 (Part 10): 1999 (RA 2009)	0.02 to 1000 mg/m^3
		Benzene	IS 5182 (Part 11): 2006 (RA 2009) NISOH Method 1501-2003	0.3 to 500 $\mu\text{g}/\text{m}^3$
		Toluene	IS 5182 (Part 11): 2006 (RA 2009), NISOH Method 1501-2003	0.3 to 500 $\mu\text{g}/\text{m}^3$
		Xylene	IS 5182 (Part 11): 2006 (RA 2009), NISOH Method 1501-2003	0.3 to 500 $\mu\text{g}/\text{m}^3$
		Total Hydrocarbons (as CH ₄)	IS 5182 (Part 17): 1979 (RA 2003)	0.2 to 100 $\text{mg}/\text{kg}(\text{v/v})$
		Chlorine	IS 5182 (Part 19): 1982 (RA 2009)	10 to 2900 μ/m^3
		Carbon dioxide	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	50 to 10000 mg/m^3
		Ammonia	ISC Method -401	0.5 to 1000 $\mu\text{g}/\text{m}^3$

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	5 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Ozone		ISC, Method No. 417, ASTM D5156-2008	10 to 2000 µg/m ³
	Lead		IS 5182 (Part 22): 2004 (RA 2009)	0.02 to 50 µg/m ³
	Iron		ASTM D4185-2006	1 to 2000 µg/m ³
	Nickel		ASTM D4185-2006	0.2 to 100 µg/m ³
	Arsenic		ASTM D4185-2006	0.2 to 50 µg/m ³
	Cadmium		ASTM D4185-2006	0.2 to 50 µg/m ³
	Mercury		ASTM D4185-2006	0.3 to 100 µg/m ³
	Total Volatile Organic Compounds (VOCs)		ASTM D 3687-2007, SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	0.1 to 100 mg/kg v/v
	Formaldehyde		ASTM D 5014-1994	1 to 1700 µg/m ³
	Hydrogen chloride (as HCl)		SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	0.1 to 14 mg/m ³
			NISOH Method 7903-1994	0.1 to 14 mg/m ³
	Hydrogen fluoride (as HF)		NISOH Method 7903- 1994	0.35 to 6 mg/m ³
	Nitric acid (as HNO ₃)		NISOH Method 7903-1994	1 to 10 mg/m ³
	Sulphuric acid (as H ₂ SO ₄)		NISOH Method 7903-1994	0.5 to 2 mg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	6 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Gases Pollutants (Excluding Vehicular)	Hydrogen sulphide	IS 5182 (Part 7): 1973 (RA 2009)	6 to 600 µg/m ³
			IS 11255 (Part 4): 2006	1 to 100 mg/m ³
		Ammonia	ISC Method -401	0.5 to 1000 µg/m ³
			IS 11255 (Part 6): 1999 (RA 2003)	5 to 100 mg/Nm ³
		Total Hydrocarbons (as CH ₄)	IS 5182 (Part 17): 1979 (RA 2003)	0.2 to 100 mg/kg(v/v)
			USEPA (Part 25A)	0.2 to 1000 mg/Nm ³
		Methane	IS 5182 (Part 17): 1979 (RA2003)	0.2 to 100 mg/kg(v/v)
		Chlorine	IS 5182 (Part 19): 1982 (RA 2009)	10 to 2900 µg/m ³
		Total fluorides	IS 5182 (Part 13): 1991 (RA 2009)	1 to 100 µg/m ³
		Hydrogen Chloride	US EPA Method-51 & 9057	0.1 to 200 mg/m ³
		Hydrogen Fluoride	US EPA Method-26	0.1 to 200 mg/m ³
		Sulphur trioxide	USEPA Method -8	2 to 15000 mg/m ³
		Organic Solvents	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	0.1 to 10 mg/m ³
5.	Industrial Gases			
a.	Carbon Dioxide	Purity of CO ₂	IS 307 : 1966 (RA 2006)	0.2 to 100 % v/v
		Moisture	IS 307 : 1966 (RA 2006)	0.001 to 2 % v/v

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	7 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Carbon monoxide	IS 307 : 1966 (RA 2006)	0.1 to 100 mg/kg
		Acid and SO ₂	IS 307 : 1966 (RA 2006)	Qualitative (Limit Test)
		Phosphene and H ₂ S	IS 307 : 1966 (RA 2006)	Qualitative (Limit Test)
		Arsenic	IS 307 : 1966 (RA 2006)	0.001 to 2 mg/m ³
		Oil	IS 307 : 1966 (RA 2006) & APHA 22 nd Ed.	0.2 to 10 mg/m ³
b.	Dissolved Acetylene Gas	Total Impurities insoluble in acetone	IS 308:1988 (RA 2010)	0.1 to 10 % v/v
		Sulphur compounds	IS 308 : 1988 (RA 2010)	0.002 to 5 % v/v
		Phosphorous Compounds	IS 308 : 1988 (RA 2010)	0.001 to 5 % v/v
		Moisture	IS 308: 1988 (RA 2010)	0.01 to 2 % v/v
6.	Liquefied/ Compressed Gases			
a.	Compressed Natural Gas (CNG)/ Piped Natural Gas (PNG)	Oil	IS 307 : 1966 (RA 2006) & APHA 22 nd Ed.	0.5 to 10 mg/m ³
		Moisture	IS 307: 1966 (RA 2006)	5 to 10000 mg/m ³
		Particulate matter	IS 11255 (Part 1): 1985 (RA2003) (under non- isokinetic condition)	0.2 to 10 mg/m ³
		Sulphide (as H ₂ S)	IS 11255 (Part 4): 2006	1 - 100 mg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	8 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
b.	Compressed Air	Oil	ISO 8573 (Part 2): 2008 IS 307: 2005 & APHA Ed. 22 nd	0.01 to 10 mg/m ³
		Moisture	IS 307 : 1966 (RA 2006)	5 to 10000 mg/m ³
		Particulate matter	ISO 8573 (Part 2): 2008	0.01 to 1 mg/m ³
			IS 11255 (Part 1): 1985 (RA 2003) (under non- isokinetic condition)	0.2 to 10 mg/m ³
		Carbon dioxide	IS 1747 (Titrimetric) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	10 to 5000 mg/kg
		Carbon monoxide	IS 5182 (Part 10): 1999 (RA 2009)	0.1 to 10 mg/kg
		Total Hydrocarbons (as CH ₄)	IS 5182 (Part 17): 1997 (RA 2003)	1.0 to 1000 mg/kg(v/v)
7.	Work Environment and Air Quality	Sulphur dioxide	IS 5182 (Part 2): 2001 (RA 2006)	5 to 1000 µg/m ³
		Suspended Particulate matter (SPM)	IS 5182 (Part 4): 1999 (RA 2005)	5 to 2000 µg/m ³
		PM _{2.5} - Particulate matter (≤ 2.5 µm)	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	5 to 500 µg/m ³
		PM ₁₀ - Particulate matter (≤ 10 µm)	IS 5182 (Part 23): 2006 (RA 2009)	5 to 1000 µg/m ³
		Sulphur dioxide	IS 5182 (Part 2): 2001 (RA 2006)	5 to 1050 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	9 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Nitrogen oxides		IS 5182 (Part 6): 2006, IS 15209-2002	5 to 740 µg/m ³
	Hydrogen sulphide		IS 5182 (Part 7): 1973 (RA 2003)	6 to 1000 µg/m ³
	Carbon monoxide		IS 5182 (Part 10): 1999 (RA 2009), IS 15206-2002	0.02 to 1000 mg/m ³
	Benzene		IS 5182 (Part 11): 2006 (RA 2009), NISOH Method 1501-2003	0.3 to 500 µg/m ³
	Toluene		IS 5182 (Part 11): 2006 (RA 2009), NISOH Method 1501-2003	0.3 to 500 µg/m ³
	Xylene		IS 5182 (Part 11): 2006 (RA 2009), NISOH Method 1501-2003	0.3 to 500 µg/m ³
	Total Hydrocarbons (as CH ₄)		IS 5182 (Part 17): 1979 (RA 2003)	0.2 to 100 mg/kg(v/v)
	Chlorine		IS 5182 (Part 19): 1982 (RA 2009)	10 to 2900 µ/m ³
	Carbon dioxide		IS 1747 (Titrimetric) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	50 to 10000 mg/m ³
	Ammonia		ISC Method -401	0.5 to 1000 µg/m ³
	Ozone		ISC, Method No. 417, ASTM D5156-2008	10 to 2000 µg/m ³
	Lead		IS 5182 (Part 22): 2004 (RA 2009)	0.02 to 50 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	10 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron	ASTM D4185-2006	10 to 2000 µg/m ³
		Nickel	ASTM D4185-2006	0.2 to 100 µg/m ³
		Arsenic	ASTM D4185-2006	0.2 to 50 µg/m ³
		Cadmium	ASTM D4185-2006	0.2 to 50 µg/m ³
		Mercury	ASTM D4185-2006	0.3 to 100 µg/m ³
		Total Volatile Organic Compounds (VOCs)	ASTM D3687-2007/ SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	0.1 to 100 mg/kg v/v
		Formaldehyde	ASTM D 5014-1994	1 to 1700 µg/m ³
		Hydrogen chloride (as HCl)	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 NISOH Method 7903-1994	0.1 to 14 mg/m ³
		Hydrogen fluoride (as HF)	NISOH Method 7903-1994	0.35 to 6 mg/m ³
		Nitric acid (as HNO ₃)	NISOH Method 7903-1994	1 to 10 mg/m ³
		Sulphuric acid (as H ₂ SO ₄)	NISOH Method 7903-1994	0.5 to 2 mg/m ³
		Asbestos content	IS 11450 : 2006	0.0001 to 10 Fibres/cc
8.	Indoor Air Quality	Temperature	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014-By Thermo hygrometer & SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 –By Portable Toxic Gas Analyzer	5 to 52°C - 10 to 70°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	11 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Relative Humidity	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014-By Thermo hygrometer	5 to 100%
			SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 –By Portable Toxic Gas Analyzer	0 to 100 %
	PM _{2.5} - Particulate matter (< 2.5 µm)		SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 -By Haz Dust Monitor	1 to 500 µg/m ³
			SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Particle Counter Cum Mass Conc. Meter	1 to 20000 µg/m ³
	PM ₁₀ - Particulate matter (<10 µm)		SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 -By Haz Dust Monitor	1 to 1000 µg/m ³
			SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Particle Counter Cum Mass Conc. Meter	1 to 20000 µg/m ³
	Total Suspended Particulate matter (TSPM)		SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014 -By Haz Dust Monitor	1 to 1000 µg/m ³
			SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Particle Counter Cum Mass Conc. Meter	10 to 20000 µg/m ³
	Sulphur dioxide		IS 5182 (Part 2): 2001 (RA 2006)	5 to 1000 µg/m ³
			SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	0.1 to 39000 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	12 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nitrogen oxides	IS 5182 (Part 6): 2006 (RA 2009) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	5 to 740 µg/m ³ 0.1 to 10000 µg/m ³
		Carbon monoxide	IS 5182 (Part 10): 1999 (RA 2009) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	0.02 to 1000 mg/m ³
		Carbon dioxide	SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014/ IS 1747	50 to 10000 mg/m ³
		Hydrogen sulphide	IS 5182 (Part 7): 1973 (RA2003) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	6 to 1000 µg/m ³
		Total Hydrocarbon	IS 5182 (Part 17): 1979 (RA2003) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014	1.0 to 1000 mg/kg(v/v)
		Chlorine	IS 5182 (Part 19): 1982 (RA 2009) SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	10 to 2900 µ/m ³
		Ammonia	ISC Method -401 SOP No.SRI/EPD/Air Lab/01 dt.01.04.2014- By Portable Toxic Gas Analyzer	0.5 to 1000 µg/m ³
		Formaldehyde	ASTM D 5014: 1994	1 to 1700 µg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	13 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
II. ALCOHOL AND ALCOHOL BASED CHEMICALS				
1.	Methanol	Relative density	IS 82 : 1973 (RA2007) Cl. 6	0.5 to 2.0
		Distillation range	IS 1448 : 1991 (Part 18) (RA 2010) Method A	50 to 70°C
		Acidity/ Alkalinity	IS 517 : 1986 Annex. B-2/B-1	0.0001 to 1%
		Residue on evaporation	IS 82 : 1973 (RA2007) Cl. 8	0.01 to 2%
		Aldehydes & ketones, as acetone	IS 517 :1986 Annex. C-1	0.01 to 1%
		Chlorine & Chlorine compounds	IS 517:1986 Annex. E	Qualitative
		Water	IS 2362:1993 (RA 2010)	0.01 to 10 %
2.	Menthol	Purity content	IS 3134:1992 (RA 2010)Annex. B	70 to 99.9%
		Colour & appearance	IS 326:1980 (RA2000) (Part 2) Cl. 2.1	Qualitative
		Melting range	IS 326 : 1980 (RA 2008) (Part 16) Cl. 3.3	40 to 60°C
		Optical rotation, 10 % (m/v) soln. in 95 % ethyl alcohol)	IS 326 : 2005 (RA 2010) (Part 4) Cl. 3.1	-60°to -40°
		Non-volatile matter	IS 3134: 1992 (RA 2010)Annex. A	0.01 to 2%
3.	Ethylene glycol	Colour	IS 5295 :1985 (RA2011)	Qualitative
		Colour after boiling for 4 hour under total reflux	IS 5295 :1985 (RA2011) Annex. A-2	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	14 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Relative density	IS 82 :1973 (RA2007) Cl. 6	0.5 to 2.0
		Distillation range at 760 mm Hg a) Initial boiling point b) The temperature at which 95ml of material shall distil	IS 5295:1985 (RA2011) Annex. A-4	150 to 250°C
		Moisture content	IS 5295:1985 (RA2011) Annex. A-5	0.01 to 10 %
		Acidity	IS 5295:1985 (RA2011) Annex A-6	0.001 to 1%
		Ash	IS 5295:1985 (RA2011) Annex. A-7	0.001 to 1%
		Ultra Violet transmittance in 1cm cell at a) 220 nm b) 275 nm c) 350 nm	IS 5295:1985 (RA2011) Annex. A-8	20 to 99.9%
		Iron content	IS 5295:1985 (RA2011) Annex. A-10	Qualitative
		Freezing point	IS 5295:1985 (RA2011) Annex. A-9	-40° to -10°
		Chlorides content	IS 5295:1985 (RA2011) Annex. A-11	Qualitative
		Diethylene glycol	IS 5295:1985 (RA2011) Annex. A-12	0.01 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	15 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Diethylene glycol	Colour, Part CO scale	IS 7918 : 2001 (RA2011)	Qualitative
		Mono-ethylene glycol content	IS 7918 : 2001 (RA2011) Annex. F	0.1 to 2%
		Tri-ethylene glycol content	IS 7918 : 2001 (RA2011) Annex. F	0.1 to 10%
		Relative density, 27°C	IS 7918 : 2001 (RA2011) Annex .A	0.5 to 2.0
		Distillation range, a) Initial boiling point 760 mm Hg, min b) Dry point 760 mm Hg	IS 7918 : 2001 (RA2011) Annex. B	100 to 300°C
		Water content	IS 7918 : 2001 (RA2011) Annex. C	0.01 to 10 %
		Acidity (as acetic acid)	IS 7918 : 2001 (RA2011) Annex. D	0.005 to 10% by mass
		Iron content	IS 7918 : 2001 (RA2011) Annex. E	Qualitative
5.	Propylene glycol	Purity content (as C ₃ H ₈ O ₂)	IS 2362 : 1993 (RA 2010) Annex. A	70 to 99.9%
		Moisture	IS 2362 : 1993 (RA 2010)	0.01 to 10 % by mass
		Arsenic	IS 1699: 1995 (RA 2009) Cl. 15	Qualitative
		Heavy metals(as Pb)	IS 13702 : 1993 (RA 2009) Annex. B	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	16 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Acidity	IS 13702: 1993 (RA 2009) Annex. C	0.01 to 10%
		Sulphated ash	IS 13702: 1993 (RA 2009) Annex. D	0.01 to 10%
		Presence of other polyhydroxy compounds	IS 13702: 1993 (RA 2009) Annex. A	Qualitative
		Ethylene glycol	IS 13702: 1993 (RA 2009) Annex. A	Qualitative
III.	PESTICIDES			
A.	Synthetic Pesticides & their formulations			
	<i>Pesticides Technical</i>			
1.	Alachlor Technical	Alachlor content	IS 9353:1980 (RA 2012) Annexex A	50 to 99.9%
		Moisture	IS 6940: 82 (RA 2012) Cl. 4.	0.01 to 5.0%
		Material insoluble In acetone	IS 6940: 82 (RA 2012) Cl.9	0.01 to 5.0%
		Acidity	IS 6940: 82 (RA 2012) Cl.11.3.2	0.01 to 5.0%
2.	Alpha naphthyl-acetic acid Technical	Active ingredient	IS 13070:1991 (RA 2012) Annex C	50 to 99.9%
		Melting point	IS 6940: 82 (RA 2012) Cl.6	100 to 200°C
		Sulphated ash	IS 13070: 1991 (RA 2012) Annexex D	0.01 to 5.0%
3.	Acephate Technical	Acephate content	IS 12915 :1990 (RA2012) Annexex A	50 to 99.9%
		Melting Point	IS 6940: 82 (RA 2012) Cl.6	50 to 100°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	17 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Atrazine Technical	Material insoluble In water	IS 6940: 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940: 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Active ingredient	IS 12932: 1990 (RA 2012) Annex B	50 to 99.9%
		Ionic chloride	IS 12932: 90 (RA 2012) Annexex C	0.1 to 5%
		Moisture	IS 6940: 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Melting Point	IS 6940: 82 (RA 2012) Cl.6	100 to 200°C
5.	Allethrin Technical	Active ingredient	IS 13146 : 1991 (RA 2012) Annexex A	50 to 99.9%
		Ratio of trans and cis isomers	IS 13146: 91 (RA 2012) Annexex B	Qualitative
		Material insoluble in acetone	IS 6940: 82 (RA 2012) Cl. 9	0.01 to 5.0%
6.	Anilophos Technical	Relative density	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 2.0
		Acidity	IS 6940 :82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Active ingredient	IS 13402 :1992 (RA 2012) Annexex A	50 to 99.9%
		Material insoluble in acetone	IS 6940: 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Moisture	IS 6940: 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	18 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Acetamiprid Technical	Active ingredient	CIPAC handbook L 649/TC/M/-	50 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 :82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940: 82 (RA 2012) Cl. 9	0.01 to 5.0%
8.	Betacyfluthrin Technical	Active ingredient	CIPAC 482/WP/M	50 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012)	0.01 to 5.0%
		Moisture	IS 6940 :82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
9.	Bromadiolone Technical	Active ingredient	IS 12914 : 1990 (RA 2012) Annexex A	50 to 99.9%
		Moisture	IS 6940 :1982 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Melting Point	IS 6940 : 1982 (RA 2012) Cl.6	150 to 250°C
10.	Butachlor Technical	Active ingredient	IS 9355-1980 (RA 2012)	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble In Acetone	IS 6940 :1982 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
11.	Carbendazim Technical	Active ingredient	IS 8445 :1991 (RA 2012) Annexex B	50 to 99.9%
		Moisture	IS 6940: 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Acidity	IS 6940:82 (RA 2012) Cl. 11.3	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	19 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
12.	Carboxin Technical	Active ingredient	IS 13110:1991 (RA 2012) Annexex B	50 to 99.9%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Melting Point	IS 6940: 1982 (RA 2012) Cl.6	50 to 100°C
13.	Cartap Hydrochloride Technical	Active ingredient	IS 14159 :1994 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940:1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		pH of 10% aqua	IS 14159:1994 RA 2009 App B	1 to 14
14.	Carbofuran Technical	Active ingredient	IS 9360:1980 (RA 2012) Annexex A	50 to 99.9%
		Moisture	IS 6940:1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		Alkalinity	IS 6940:1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
15.	Cypermethrin Technical	Active ingredient	IS 12015:1987 (RA 2012) Annexex A	50 to 99.9%
		Acidity	IS 6940:1982 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl. 4.1	0.01 to 5.0%
16.	Cyfluthrin Technical	Active ingredient	IS 14156:1994 (RA 2009) Annexex A	50 to 99.9%
		Acidity	IS 6940:1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl. 4.1	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	20 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
17.	Chlorpyrifos Technical	Active ingredient	IS 8963: 2006 (RA 2010) Annex A	50 to 99.9%
		Acidity	IS 6940:1982 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Material soluble in Acetone	IS 6940: 1982 (RA 2012) Cl. 9	0.01 to 5.0%
18.	Captan Technical	Active ingredient	IS 14251: 1995 (RA 2009)	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		Free ionic chloride	IS 14251: 1995 (RA 2009) Annex B	0.1 to 5%
19.	Copper oxychloride Technical	Copper content	IS 1506: 1977 (RA 2012)	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.2	0.01 to 5.0%
		Total chlorine	IS 1486: 1978 (RA 2012) App A	0.01 to 5.0%
		Acidity/Alkalinity	IS 1506: 1977 (RA 2012) App B	0.01 to 5.0%
		Soluble copper	IS 1486: 1978 (RA 2012) App B	Qualitative
		Lead	IS 1486: 1978 (RA 2012) App C	Qualitative
		Arsenic	IS 1486: 1978 (RA 2012) App D	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	21 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
20.	Cypermethrin Technical / Technical concentrate	Active ingredient	IS 12015: 1987 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940: 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940: 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Relative density	IS 6940: 82 (RA 2012) Cl.5.0	0.5 to 2.0
		Cis trans ratio	IS 12017: 1987 (RA 2012) Annex A	Qualitative
21.	Cymoxanil Technical	Active ingredient	IS 15600: 2005 (RA 2010) Annex A	50 to 99.9%
		Acidity	IS 6940:1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940: 1982 (RA 2012) Cl. 9	0.01 to 5.0%
22.	Clodinafop propargyl Technical	Active ingredient	CIPAC handbook 683 /TC/M/3	50 to 99.9%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940: 1982 (RA 2012) Cl. 9	0.01 to 5.0%
23.	Cyphenothrin Technical	Active ingredient	CIPAC handbook 761 /TC/M/3	50 to 99.9%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	22 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940: 1982 (RA 2012) Cl. 9	0.01 to 5.0%
24.	Dodine Technical	Active ingredient	IS 13784:1993 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.2	0.01 to 5.0%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
25.	Diiflubenzuron Technical	Active ingredient	IS 14185: 1994 (RA 2009) Ann A	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.1	0.01 to 5.0%
		Acidity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
26.	Diuron Technical	Active ingredient	IS 8702: 1997 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Melting Point	IS 6940: 1982 (RA 2012) Cl.6	100 to 200°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	23 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
27.	Dicofol Technical	Active ingredient	IS 5278: 1969 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 5278: 1969 (RA 2012) Annex B	0.01 to 5.0%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.0	0.01 to 5.0%
28.	Deltamethrin Technical	Active ingredient	IS 12005: 2011 (RA 2012) Annex A	50 to 99.9%
		Melting Point	IS 6940: 1982 (RA 2012) Cl.6	20 to 200°C
		Optical rotation	IS 12005: 1987 (RA 2012) App B	20 to 100°
		Acid chloride	IS 12005: 1987 (RA 2012) App C	0.01 to 5.0%
		Acid Anhydride	IS 12005: 1987 (RA 2012) App D	0.01 to 5.0%
29.	Diazinon Technical	Active ingredient	IS 1833: 1980 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940: 1982 (RA 2012) Cl.4.0	0.01 to 5.0%
		Acidity	IS 6940:1982 (RA 2012) Cl. 11.3.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940: 1982 (RA 2012) Cl. 9	0.01 to 5.0%
30.	Dimethoate Technical	Active ingredient	IS 3902:1975 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940:1982 (RA 2012) Cl.4.2	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	24 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
31.	Dichlorovs Technical	Material insoluble in acetone	IS 6940:1982 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940:1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Active ingredient	IS 4929:1978 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940:1982 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940:1982 (RA 2012) Cl. 4.1	0.01 to 5.0%
32.	Ethephon Technical	Material insoluble in acetone	IS 6940:1982 (RA 2012) Cl.9.1	0.01 to 5.0%
		Active ingredient	IS 14408: 1996 (RA 2012)	50 to 99.9%
		pH	IS 14408: 1996 (RA 2012)	1 to 14
33.	Endosulphan Technical	Active ingredient	IS 4344 : 1978 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in water	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	25 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
34.	Ethion Technical	Active ingredient	IS 10369 : 1982 (RA 2009) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
35.	Fenvalerate Technical	Active ingredient	IS 12003 : 1987 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
36.	Fluchloralin Technical	Active ingredient	IS 8958 : 1978 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
37.	Fenitrothion Technical	Active ingredient	IS 5280 : 1969 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.0	0.01 to 5.0%
		Acidity	IS 5280 : 69 (RA 2012) App C	0.01 to 5.0%
		Specific gravity	IS 5280 : 69 (RA 2012) App D	0.5 to 2.5

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	26 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Material insoluble in acetone	IS 5280 : 69 (RA 2012) App B	0.01 to 5.0%
38.	Fenpropathrin Technical	Active ingredient	IS 15161 : 2002 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
39.	Fenthion Technical	Active ingredient	IS 7950 : 1989 (RA 2012) Annex A	50 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
40.	Fipronil Technical	Active ingredient	CIPAC 581//TC/M3	50 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012)	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
41.	Glyphosate Technical	Active ingredient	IS 12502 : 88 (RA 2009) Annex A	50 to 99.9%
		Acidity	IS 12502 : 88 (RA 2009) App A-2	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	27 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
42.	Hexaconazole Technical	Chloride	IS 12502 : 88 (RA 2009) App B	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Active ingredient	IS 14549 : 1998 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
43.	Imidacloprid Technical	Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Active ingredient	IS 15443 : 2004 (RA 2009) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
44.	Isoproturon Technical	Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Active ingredient	IS 12004 : 1987 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Melting Point	IS 6940 : 82 (RA 2012) Cl.6	100 to 200°C
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	28 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
45.	Isoprothiolane Technical	Active ingredient	IS 15163 : 2002 (RA 2009) Annex A & B	50 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
46.	Lambda Cyhalothrin Technical	Active ingredient	IS 14509 : 1997 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
47.	Lindane Technical	Active ingredient	IS 882 : 1984 (RA 2010) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 882 : 84 (RA 2010) Annex B	0.01 to 5.0%
		Setting Point	IS 882 : 84 (RA 2010) Annex C	Qualitative
48.	Metalaxyl Technical	Active ingredient	IS 13458 : 1992 (RA 2007) Annex B	50 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	29 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
49.	Metribuzin Technical	Active ingredient	IS 13332 : 1992 (RA 2012)	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Melting point	IS 6940 : 82 (RA 2012) Cl.6	100 to 200°C
50.	Methyl Parathion (Technical concentrate)	Active ingredient	IS 9372 : 1980 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Relative density	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 4.0
51.	Mancozeb Technical	Mancozeb content	IS 8707 : 2013 App A	50 to 99.9%
		Zinc content	IS 8707 : 2013 App B	0.02 to 5%
		Manganese content	IS 8707 : 2013 App C	1 to 40%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	30 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
52.	Malathion Technical	Active ingredient	IS 1832 : 1978 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Specific gravity	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 2.5
53.	Methyl Parathion Technical	Active ingredient	IS 2570 : 1989 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Relative density	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 2.5
54.	Monocrotophos Technical	Active ingredient	IS 8025 : 90 (RA 2012) Annex B	50 to 99.9%
		Free MMA	IS 8025 : 90 (RA 2012) Annex C	0.1 to 5%
		Acidity	IS 6940 : 82 Cl.13.5.4	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	31 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
55.	Metsulfuron-methyl Technical	Active ingredient	IS 15615 : 2005 (RA 2010) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
56.	Phorate Technical	Active ingredient	IS 7976 : 1976 (RA 2012) Annex A	50 to 99.9%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Specific gravity	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 2.5
57.	Profenofos Technical	Active ingredient	IS 15238 : 2002 (RA 2009) Annex A	50 to 99.9%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	32 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
58.	Phenthoate Technical	Active ingredient	IS 8293 : 1976 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Specific gravity	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 2.5
59.	Phosalone Technical	Active ingredient	IS 8488: 1991 (RA 2012) Ann A	50 to 99.9%
		Melting Point	IS 6940 : 82 (RA 2012) Cl.6	20 to 100 °C
		Moisture	IS 8488: 1991 (RA 2012) Ann B	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
60.	Propiconazole Technical	Active ingredient	IS 15241 : 2002 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	33 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
61.	Pendimethalin Technical	Active ingredient	IS 12685 : 1989 (RA 2009) Annex A	50 to 99.9%
		Melting point	IS 6940 : 82 (RA 2012) Cl.6	20 to 100°C
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
62.	Propoxur Technical	Active ingredient	IS 8496 : 1977 (RA 2007) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2007) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2007) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2007) Cl. 9	0.01 to 5.0%
		Melting point	IS 6940: 1982 (RA 2007) Cl.6	50 to 100°C
63.	Propanil Technical	Active ingredient	IS 8071 : 1976 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Chlorine content	IS 8071 : 1976 (RA 2012) Annex B	0.01 to 50%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	34 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
64.	Primiphos methyl Technical	Active ingredient	IS 13080 : 1991 (RA 2012) Annex B	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Relative density	IS 6940 : 82 (RA 2012) Cl.5	0.5 to 4.0
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
65.	Pretilachlor Technical	Active ingredient	IS 15158 : 2002 (RA 2009) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
66.	Quinalphos Technical	Active ingredient	IS 8072 : 1984 (RA 2012) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.0	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Relative density	IS 6940 : 82 (RA 2012) Cl.5.0	0.5 to 2.0

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	35 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
67.	Triazophos Technical	Active ingredient	IS 14936 : 2001 (RA 2012) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
68.	Triademefon Technical	Active ingredient	IS 13328: 1992 (RA 2012) Ann A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
69.	Tebuconazole Technical	Active ingredient	IS 15165 : 2002 (RA 2009) Annex A	50 to 99.9%
		Alkalinity	IS 6940 : 82 (RA 2012) Cl. 11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
70.	Thiophanate methyl Technical	Active ingredient	IS 14551 : 1998 (RA 2009) Annex A	50 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl.9.1	0.01 to 5.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	36 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
71.	Thiram Technical	Active ingredient	IS 4320 : 1982 (RA2007)	50 to 99.9%
		Loss on drying	IS 4320 : 82 (RA 2007) Annex B	0.01 to 5.0%
		Ash	IS 4320 : 82 (RA 2007) Annex C	0.01 to 5.0%
72.	Temephos Technical	Active ingredient	IS 8701 : 2013 Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl. 4.1	0.01 to 5.0%
		Material insoluble in acetone	IS 6940 : 82 (RA 2012) Cl. 9	0.01 to 5.0%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 5.0%
73.	Ziram Technical	Active ingredient	IS 3900 : 1975 (RA 2007) Annex A	50 to 99.9%
		Moisture	IS 6940 : 82 (RA 2012) Cl.4.2	0.01 to 5.0%
74.	Zinc Phospide Technical	Active ingredient	IS 1251 : 1988 (RA 2009) Annex A	50 to 99.9%
		Zinc content	IS 1251 : 1988 (RA 2009) App. B	50 to 99.9%
		sieving through 150 μ IS sieve	IS 6940 : 82 (RA 2012) Cl.12.1	70 to 99.9%
		sieving through 106 μ IS sieve	IS 6940 : 82 (RA 2012) Cl.12.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	37 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
75.	2,4-D Sodium Salt Technical	Acid content (2,4-D)	IS 1488 : 1989 (RA 2009) Annex B	50 to 99.9%
		Water insoluble matter	IS 1488 : 97 (RA 2009) Annex C	0.01 to 5.0%
		Free Phenol	IS 4321 : 89 (RA 2009) Annex A	0.01 to 1.5%
		Melting Point	IS 1488 : 97 (RA 2009) Annex D	100 to 200°C
		Loss on drying	IS 4321 : 89 (RA 2009) Annex B	0.01 to 5.0%
76.	2,4-D Technical	2,4-D contents	IS 4321 : 1989 (RA 2009) Annex A	50 to 99.9%
		Free Phenol	IS 4321 : 1989 (RA 2009) Annex B	0.05 to 1.5%
		Loss on drying	IS 4321 : 1989 (RA 2009) Annex C	0.01 to 5.0%
		Melting Point	IS 6940 : 82 (RA 2012) Cl.6.0	100 to 200°C
		Triethanol amine insoluble matter	IS 4321 : 1989 (RA 2009) Annex D	0.01 to 5.0%
		Sulphated ash	IS 4321 : 1989 (RA 2009) Annex E	0.01 to 2.0%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	38 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
77.	2,4-D Ethyl Ester Technical	2,4 D content	IS 7233 : 91 (RA 2009) Annex A	50 to 99.9%
		Free 2,4 D content	IS 7233 : 91 (RA 2009) Annex B	0.01 to 10.0%
		2,4 D ethyl ester	IS 7233 : 91 (RA 2009) Annex C	50 to 99.9%
		Melting point	IS 7233 : 91 (RA 2009) Annex D	100 to 200°C
		Water	IS 7233 : 91 (RA 2009) Annex E	0.01 to 5.0%
		Suspended solids	IS 7233 : 91 (RA 2009) Annex F	0.01 to 2%
<i>Water Dispersable Powders</i>				
1.	Atrazine WP	Active ingredient	IS 12932 : 1990 (RA 2012) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300 s

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	39 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Alpha-Cypermethrin WP	Active ingredient	WHO SPEC 454/WP January 2012	2 to 85%
		Identity	WHO SPEC 454/WP January 2012	Qualitative
		Suspensibility	WHO SPEC 454/WP January 2012 IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Wet sieve test	WHO SPEC 454/WP January 2012	70 to 99.9%
		Persistent foam	WHO SPEC 454/WP January 2012	2 to 100ml
		pH	IS 1506: 1977 (Append A)	1 to 14
3.	Alpha-Cypermethrin WP	Active ingredient	WHO/IS/98.1.2.R1 revised August 2000	2 to 85%
		Alphacyper cis 1 isomer content	WHO/IS/98.1.2.R1 revised August 2000	Qualitative
		Suspensibility	WHO/IS/98.1.2.R1 revised August 2000 IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Wet sieve test	WHO/IS/98.1.2.R1 revised August 2000	70 to 99.9%
		Persistent foam	WHO/IS/98.1.2.R1 revised August 2000	2 to 100ml
		Alkalinity	IS 6940 : 82 (RA 2012) Cl.13.5	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	40 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Benomyl WP	Active ingredient	IS 13786 : 1993 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
5.	Copper Oxy-chloride WDP	Active ingredient	IS 1506 : 1977 (RA 2012)	2 to 85%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		pH	IS 1507 : 1977 (RA 2012) App A	1 to 14
6.	Chlorothalonil WP	Active ingredient	IS 13132 : 1991 (RA 2012) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	41 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Clodinafop propargyl WP	Active ingredient	CIPAC 683/WP/M/3	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
8.	Carbaryl WDP	Active ingredient	IS 7121 : 1973 (RA 2009) App A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.13.5	0.01 to 10%
9.	Carbendazim WP	Active ingredient	IS 8446 : 1991 (RA 2012) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	42 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
10.	Captan WP	Active ingredient	IS 11785 : 1986 (RA 2012) App A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940: 1982 (RA 2012) Cl.11.4	3 to 300sec
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl.11.3	0.01 to 10%
11.	Deltamethrin WP	Active ingredient	IS 12005-2011 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940: 1982 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940: 1982 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940: 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300 s
12.	Cyfluthrin WP	Active ingredient	IS 14156 : 1994 (RA 2009) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	43 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
13.	Chlorimuron ethyl WP	Suspensibility	IS 14158 : 1994 (RA 2009) Annex B	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Active ingredient	IS 15619 : 2005 (RA 2010) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Active ingredient	IS 11995 : 1987 (RA 2007) App A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
14.	Isoproturon WP	Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	44 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
15.	Lambda cyhalothrin WP	Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Active ingredient	IS 14510 : 1997 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 14510 : 1997 (RA 2012) Annex B	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
16.	Malathion WDP	Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Active ingredient	IS 1832 : 1978 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 2569 : 1978 (RA 2012) App A	10 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
17.	Mancozeb WP	Active ingredient	IS 8707 : 1978 (RA 2010) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	45 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Zinc content	IS 8707 : 1978 (RA 2010) App B	1 to 4 %
		Manganese content	IS 8707 : 1978 (RA 2010) App C	20 to 40%
18.	Metalaxyl Mancozeb WP	Metalaxyl Content	IS 13458 : 1992 (RA 2007) Annex B	2 to 85%
		Mancozeb Content	IS 13692 : 1993 (RA 2007) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
19.	Metalaxyl WS	Active ingredient	IS 13458 : 1992 (RA 2007) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300 s

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	46 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
20.	Metribuzin WP	Active ingredient	IS 13332 : 1992 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
21.	Metsulfuron methyl WDP	Active ingredient	IS 15615 : 2005 (RA 2010) Annex A	2 to 85%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Acidity	IS 6940 : 82 (RA 2012) Cl.11.3.2	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300 s
22.	Primiphos methyl WP	Active ingredient	IS 13080 : 1991 (RA 2012) Annex B	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	47 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
23.	Sulphur WP	Active ingredient	IS 3383 : 1982 (RA 2009) App A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 82 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec
		Arsenic	IS 3383 : 1982 (RA 2009) App B	0.001 to 1%
24.	Thiophanate-methyl WP	Active ingredient	IS 14551 : 1998 (RA 2009) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 14551 : 1998 (RA 2009) Annex A	10 to 99.9%
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
		Wettability	IS 6940 : 82 (RA 2012) Cl.11.4	3 to 300sec

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	48 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
25.	Thiram WS	Active ingredient	IS 4320 : 1982 (RA 2007) Annex A	2 to 85%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.11.1	70 to 99.9%
		Wettability	IS 6940 : 1982 (RA 2012) Cl.11.4	3 to 300sec
26.	Zineb WDP	Active ingredient	IS 3898 : 1981 (RA 2012) Annex A	2 to 85%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 1982 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 1982 (RA 2012) Cl.11.4	3 to 300sec
		Zinc content	IS 8707 : 1978 (RA 2010) App B	1 to 30%
27.	Ziram WDP	Active ingredient	IS 3900 : 1975 (RA 2007) Annex A	2 to 85%
		Sieving	IS 6940 : 82 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 1982 (RA 2012) Cl.11.2	10 to 99.9%
		Wettability	IS 6940 : 1982 (RA 2012) Cl.11.4	3 to 300sec

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	49 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
28.	2,4-D Ethyl Ester WP	2,4-D acid content	IS 7233 : 1991 (RA 2009) Annex A	2 to 85%
		Identity	IS 10244 : 1993 (RA 2012) Annex A	Qualitative
		Sieving	IS 6940 : 1982 (RA 2012) Cl.11.1	70 to 99.9%
		Suspensibility	IS 6940 : 1982 (RA 2012) Cl.11.2	10 to 99.9%
		Free Acidity as 2,4-D	IS 10244 : 1993 (RA 2012) Annex B	0.01 to 10%
		Wettability	IS 6940 : 1982 (RA 2012) Cl.11.4	3 to 300sec
	<i>Emulsifiable Concentrate</i>			
1.	Anilophos EC	Active ingredient	IS 13402 : 1992 (RA 2012) Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 1998 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	50 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Butachlor EC	Active ingredient	IS 9355 : 1980 (RA 2012) App A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 1998 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 82 (RA 2012) Cl.11.3	0.01 to 10%
3.	Chlorpyrifos EC	Active ingredient	IS 8963 : 2006 (RA 2010) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (P 20) RA2008	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
4.	Cypermethrin EC	Active ingredient	IS 12015 : 1987 (RA 2012) Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	51 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Cyphenothrin EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Flash Point	IS 1448 : 98 (P 20) RA2008	10 to 100°C
		Active ingredient	IS 15978 : 2012 (RA 2012) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) RA2008	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
6.	Chlorpyrifos+ Cypermethrin EC	Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Active ingredient	IS 8963 : 2006 (RA 2010) IS 12015 : 1987 (RA2007)	2 to 88% 2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	52 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Deltamethrin+ Triazophos EC	Active ingredient	IS 12005 : 2011 (RA 2012)	2 to 88%
		Cold test	IS 14936 : 2001 (RA2007)	2 to 88%
			IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
8.	Dimethoate EC	Active ingredient	IS 3903 : 1984 (RA 2009) Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
9.	Dichlorovos EC	Active ingredient	IS 5277 : 1978 (RA 2012) App A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	53 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
10.	Deltamethrin EC	Active ingredient	IS 12005 : 2011 (RA 2012) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
11.	Ethion EC	Active ingredient	IS 10369 : 1982 (RA 2009) Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	54 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
12.	Fenoxaprop-p-ethyl EC	Active ingredient	IS 15239 : 2002 (RA 2009) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
13.	Fenpropathrin EC	Active ingredient	IS 15161 : 2002 (RA 2009) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
14.	Fenthion EC	Active ingredient	IS 7950 : 1989 (RA 2012) Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	55 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
15.	Fenvalerate EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Flash Point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Active ingredient	IS 12003 : 1987 (RA 2012) Annex A1 & A2	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
16.	Hexaconazole EC	Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Active ingredient	IS 14549 : 1998 (RA 2009) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	56 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
17.	Isoprothiolane EC	Active ingredient	IS 15163 : 2002 (RA 2009) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
18.	Malathion EC	Active ingredient	IS 1832 : 1978 (RA 2012) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
19.	Methyl Parathion EC	Active ingredient	IS 2865 : 1978 (RA 2012) App A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	57 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
20.	Monocrotophos SL	Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 8074 : 1990 (RA 2012) Annex B	2 to 88%
		Free MMA	IS 8025 : 90 (RA 2012) Annex C	0.1 to 10%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
21.	Oxydemeton Methyl	Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Active ingredient	IS 8258 : 1976 (RA 2012) Ann A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
22.	Phenthoate EC	Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Active ingredient	IS 8293 : 1976 (RA 2012) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	58 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
23.	Profenofos EC	Active ingredient	IS 15238 : 2002 (RA 2009) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
24.	Pirimiphos methyl EC	Active ingredient	IS 13080 : 1991 (RA 2012) Annex B	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	59 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
25.	Pretilachlor EC	Active ingredient	IS 15158 : 2002 (RA 2009) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
26.	Phosalone EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 8488: 1991 (RA 2012) Ann. A	2-88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
27.	Propoxur EC	Active ingredient	IS 8496 : 1977 (RA 2012) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	60 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
28.	Propanil EC	Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 8071 : 1976 (RA 2012) Annex A	2 to 88%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
29.	Paraquat dichloride WSC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 8497 : 1982 (RA 2012) App A	2 to 88%
		Free, 4,4-Bipyridyl	IS 8497 : 1982 (RA 2012) App B	0.01 to 2%
30.	Pendimethalin EC	pH	IS 8497 : 1982 (RA 2012) App C	1 to 14
		Active ingredient	IS 12685 : 1989 (RA 2009) Annex B	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	61 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
31.	Quinalphos EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Active ingredient	IS 8072 : 1984 (RA 2012) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
32.	Temephos EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Active ingredient	IS 8701 : 2013 Annex A	2 to 88%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
33.	Profenophos+ Cypermethrin EC	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Active ingredient	IS 15238 : 2002 (RA 2009) IS 12015 : 1987 (RA 2007)	2 to 88% 2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	62 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
34.	Triazophos EC	Flash point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Active ingredient	IS 14936 : 2001 (RA 2012) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
35.	2,4-D-Ethyl Ester EC	Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 10243 : 1993 (RA 2012) Annex A	2 to 88%
		Free Acidity	IS 7233 : 91 (RA 2009) Annex B	0.01 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash Point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
1.	<i>Dusting powders</i> Copper oxychloride DP	Active ingredient	IS 1506 : 1977 (RA 2012) App A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	63 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Alkalinity/ Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc
2.	Fenvelarate DP	Active ingredient	IS 12003 : 1987 (RA 2012) Annex A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc
3.	Malathion DP	Active ingredient	IS 1832 : 1978 (RA 2012) Annex A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc
4.	Methyl Parathion DP	Active ingredient	IS 2570 : 1989 (RA 2012) Annex A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	64 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Phosalone DP	Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc
		Active ingredient	IS 8488 : 1991 (RA 2012) AnnexA	0.1-90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
6.	Phenthoate DP	Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01-5%
		Active ingredient	IS 8293 : 1976 (RA 2012) Annex A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc 10 to 80%
7.	Quinalphos DP	Active ingredient	IS 8072 : 1984 (RA 2012) Annex A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	65 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Sulphur DP	Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc 10 to 80%
		Active ingredient	IS 6444 : 1979 (RA 2012) App A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc 0 to 80% 0.02
9.	Trichlorofon DP	Active ingredient	IS 7945 : 1976 (RA 2009) App A	0.1 to 90%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc 10 to 80%
1.	<i>Granules</i> Butachlor Granules	Active ingredient	IS 9355 : 1980 (RA 2012) App A	0.1 to 15%
		Particle size	IS 6940 : 1982 (RA 2012) Cl.12.2	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl.12.1	0.01 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	66 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Cartap hydrochloride Granules	Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Acidity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 10%
		Active ingredient	IS 14159 : 1994 (RA 2009) Annex A	0.1 to 15%
		pH 1% aqueous	IS 6940 : 1982 (RA 2012) Cl.13.5	1 to 14
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl. 12.1	0.01 to 5%
3.	Carbofuran Granules	Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Active ingredient	IS 9360 : 1980 (RA 2012) App A	0.1 to 15%
		Acidity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 10%
		Particle Size	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl.12.1	0.01 to 5%
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	67 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Fenthion Granules	Encapsulation	IS 9359 : 1995 (RA 2012) App A & B	0.001 to 5%
		Active ingredient	IS 7950 : 1989 (RA 2012) Annex A	0.1 to 15%
		Acidity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 10%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl. 12.1	0.01 to 5%
5.	Fipronil Granules	Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Relative density	CIPAC handbook J 581/TC/M	0.5 to 2.0
		pH	IS 6940 : 1982 (RA 2012)	1 to 14
6.	Phorate Encapsulated Granules	Active ingredient	CIPAC handbook J 581/TC/M	0.1 to 15%
		Active ingredient	IS 9359 : 1995 (RA 2012) Annex C	0.1 to 15%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 10%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl.12.1	0.01 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	68 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Encapsulation test	IS 9359 : 1995 (RA 2012) Annex A & B	0.01 to 5
7.	Pendimethalin Granules	Active ingredient	IS 12685 : 1989 (RA 2009) Annex A	0.1 to 15%
		Acidity/Alkalinity	IS 6940 : 1982 Cl.13.5.4	0.01 to 10%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl.12.1	0.01 to 5%
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
8.	Quinalphos Granules	Active ingredient	IS 8072 : 1984 (RA 2012) Annex A	0.1 to 15%
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl.12.1	0.01 to 5%
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	69 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
9.	Temephos Granules	Active ingredient	WHO/SIF/40.1R1 December 1999	0.1 to 15%
		Apparent density	WHO/SIF/40.1R1 December 1999	0.01 to 5%
		Sieving	WHO/SIF/40.1R1 December 1999	70 to 99.9%
10.	2,4-D Ethyl Ester Granules	Active ingredient	IS 10243 : 1993 (RA 2012) Annex A	0.1 to 15%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Dust	IS 6940 : 1982 (RA 2012) Cl. 12.1	0.01 to 5%
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Free Acidity	IS 10244 : 1993 (RA 2012) Annex B	0.01 to 10%
		Identity Test	IS 13513 : 1992 (RA 2012) Annex A	Qualitative
1.	Miscellaneous Formulation Aluminium Phosphide tablets	Active ingredient	IS 6438 : 1980 (RA 2009) App A	40 to 70%
		Disintegration	IS 6438 : 1980 (RA 2009) App B	Qualitative
		Average weight	IS 6438 : 1980 (RA 2009)	2 to 4g
2.	Aluminium Phosphide powder	Active ingredient	IS 6438 : 1980 (RA 2009) App A	40 to 70%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	70 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Acephate S.P	Active ingredient	IS 12916 : 1990 (RA 2012)	2 to 85%
		Acidity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
4.	Alpha-naphthyl Acetic Acid SL	Relative density	IS 6940 : 1982 (RA 2012) Cl.5.0	0.5 to 2.0
		pH	IS 6940 : 1982 (RA 2012) Cl.13.5.4	1 to 14
		Active ingredient	IS 13138 : 1991 (RA 2012) Annex B	2 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
5.	Allethrin mosquito coils	Allethrin contents	IS 13438 : 92 (RA2007)	0.01 to 10%
		Length	IS 13438 : 92 (RA 2007) Cl. 3.2	50 to 100cm
		Mass	IS 13438 : 92 (RA2007) Cl. 3.3	15 to 40g
		Strength	IS 13438 : 92 (RA2007) Cl. 3.5	60 to 120g
6.	Bromadiolone RB	Active ingredient	IS 12914 : 1990 (RA 2012) Annex A	0.001 to 2%
7.	Cartap HCI SP	Active ingredient	IS 14159 : 1994 (RA 2009) Annex A	2 to 85%
		Material insoluble in water	IS 6940 : 1982 (RA 2012) Cl. 9	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	71 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		pH of 10% extract	IS 14159 : 1994 (RA 2009) Annex B	1 to 7
8.	Cyfluthrin EW	Active ingredient	IS 14156 : 1994 (RA 2009) Annex A	2 to 88%
		Dispersion stability	CIPAC MT 180	Qualitative
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Acidity	IS 6940 : 1982 (RA 2012) Cl. 11.3	0.01 to 10%
9.	Deltamethrin ULV	Active ingredient	IS 12005 : 2011 (RA 2012) Annex A	0.1 to 5%
		Flash point test	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Acidity /Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
10.	Deltamethrin Flow	Active ingredient	IS 12005 : 2011 (RA 2012) Annex A	0.1 to 5%
		Dispersibility in water	IS 14411 : 96 (RA 2007) Cl. 3.4.1	Qualitative
11.	Ethephon Solution	Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Ethephone content	IS 14409: 1996 (RA 2007) Annex. A	2-88%
		pH	IS 14408: 1996 (RA 2007) Cl. 3.3.1	1-7

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	72 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
12.	Glyphosate SL	Active ingredient	IS 12502 : 88 (RA 2009) Annex A	2 to 88%
13.	Imidacloprid SL	Active ingredient	IS 15443 : 2004 (RA 2009) Annex A	2 to 88%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Acidity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
14.	Mosquito Repellant Mats	Allethrin	IS 13439 : 1992 (RA 2012) Annex A	0.01 to 10%
		PBO	IS 13439 : 92 (RA 2012) Cl.3.2.2	0.1 to 4%
		Dimensions	IS 13439 : 92 (RA 2012) Cl.3.1.2	Qualitative
15.	Thiram Seed Dressing Formulations	Active ingredient	IS 4320 : 1982 (RA 2007) App A	2 to 85%
		Sieving	IS 4783 : 1982 (RA 2009) App A	70 to 99.9%
16.	2,4 Dimethyl amine salt SL	Acid content (expressed as 2,4-D)	IS 1827 : 1989 (RA 2009) Annex B	2 to 88%
		Melting point of the extracted acid	IS 1827 : 1989 (RA 2009) Annex C	100 to 200°C
		Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10% 0.02

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	73 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
B.	Natural pesticides & their formulations			
1.	Neem based EC concentrate containing Azadirachtin	Active ingredient	IS 14300 : 1995 (RA 2009) Annex A	0.02 to 10%
		Flash point	IS 1448 : 98 (Part 20) (RA 2008)	10 to 100°C
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.13.5	0.01 to 10%
		Aflatoxin	IS 14299 : 1995 (RA 2009) Annex. B	Qualitative
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
2.	Neem extract concentrate containing Azadirachtin	Active ingredient	IS 14299 : 1995 (RA 2009) Annex A	0.02 to 10%
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Material insoluble in acetone	IS 6940 : 1982 (RA 2012) Cl. 9	0.01 to 10%
		Moisture	IS 6940 : 1982 (RA 2012) Cl.4.0	0.01 to 10 %
		Aflatoxin	IS 14299 : 1995 (RA 2009) Annex. B	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	74 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Pyrethrum Dusting Powder	Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Active ingredient	IS 1051 : 1980 (RA 2012) App B	1.0 to 10.0%
		Sieving	IS 6940 : 1982 (RA 2012) Cl.12.1	70 to 99.9%
		Bulk density	IS 6940 : 1982 (RA 2012) Cl.12.2	0.01 to 5g/cc 10 to 80%
4.	Pyrethrum Extracts	Acidity/Alkalinity	IS 6940 : 1982 (RA 2012) Cl.11.3	0.01 to 10%
		Active ingredient	IS 1051 : 1980 (RA 2012) App B	1 to 60%
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C
		Saponification value	IS 548 (Part I) 1964 (RA 2010)	0.5 to 30%
5.	Pyrethrum Emulsifiable concentrates	Active ingredient	IS 1051 : 1980 (RA 2012) App B	1.0 to 10.0%
		Identity test	IS 1051 : 1980 (RA 2012) App A & B	Qualitative
		Emulsion stability	IS 6940 : 1982 (RA 2012) Cl.13.3	Qualitative
		Cold test	IS 6940 : 1982 (RA 2012) Cl.13.1	Qualitative
		Flash point	IS 1448 : 98 (P 20) (RA 2008)	10 to 100°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	75 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IV.	POLLUTION AND ENVIRONMENT			
1.	Soil/ Solid Waste	Pesticide residue o,p- DDT p,p- DDT o,p – DDE p,p – DDE o,p- DDD p,p- DDD Lindane (γ-HCH) α-HCH β-HCH δ-HCHα-Endosulfan β-Endosulfan Endosulfan –Sulphate Monocrotophos Ethion Chlorpyrifos Phorate Phorate Sulfone Phorate Sulfoxide 2,4 – D Butachlor Isoproturon Alachlor Atrazine Methyl Parathion Paraxon methyl Malathion Malaaxon Aldrin Dieldrin Fenthion Chlordane Endosulfan Permethrin Cypermethrin	(SRI/SOP/SOIL & SOLID WASTE/00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	1 to 1000 µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	76 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fenvalarate		(SRI/SOP/SOIL & SOLID	1 to 1000 µg/kg
	Deltamethrin		WASTE/00)	(LOD 0.5 µg/kg)
	Chlorothionol		ISSUE NO. 00	
	Chlorpyrifos methyl		DATE 01.02.2013	
	Propanil		REVISION NO. 01	
	Vinconazole		DATE 01.04.2014	
	Parathion			
	Allethrin			
	Pretilaclor			
	Endrin			
	Chlorbenzilate			
	Bromopropylate			
	Methoxyclor			
	Amitraz			
	Cyahalothrin			
	Coumaphos			
	Cyfluthrin			
	Fluvalinate			
	Heptaclor			
	Dicofol			
	Heptaclor Epoxide			
	Fenarimol			
	Esfenvalerate			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			
	Buprofezin			
	Cymoxanil			
	Difenconazole			
	Difenthruron			
	Fenamidon			
	Flusilazole			
	Methomyl			
	Omethoate			
	Pyraclostrobin			
	Tebuconazole			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	77 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Thiodicarb		(SRI/SOP/SOIL & SOLID	1 to 1000 µg/kg
	Trifloxystrobin		WASTE/00)	(LOD 0.5 µg/kg)
	Abamectin		ISSUE NO. 00	
	Acetamiprid		DATE 01.02.2013	
	Carbendazim		REVISION NO. 01	
	Chlorfenviphos		DATE 01.04.2014	
	Diflubenzuron			
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			
	Methamidofos			
	Myclobutanil			
	Penconazole			
	Phorate			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Enamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			
	Iprovalicarb Kresoxim Methyl			
	Metalaxyl			
	Thiamethoxam			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	78 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Acephate Aldicarb Carbaryl Carbofuran Diazinon Diclorovos Dimethoate Phosalone Phophamidone Propoxur Simazine		(SRI/SOP/SOIL & SOLID WASTE/00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	1 to 1000 µg/kg (LOD 0.5 µg/kg)
	Antibiotics & veterinary Drugs Ciprofloxacin Norfloxacin Levofloxacin Ofloxacin Metronidazole Tinidazole Sulfamethoxazole Erythromycin Ibuprofen Diclofenac Amoxycillin Doxycycline			100 to 1000 µg/kg (LOD 50 µg/kg)
	Cefoperazone Ceftriaxone			500 to 1000 µg/kg (LOD 250 µg/kg)
	Environmental Pollutants VOCs PAH PCBs			1 to 100µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	79 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Heavy Metals	(SRI/SOP/SOIL & SOLID WASTE/00)	
		Hg	ISSUE NO. 00	100 to 5000 µg/kg
		As	DATE 01.02.2013	(LOD 50 µg/kg)
		Pb	REVISION NO. 01	50 to 5000 µg/kg
		Cd	DATE 01.04.2014	(LOD 25 µg/kg)
		Cr		
2.	Solid/Hazardous Wastes	pH (1 2.5)	Manual on Sampling, Analysis and Characterization of Hazardous Waste, CPCB	1 to 14
		Loss on Ignition	ASTM D 7348, 2007 Guidelines	0.1 to 99% by mass
		Chloride	Method No. 9253-9077 of EPA SW – 846	0.1 to 10 % by mass
		Sulphate	Guideline s of IS 2720 (Part 27): 1977 (RA 2006)	0.1 to 10, % by mass
		Silica, as SiO ₂	Manual on Sampling, Analysis and Characterization of Hazardous Waste, CPCB	1 to 99, % by mass
		Nitrogen	IS 10158 : 1982 (RA 2009)	0.1 to 10, % by mass
		Phosphorus P ₂ O ₅	IS 10158 : 1982 (RA 2009)	0.1 to 10, % by mass
		Metals		
		Sodium, as Na ₂ O	Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 10 % by mass
		Potassium, as K ₂ O	Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 10 % by mass

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	80 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Calcium, as CaO		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 10 % by mass
	Magnesium, as MgO		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 10 % by mass
	Aluminum, as Al ₂ O ₃		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 10 % by mass
	Iron, as Fe ₂ O ₃		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.01 to 30 % by mass
	Copper		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Chromium		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Cadmium		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Lead		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Manganese		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	81 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Zinc		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Nickel		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Titanium		Method No 6010 B of EPA SW – 846 IS 3025 (Part 2): 2012	10 to 100 mg/kg
	Arsenic		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.1 to 50 mg/kg
	Mercury		Method No. 3050, 3052 of EPA SW – 846 IS 3025 (Part 2): 2012	0.04 to 50 mg/kg
	Gross Calorific Values		IS 10158: 1982 (RA 2009) & IS 1350 (Part 2): 1970 (RA2000)	100 to 10000 cal/g
	Oil & Grease		Method No 9071 B of EPA SW – 846	1 to 10000 mg/kg
	Cyanide		Manual on Sampling, Analysis and Characterizations of Hazardous Waste, CPCB	0.1 to 100 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	82 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
V.	FOOD AND AGRICULTURAL PRODUCTS			
1.	Alcoholic drinks & Beverages	Ethyl alcohol	IS 3865-2001, (RA 2009) IS 3752-2005, (RA 2009) IS 7585-1995, (RA 2009)	1 to 80 % v/v
		Methyl alcohol	IS 3752-2005, (RA 2009) IS 3865-2001, (RA 2009)	0.1 to 50 g/100L of absolute alcohol
		Residue on evaporation	IS 3752-2005, (RA 2009)	0.1 to 10 g/100ml
		Total acidity	IS 3752: 2005 (RA 2009)	0.1 to 15.0 g/L
		Fixed acidity	IS 3752: 2005 (RA 2009)	0.5 to 5.0 g/L
		Volatile acids as acetic acid	IS 3752: 2005 (RA 2009)	0.5 to 5.0 g/L
		Esters as ethyl acetate	IS 3752: 2005 (RA 2009)	0.5 to 15g/100L of absolute alcohol
		Higher alcohols as amyl alcohol	IS 3752: 2005 (RA 2009)	0.5 to 50g/100L of absolute alcohol
		Aldehydes as acetaldehyde	IS 3752: 2005 (RA 2009)	0.5 to 50g/100L of absolute alcohol
		Furfural	IS 3752: 2005 (RA 2009)	0.5 to 20 g/100L of absolute alcohol
		Reducing sugars	IS 7585: 1995 (RA 2009)	1 to 1000 g/L
		Tannins	IS 7585: 1995 (RA 2009)	0.01 to 100 g/L
		Total sulphur dioxide	IS 7585: 1995 (RA 2009)	10 to 1000 mg/L
		Free sulphur dioxide	IS 7585: 1995 (RA 2009)	10 to 1000 mg/L

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	83 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Copper	IS 11123: 1984 (RA 2010) AOAC 999.10, 19 th Ed.	0.1 to 1000 mg/L
		Arsenic	IS 11124: 1984 (RA 2010) AOAC 986.15 / 963.21, 19 th Ed.	0.02 to 100 mg/L
		Iron	IS 13320: 1992 (RA 2010) AOAC 999.10 / 999.11, 19 th Ed.	0.01 to 100 mg/L
		Lead	IS 12074: 1987 (RA 2010) AOAC 990.08 / 999.10 / 999.11, 19 th Ed.	0.01 to 50 mg/L
		Carbon dioxide	IS 2346: 1992 (RA 2009)	1.0 to 13.0 v/v
		Extract	IS 7585: 1995 (RA 2009)	10 to 500 g/L
		pH	IS 3865: 2001 (RA 2009)	1 to 14
2.	Animal Feeds	Moisture	IS 5470: 2002 (RA 2008) IS 7874 (Part 1): 1975 (RA 2009)	1 to 15% w/w
		Total ash	IS 5470: 2002 (RA 2008) IS 7874 (Part 1): 1975 (RA 2009)	0.1 to 90% w/w
		Acid insoluble ash	IS 7874 (Part 1): 1975 (RA 2009)	0.05 to 10% w/w
		Fluorine	IS 5470: 2002 (RA 2008) IS 7874 (Part 2): 1975 (RA 2009)	1 to 1000 mg/kg
		Calcium	IS 15121: 2002 (RA 2008) IS 13433 (Part 1&2): 1992 (RA 2008) AACC 40-75	0.001 to 50% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	84 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Magnesium		IS 13574: 1992 (RA 2002) IS 15121: 2002 (RA 2008) AACC 40-75	10 to 5000 mg/kg
	Phosphorus		AOAC 991.25, 19th Ed. IS 14828: 2000 (RA 2008) AACC 40-75	0.001 to 50% w/w
	Iron		IS 15121: 2002 (RA 2008) AOAC 999.11, 19th Ed. AACC 40-1975	1 to 2000 mg/kg
	Iodine		IS 7874 (Part 2): 1975 (RA 2009)	10 to 500 mg/kg
	Copper		IS 15121: 2002 (RA 2008) AOAC 999.11 19th Ed. AACC 40-1975	1 to 2000 mg/kg
	Manganese		IS 12046: 1987 (RA 2004) IS 15121: 2002 (RA 2008) AACC 40 191975	1 to 2000 mg/kg
	Cobalt		IS 7874 (Part 2): 1975, (RA 2009) IS 14644 (Part 2): 1998 (RA 2010)	1 to 2000 mg/kg
	Zinc		IS 15121:2002 (RA 2008) AOAC 999.11,19th Ed.	1 to 2000 mg/kg
	Crude protein		IS 7874 (Part 1) :1975 (RA 2009) IS 7219: 1973 (RA 2005)	1 to 40% w/w
	Urea Nitrogen		IS 7874 (Part 1):1975 (RA 2009) IS 7219: 1973 (RA 2005)	0.1 to 10% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	85 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Bakery & Confectionery Products	Crude fat	IS 7874 (Part 1): 1975 (RA 2009) IS 7219:1973 (RA 2005)	0.5 to 30% w/w
		Crude fiber	IS 7874 (Part 1): 1975 (RA 2009) IS 7219:1973 (RA 2005)	1.0 to 30% w/w
		Castor husk	IS 7874 (Part 1): 1975 (RA 2009) IS 7219:1973 (RA 2005) IS 3441:1982	Qualitative
		Mahua cake	IS 7874 (Part 1): 1975 (RA 2009) IS 7219:1973 (RA 2005) IS 3441: 1982	Qualitative
		Aflatoxin B1,B2,G1,G2	AOAC 19th Ed.(Ch-49)	2 to 10000 µg/kg
		Moisture	IS 1011 : 2002 (RA 2009) IS 6287 : 1985 (RA 2010) IS 12711 : 1989 (RA 2010)	1 to 20% w/w
		Sulphated ash	IS 6287 : 1985 (RA 2010)	0.1 to 10% w/w
		Acid insoluble ash	IS 1011 : 2002 (RA 2009) IS 12711 : 1989 (RA 2010) IS 6287 : 1985 (RA 2010)	0.05 to 1% w/w
		Reducing sugars	IS 6287 : 1985 (RA 2010)	1 to 85% w/w
		Sucrose	IS 6287 : 1985 (RA 2010)	1 to 85% w/w
		Fat	IS 12711 : 1989 (RA 2010) IS 3509 : 1966 (RA 2009)	0.5 to 60% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	86 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Protein	IS 6287 : 1985 (RA 2010)	1 to 40% w/w
		Sulphur dioxide	IS 6287 : 1985 (RA 2010)	10 to 10000 mg/kg
		Arsenic	IS 11124 : 1984 (RA 2010) AOAC 986.15 19th Ed.	0.002 to 50 mg/kg
		Lead	IS 12074 : 1987 (RA 2010) AOAC 999.11 19th Ed.	1 to 20 mg/kg
		Zinc	IS 9958 : 1981 (RA2004) AOAC 999.11 19th Ed.	1 to 50 mg/kg
		Tin	AOAC 985.16 19th Ed.	1 to 500 mg/kg
		Copper	IS 11123 : 1984 (RA 2010) AOAC 999.11 19th Ed.	1 to 1000 mg/kg
		Total ash	IS 1011 : 2002 (RA 2009) IS 12711 : 1989 (RA 2010)	0.1 to 10% w/w
		Acidity of extracted fat	IS 1011 : 2002 (RA 2009) IS 12711 : 1989 (RA 2010)	0.01 to 5% w/w
		Total solids	IS 1011 : 2002 (RA 2009) IS 12711 : 1989 (RA 2010)	30 to 98% w/w
		Crude fiber	IS 1011 : 2002 (RA 2009) IS 12711 : 1989 (RA 2010)	0.1 to 5% w/w
		Total Dietary fiber	AOAC 985.29 19th Ed	1 to 18 % w/w
		Saturated fat	AOAC 996.06 19 th Ed	1 to 50 % w/w
		Monounsaturated fat	AOAC 996.06 19 th Ed	1 to 55 % w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	87 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Cereals, Pulses & by-products	Polyunsaturated fat	AOAC 996.06 19 th Ed	1 to 30 % w/w
		Trans fat	AOAC 996.06 19 th Ed	0.1 to 10% w/w
		Cholesterol	AOAC 976.26 19 th Ed	1 to 500 mg/100g
		Sodium	AOAC 985.35 19 th Ed	1 to 1000 mg/100g
		pH	IS 12711 : 1989 (RA 2010)	1 to 14
		Structure of starch	IS 1005 : 1992 IS 1006 : 1984 (RA 2009) IS 1007 : 1984 (RA 2009) IS 1009 : 1979 (RA 2005) IS 1010 : 1968 (RA 2005) IS 1155 : 1968 (RA 2010) IS 1157 : 1957 (RA 2010)	Qualitative
		Gluten	IS 1155: 1968 (RA 2010)	1 to 20% w/w
		Urease activity	IS 7835-2013	pH difference 0.1 to 1.0 units
		Moisture	IS 1155-1968 (RA 2010) IS 4333 (Part 2): 2002, (RA 2009) IS 1011: 2002 IS 4684: 1975 (RA 2005)	1.0 to 60% w/w
		Total Dietary Fiber	AOAC 985.29, 19 th Ed.	0.1 to 25.0% w/w
		Uric acid	IS 4333 (Part 5): 1970, (RA 2010)	20 to 10000 mg/kg
		Gossypol	IS 10901: 1984 (RA 2009) IS 4684: 1975 (RA 2005)	0.01 to 5% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	88 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Total ash		IS 1155: 1968 (RA 2010) IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 10% w/w
	Fat		AOAC 923.05 19th Ed.	0.1 to 25% w/w
	Acid insoluble ash		IS 1155: 1968 (RA 2010) IS 4706 (Part 2): 1978 (RA 2010)	0.05 to 1% w/w
	Crude fiber		IS 1155: 1968 (RA 2010) IS 1157: 1957 (RA 2010) IS 4684: 1975 (RA 2005) IS 10226 (Part1/2): 1982 (RA 2012)	1 to 25% w/w
	Alcoholic acidity		IS 1155: 1968 (RA 2010)	0.01 to 1.0% w/w
	Aflatoxins (Total / B1,B2, G1,G2)		IS 4684: 1975 (RA 2005) AOAC 19th Ed.(Ch.49)	2 to 10000 µg/kg
	Total Carbohydrates		IS 2234: 1989 (RA 2005)	1 to 90% w/w
	Starch		IS 4706 (Part 2): 1978 (RA 2010) AOAC 996.11 19 th Ed.	1 to 85% w/w
	Vitamin A		AOAC 19th Ed.(Ch.45) IS 5886: 1970 (RA 2010) USP-2012	0.01 to 10 mg/100g
	Acid value of extracted fat		IS 1011: 2002 (RA 2009) IS 4684: 1975 (RA 2005)	0.01 to 5% w/w
	Protein		IS 7219: 1973 (RA 2005)	0.1 to 50% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	89 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Coffee, cocoa & by-products	Damaged grains	IS 5884: 1993 (RA 2009) IS 4333 (Part 1): 1996 (RA 2001)	0.01 to 10.0 % w/w
		Other food grains	IS 5884: 1993 (RA 2009) IS 4333 (Part 1): 1996 (RA 2001)	0.01 to 10.0 % w/w
		Sieve test	IS 6109: 1971 (RA 2010)	Passing through 80 to 100% w/w
		Insect infestation	IS 6109: 1971 (RA 2010)	Qualitative
		Moisture	IS 2791 : 1992 (RA 2009) IS 2962 : 1964 (RA 2009) IS 1164 : 1986 (RA 2012) IS 3077 : 1992 (RA 1998) IS 3309 : 1992 (RA 1998)	0.1 to 10% w/w
		Crude fibre	IS 10226 (Part 1):1982 (RA 2010) IS 1164 :1986 (RA 2012)	0.1 to 25% w/w
		Petroleum ether extract / fat	IS 1164 : 1986 (RA 2012) IS 3077 : 1992 (RA 1998)	0.1 to 15% w/w
		Total ash	IS 2791 : 1992 (RA 2009) IS 2962 : 1964 (RA 2009) IS 1164 : 1986 (RA 2012) IS 3077 : 1992 (RA 1998) IS 3309 : 1992 (RA 1998)	0.01 to 15% w/w
		Water soluble ash	IS 13855 : 1993 (RA 2009)	1 to 80% w/w
		Acid insoluble ash	IS 13857 : 1993 (RA 2009) IS 2962 : 1964 (RA 2009) IS 1164 : 1986 (RA 2012) IS 3077 : 1992 (RA1998)	0.04 to 2% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	90 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Caffeine	IS 2791 : 1992 (RA 2009) IS 3077 : 1992 (RA 2009)	0.01 to 5% w/w
		Alkalinity of water soluble ash	IS 13856 : 1993 (RA 2009) IS 1164 : 1986 (RA 2012) IS 3077 : 1992 (RA1998)	0.1 to 5.0% w/w
		Lead	AOAC 973.35 19th Ed.	0.1 to 500 mg/kg
		Copper	AOAC 999.11 19th Ed.	1 to 1000 mg/kg
		Petroleum ether extract	IS 3077 : 1992 (RA 2009)	1 to 30% w/w
		Water soluble matter / water extract	IS 13862 : 1999 (RA 2009) IS 3077 : 1992 (RA1998)	1 to 80% w/w
		Solubility	IS 2791 : 1992 (RA 2009) IS 3309 : 1992 (RA1998)	Qualitative
		Alcohol insoluble residues	IS 2962 : 1964 (RA 2009)	1 to 50% w/w
6.	Milk & Dairy Products	Presence of starch	IS 1479 (Part 1) : 1960 (RA 2009)	Qualitative
		Total solids	IS 1479 (Part 2) : 1961 (RA 2009) IS 11623 : 1986 (RA 2008)	0.1 to 99.8% w/w
		Neutralizer	IS 1479 (Part 1) : 1960 (RA 2009) IS 11623 : 1986 (RA 2008)	Qualitative
		Casein	IS 1479 (Part 2) : 1961 (RA 2009) IS 11623 : 1986 (RA 2008)	1 to 25% w/w
		Methylene blue reduction test	IS 1479 (Part 1) : 1960 (RA 2009) IS 11623 : 1986 (RA 2008)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	91 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Preservatives (Formaldehyde & Hydrogen peroxide)	IS 1479 (Part 1) : 1960 (RA 2009)	Qualitative
		Lactose	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 60% w/w
		Insolubility index	IS 12759 : 1989 (RA 2010)	0.1 to 10 ml
		Potassium	IS 12760 : 1989 (RA 2010) AOAC 990.23 19th Ed.	1 to 1000 mg/100g
		Sodium	IS 12760 : 1989 (RA 2010) AOAC 990.23 19th Ed.	1 to 1000 mg/100g
		Vitamin A	AOAC 992.06 +19th Ed.(Ch.50) IS 5886 : 1970 (RA 2005) USP-2012	0.01 to 10mg/100g
		Vitamin D	AOAC 19th Ed.(Ch.50) IS 5835 : 1970 (RA 2005) USP-2012	10 to 1000 IU/100g
		Iron	AOAC 999.11 19th Ed.	0.1 to 1000 mg/kg
		Copper	IS 7874 (Part 2) : 1975 (RA 2009) AOAC 999.11 19th Ed.	0.1 to 1000 mg/kg
		Iodine	IS 7224 : 2006 (RA 2010)	0.1 to 100 mg/kg
		Urea	IS 1479 (Part 1) : 1961 (RA 2009)	10 to 1000 mg/100ml
		Manganese	IS 1699 : 1995 (RA 2009) IS 12046 : 1987 (RA 2010)	1 to 1000 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	92 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Zinc	AOAC 969.32 19th Ed.	0.1 to 1000 mg/kg
		Fat	IS 1479 (Part 2) : 1961 (RA 2009) IS 3509 : 1966 (RA 2009) IS 3507 : 1966 (RA 2009) IS 11721 : 2005 (RA 2010) IS 11762 : 2005 (RA 2010) IS 11766 : 1986 (RA 2008)	0.1 to 85% w/w
		Titrateable acidity	IS 1479 (Part 1):1960 (RA 2009) IS 3509 : 1966 (RA 2009) IS 3507 : 1966 (RA 2009) IS 11721 : 2005 (RA 2010) IS 11762 : 2005 (RA 2010)	0.01 to 5% w/w
		Moisture	IS 3507 : 1966 (RA 2009) IS 11623 : 1986 (RA 2008)	0.1 to 25% w/w
		pH	IS 1479 (Part 2) : 1961 (RA 2009) IS 3507 : 1966 (RA 2009)	0.1 to 14
		Total solids	IS 1479 (Part 2) : 1961 (RA 2009)	20 to 98.5% w/w
		Total Nitrogen	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 10% w/w
		Crude protein	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 40% w/w
		True protein	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 35% w/w
		Albumin	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 10% w/w
		Non-protein Nitrogen	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 10% w/w
		Sucrose	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 50% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	93 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chloride	IS 1479 (Part 2) : 1961 (RA 2009)	0.01 to 2% w/w
		Calcium	IS 13433 (Part 2) : 1992 (RA 2008)	0.001 to 1% w/w
		Magnesium	IS 12491 : 1988 (RA 2010)	1 to 1000 mg/100g
		Phosphorus	IS 1479 (Part 2) : 1961 (RA 2009) IS 12756 : 1989 (RA 2010) AOAC 991.25 19 th Ed.	0.001 to 1% w/w
		Sediments	IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 50 % w/w
		Test for sterilized milk	IS 1479 (Part 2) : 1961 (RA 2009)	Qualitative
		Heavy metals as Lead	IS 1699 : 1995 (RA 2009)	Qualitative
		Cadmium	AOAC 999.11 19th Ed.	0.1 to 100 mg/kg
		Arsenic	AOAC 986.15 19th Ed.	0.001 to 100 mg/kg
		Tin	AOAC 985.16 19th Ed.	1 to 100 mg/kg
		Mercury	AOAC 971.21 19th Ed.	0.001 to 100 mg/kg
		Curd	IS 3507 : 1966 (RA 2009)	0.1 to 20 % w/w
		Quaternary ammonium compounds	IS 1479 (Part 2) : 1961 (RA 2009)	Qualitative
		Nitrate	IS 1479 (Part 1) : 1960 (RA2003) AOAC 993.03 19th Ed.	10 to 1000 mg/100g
		Nitrite	AOAC 973.31 19th Ed.	10 to 1000 mg/100g

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	94 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Tea & Tea Products	Phosphatase test	IS 8479 (Part 2) : 1977 (RA 2008)	0.5 to 10 µg phenol/g
		Ash	IS 14433 (Part 1) : 1997 (RA 2010) IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 10% w/w
		Acid insoluble ash	IS 14433 (Part 1) : 1997 (RA 2010) IS 1479 (Part 2) : 1961 (RA 2009)	0.02 to 0.5% w/w
		Salt as NaCl	IS 14433 (Part 1) : 1997 (RA 2010) IS 1479 (Part 2) : 1961 (RA 2009)	0.1 to 5% w/w
		Saturated fat	AOAC 996.06 19 th Ed	1 to 50% w/w
		Monounsaturated fat	AOAC 996.06 19 th Ed	1 to 60% w/w
		Polyunsaturated fat	AOAC 996.06 19 th Ed	1 to 20% w/w
		Trans fat	AOAC 996.06 19 th Ed	0.1 to 10% w/w
		Cholesterol	AOAC 976.26 19 th Ed	1 to 500 mg/100g
		Scorched particles	IS 13500 : 1992 (RA 2008)	Qualitative
		Moisture	IS 13859 : 1992 (RA 2009)	0.1 to 10% w/w
		Crude fibre	IS 10226 (Part 1) : 1982 (RA 2010)	0.1 to 25% w/w
		Total ash	IS 13854 : 1994 (RA 2009) IS 13860 : 1993 (RA 1998)	0.01 to 15% w/w
		Water soluble ash	IS 13855 : 1993 (RA 2009)	20 to 80%, w/w
		Alkalinity of water soluble ash	IS 13856 : 1993 (RA 2009)	0.1 to 5.0% w/w
		Acid insoluble ash	IS 13857 : 1993 (RA 2009)	0.04 to 2% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	95 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total catechins	IS 15344 : 2003 (RA 2008)	1 to 50% w/w
		Lead	AOAC 973.35 19th Ed.	0.1 to 500 mg/kg
		Copper	AOAC 999.11 19th Ed.	1 to 1000 mg/kg
		Water extract	IS 13862 : 1999 (RA 2009)	1 to 80% w/w
8.	Food Additives	Loss on drying	IS 253 : 1985 (RA 2009) IS 4359 : 1967 (RA 2009) IS 4818 : 1996 (RA 2008) IS 5191 : 1993 (RA 2008) IS 5707 : 1996 (RA 2009) IS 5719 : 2005 (RA 2009) IS 6385 : 1997 (RA 2008) IS 10502 : 1993 (RA 2010) IS 7224 : 2006 (RA 2010) IS 2962 : 1964 (RA 2009)	0.01 to 10% w/w
		pH	IS 4752 : 1994 (RA 2008)	1 to 14
		Chloride	IS 253 : 1985 (RA 2009) IS 7224 : 2006 (RA 2010)	0.01 to 10% w/w
		Solubility	IS 10502:1993 (RA 2010)	Qualitative
		Sulphate	IS 253 : 1985 (RA 2009)	0.01 to 10% w/w
		Total ash	IS 2962 : 1964 (RA 2009) IS 5707 : 1996 (RA 2009) IS 5719 : 2005 (RA 2009) IS 10502 : 1993 (RA 2010)	0.1 to 10% w/w
		Acid insoluble ash	IS 2962 : 1964 (RA 2009) IS 5707 : 1996 (RA 2009) IS 5719 : 2005 (RA 2009) IS 10502 : 1993 (RA 2010)	0.05 to 10% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	96 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Sulphated ash		IS 4818 : 1996 (RA 2008) IS 6385 : 1997 (RA 2008)	0.01 to 10% w/w
	Protein		IS 10502 : 1993 (RA 2010)	0.1 to 10% w/w
	Purity		IS 10502 : 1993 (RA 2010) IS 6385 : 1997 (RA 2008) IS 2113 : 2002 (RA 2010)	80 to 100% w/w
	Gambier		IS 4359 : 1967 (RA 2009)	Qualitative
	Particle size (sieve test)		IS 253 : 1985 (RA 2009) IS 7224 : 2006 (RA 2010)	80 to 99% w/w
	Matter insoluble in dil. HCl		IS 253 : 1985 (RA 2009) IS 10502 : 1993 (RA 2010)	0.01 to 10% w/w
	Insolubles in boiling/cold water		IS 2962 : 1964 (RA 2009) IS 253 : 1985 (RA 2009)	0.01 to 50% w/w
	Matter soluble in water other than NaCl		IS 253 : 1985 (RA 2009) IS 7224 : 2006 (RA 2010)	0.01 to 10% w/w
	Matter insoluble in rectified spirit		IS 2962 : 1964 (RA 2009)	0.01 to 50% w/w
	Starch		IS 2962 : 1964 (RA 2009) IS 10502 : 1993 (RA 2010)	Qualitative
	Calcium gluconate		USP : 2012 Food Chemical Codex	Qualitative
	Titanium dioxide		AOAC 973.36 19th Ed.	10 to 10000 mg/kg
	Calcium		IS 13433 (Part 2) : 1992 (RA 2008)	0.01 to 1% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	97 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Magnesium	IS 12491 : 1988 (RA 2010)	10 to 10000 mg/kg
		Iron	AOAC 999.11 19 th Ed.	10 to 10000 mg/kg
		Lead	AOAC 999.11 19 th Ed.	0.1 to 100 mg/kg
		Selenium	AOAC 986.15 19 th Ed.	0.05 to 100 mg/kg
		Copper	AOAC 999.11 19 th Ed.	0.1 to 1000 mg/kg
		Zinc	AOAC 969.32 19 th Ed.	0.1 to 1000 mg/kg
		Tin	AOAC 985.16 19 th Ed.	0.1 to 1000 mg/kg
		Arsenic	AOAC 986.15 19 th Ed.	0.001 to 10 mg/kg
		Iodine	IS 7224 : 2006 (RA 2010)	0.1 to 500 mg/kg
9.	Honey & honey products	Foreign matter	IS 4941 : 1994 (RA 2008)	Qualitative
		Fiehe`s test	IS 4941 : 1994 (RA 2008)	Qualitative
		Total count of pollens and plant materials	IS 4941 : 1994 (RA 2008)	1000 to 50,000 counts
		Optical density at 660 nm	IS 4941 : 1994 (RA 2008)	0.01 to 1.0
		Specific gravity	IS 4941 : 1994 (RA 2008)	0.6 to 2
		Moisture	IS 4941 : 1994 (RA 2008)	0.1 to 75% w/w
		Fructose to glucose ratio	IS 4941 : 1994 (RA 2008)	0.2 to 2.5
		Proline	AOAC 979.20 19 th Ed.	10 to 1000 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	98 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
10.	Fruits & Vegetable products	Total reducing sugars	IS 4941 : 1994 (RA 2008)	0.1 to 75% w/w
		Ash	IS 4941 : 1994 (RA 2008)	0.1 to 10 % w/w
		Refractive index	IS 4941 : 1994 (RA 2008)	1.3 to 1.7
		Sucrose	IS 4941 : 1994 (RA 2008)	0.1 to 50 % w/w
		Hydroxyl methyl Furfural	AOAC 980.23 19th Ed.	10 to 800 mg/kg
		Diastatic activity	AOAC 958.09 19th Ed.	1 to 100
		Color	IS 4941 : 1994 (RA 2008)	Qualitative
		Acidity as formic acid	IS 4941 : 1994 (RA 2008)	0.01 to 0.5% w/w
		Specific gravity (°Brix)	IS 2860 : 1964 (RA 2008)	1.0 to 85.0°
		Acidity	IS 2860 : 1964 (RA 2008)	0.01 to 5.0% w/w
		Color	IS 2860 : 1964 (RA 2008)	Qualitative
		Defects	IS 2860 : 1964 (RA 2008) IS 3245 : 1965 (RA 2001)	Qualitative
		Ash	IS 2860 : 1964 (RA 2008) IS 3500 : 1966 (RA 2005) IS 4624 : 1978 (RA 2005)	0.01 to 5.0 % w/w
		Acid insoluble ash	IS 8786 : 1978 (RA 2001) IS 3500 : 1966 (RA 2005) IS 4624 : 1978 (RA 2005)	0.05 to 1.0 % w/w
		Sodium chloride	IS 2860 : 1964 (RA 2008)	0.1 to 20 % w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	99 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Iron		AOAC 19th Ed.(Ch. 9)	0.10 to 500 mg/kg
	Drained weight		IS 2860-1964 (RA 2008)	10 to 95% of net weight
	Arsenic		AOAC 986.15 19th Ed.	0.001 to 5 mg/kg
	Lead		AOAC 973.35 19th Ed.	0.01 to 10 mg/kg
	Copper		AOAC 999.11 19th Ed. AACC 40-75	0.1 to 20 mg/kg
	Tin		AOAC 985.16 19th Ed.	0.1 to 250 mg/kg
	Zinc		AOAC 969.32 19th Ed. AACC 40-75	0.1 to 100 mg/kg
	Calcium		IS 13433 (Part 2)-1992 (RA 2008) AACC 40-75	0.01 to 1% w/w
	Phosphorus		AOAC 991.25 19th Ed. AACC 40-75	0.01 to 1% w/w
	pH		IS 2860-1964 (RA 2008)	0.1 to 14
	Reducing sugars		IS 8846-1989 (RA1995)	1 to 50% w/w
	Volatile oil		IS 1797-1985 (RA 2009) IS 329-2004 (RA 2010)	0.1 to 50% w/w
	Pectin		IS 1797-1985 (RA 2009) IS 329-2004 (RA 2010)	0.1 to 2.5% w/w
	Dietary fiber		AOAC 985.29 19th Ed.	0.1 to 15 % w/w
	Sulphur dioxide		AOAC 985.29 19th Ed.	10 to 3000 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	100 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Benzoic acid	IS 12014 (Part 1) : 1986 (RA 2009)	10 to 2000 mg/kg
		Sorbic acid	IS 12014 (Part 3) : 1986 (RA 2009)	10 to 4000 mg/kg
		Total soluble solids	IS 13815 : 2009 IS 2860 : 1964 (RA 2008)	1 to 80% w/w
		Head space	IS 13815 : 2009 IS 2860 : 1964 (RA 2008)	Qualitative
		Peroxidase test	IS 4624 : 1978 (RA 2005)	Qualitative
		Vitamin C	IS 13815 : 2009 IS 2860 : 1964 (RA 2008)	10 to 900 mg/kg
11.	Fruit juices & Concentrates	Soluble solids	IS 13815 : 2009 IS 5861 : 1993 (RA 2008)	1 to 80% w/w
		Acidity / Titratable acidity	IS 13844 : 2003 (RA 2008) IS 2860 : 1964 (RA 2008)	0.01 to 5.0% w/w
		Ethanol	IS 15096 : 2002 (RA2012)	1 to 10 g/kg
		Saccharin	IS 2346 : 1992 (RA 2009)	10 to 200 mg/L
		Essential oil	IS 1797 : 1985 (RA 2009)	0.1 to 50% w/w
		Sugar as invert sugar	IS 3881 : 1993 (RA 2008)	1 to 50% w/w
		Sulphur dioxide	IS 4624 : 1978 (RA 2005)	10 to 3000 mg/kg
		Vacuum of can	IS 2860 : 1964 (RA 2008)	Qualitative
		Head space of can	IS 2860 : 1964 (RA 2008)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	101 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Specific gravity / Degree Brix	IS 2860 : 1964 (RA 2008)	1 to 80% w/w
		pH	IS 3881 : 1993 (RA 2008)	0.1 to 14
		Volatile acidity	IS 3881 : 1993 (RA 2008)	0.1 to 1.2 %w/w
		Arsenic	AOAC 986.15 19th Ed.	0.001 to 5 mg/kg
		Lead	AOAC 973.35 19th Ed.	0.01 to 10 mg/kg
		Copper	AOAC 999.11 19th Ed. AACC 40-1975	0.1 to 20 mg/kg
		Tin	AOAC 985.16 19th Ed.	0.1 to 250 mg/kg
		Zinc	AOAC 969.32 19th Ed. AACC 40-1975	0.1 to 100 mg/kg
12.	Infant foods	Moisture	IS 16072 : 2012 IS 1806 : 1975 (RA 2009)	1 to 10% w/w
		Fat	IS 11721 : 2005, (RA 2010)	1 to 25% w/w
		Protein	IS 7219 : 1973 (RA 2005)	1 to 25% w/w
		Total Carbohydrates	IS 1656 : 2007 (RA 2012)	1 to 70% w/w
		Saturated fat	AOAC 996.06, 19 th Ed	1 to 55%
		Monounsaturated fat	AOAC 996.06, 19 th Ed	1 to 50%
		Polyunsaturated fat	AOAC 996.06, 19 th Ed	1 to 20%
		Trans fat	AOAC 996.06, 19 th Ed	0.1 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	102 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cholesterol	AOAC 976.26, 19 th Ed	1 to 500 mg/100g
		Total ash	IS 14433: 2007 (RA 2012)	1 to 15% w/w
		Acid insoluble ash	IS 14433: 2007 (RA 2012)	0.02 to 1% w/w
		Insolubility index	IS 12759: 1989 (RA 2010)	0.1 to 10.0 ml
		Vitamin A	AOAC 992.06, 19 th Ed. IS 58 86: 1970 (RA 2010) USP-2012	10 to 10000 µg/100g
		Vitamin D	AOAC 19 th Ed.(Ch.50) IS 5835: 1970 (RA1995) USP-2012	10 to 1000 IU/100g
		Thiamine	AOAC 19 th Ed.(Ch.45) IS 5398: 1969 (RA1995)	100 to 10000 µg/100g
		Nicotinamide	AOAC 19 th Ed.(Ch.45) IS 5400: 1969 (RA 2005)	0.1 to 100 mg/100g
		Riboflavin	AOAC 19 th Ed.(Ch.45) IS 5399: 1969 (RA 2005)	100 to 10000 µg/100g
		Vitamin B6	AOAC 19 th Ed.(Ch.45) USP-2012	100 to 1000 µg/100g
		Vitamin C	IS 5838: 1970 (RA 2009) USP-2012	1 to 1000 mg/100 g
		Calcium	IS 5949: 1990 (RA 2010) IS 15121: 2002 (RA 2008)	0.01 to 5% w/w
		Phosphorus	IS 12756: 1989 (RA 2010) AOAC 991.25,19 th Ed.	0.01 to 5% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	103 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iodide	AOAC 992.24, 19 th Ed.	10 to 500 µg/100g
		Copper	IS 1699: 1995 (RA 2009) AOAC 999.11, 19 th Ed.	0.1 to 50 mg/kg
		Manganese	IS 3025 (Part 2): 2004 (RA 2009) IS 12046:1987 (RA 2010)	0.1 to 50 mg/kg
		Zinc	IS 1699 :1995 (RA 2009) AOAC 19 th Ed.(Ch 9)	0.1 to 50 mg/kg
		Sodium	IS 12760: 2012 AOAC 19 th Ed.(Ch 9)	0.01 to 10% w/w
		Potassium	IS 12760: 2012 AOAC 19 th Ed.(Ch 9)	0.01 to 5% w/w
		Chloride	IS 11763: 2005 (RA 2008)	0.1 to 10% w/w
		Magnesium	IS 5949: 1990 (RA 2010) IS 12491: 1988 (RA 2010) AOAC 19 th Ed.(Ch 9)	1 to 1000 mg/100g
		Choline	AOAC 19 th Ed.(Ch.50) USP-2012	1 to 1000 mg/100g
		Iron	AOAC 999.11, 19 th Ed.	1 to 100 mg/kg
		Lead	AOAC 999.11, 19 th Ed.	0.1 to 50 mg/kg
		Arsenic	AOAC 986.15, 19 th Ed.	0.01 to 50 mg/kg
		Cadmium	AOAC 999.11, 19 th Ed.	0.1 to 500 mg/kg
		Tin	AOAC 985.16, 19 th Ed.	1 to 500 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	104 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Scorched particles	IS 13500: 1992 (RA 2008)	Qualitative
		Linoleate	AOAC 996.06, 19th Ed.	0.2 to 25% w/w
		Starch	IS 1806 : 1975, (RA 2009)	Qualitative
		Lecithin	IS 5055 : 1996, (RA 2009)	0.1 to 2% w/w
		Synthetic food colour	IS 12711 : 1989 (RA 2010) DGHS Manual for Food Additives	Qualitative
13.	Tobacco & by-products	Sieve Analysis	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	Qualitative
		Moisture (Dean & Stark)/ loss on drying	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.5 to 40% w/w
		Presence of Mould / weevil	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	Qualitative
		Total alkaloids (as nicotine)	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.1 to 5.0% w/w
		Total Nitrogen	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.1 to 10% w/w
		Total ash	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.1 to 20% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	105 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
14.	Oil seeds & by products	Acid insoluble ash	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.01 to 10% w/w
		Total chlorides	IS 5643 : 1999 (RA 2009) IS 9379 : 2008 IS 4463 : 1973 (RA 2008)	0.1 to 20% w/w
		Sugar	IS 8846 : 1989 (RA 2008)	1 to 20% w/w
		Reducing sugars	IS 8846 : 1989 (RA 2008)	1 to 20% w/w
		Calcium (as CaO)	IS 2111 : 1973	0.01 to 10% w/w
		Crude Fibre	IS 2111 : 1973	0.1 to 25.0% w/w
		Damaged seeds and weevilled seeds	IS 3579 : 1966 (RA 2000)	0.1 to 10% w/w
		Slightly damaged seeds	IS 3579 : 1966 (RA 2000)	0.1 to 10% w/w
		Dead and immature seeds	IS 3579 : 1966 (RA 2000)	0.1 to 10% w/w
		Impurities	IS 3579 : 1966 (RA 2000)	0.1 to 10% w/w
		Moisture	IS 3579 : 1966 (RA 2000)	1 to 20% w/w
		Oil content	IS 3579 : 1966 (RA 2000)	1 to 60% w/w
		Acid value of extracted oil	IS 3579 : 1966 (RA 2000)	0.1 to 10 % w/w
		Allyl isothiocyanate	IS 548 (Part 1) : 1964 (RA 2006)	0.1 to 1.0 % w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	106 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
15.	Oils, fats & related products	Admixture with other oils & adulterants	IS 548 (Part 2) : 1976 (RA 2006)	Qualitative
		Carotenoids	IS 5886 : 1970 (RA 2010) AOAC 19th Ed.(Ch 45)	50 to 2000 mg/kg
		Unsaponifiable matter	IS 548 (Part 1) : 1964 (RA 2006)	0.1 to 5% w/w
		Titre value	IS 548 (Part 1) : 1964 (RA 2006)	10 to 50°C
		Color on lovibond scale	IS 548 (Part 1) : 1964 (RA 2006)	10 to 70 units
		Argemone oil	IS 548 (Part 2) : 1976 (RA 2006)	Qualitative
		Bellier turbidity temperature	IS 548 (Part 2) : 1976 (RA 2006)	5 to 50°C
		Ash	IS 12029 : 1986 (RA 2004)	0.1 to 5% w/w
		Mineral acid	IS 12029 : 1986 (RA 2004)	0.01 to 5% w/w
		Clarity	IS 12029 : 1986 (RA 2004)	Qualitative
		Specific gravity	IS 548 (Part I) : 1964 (RA 2006) AOAC 985.19, 19 th Ed.	0.6 to 1.2
		Lead	IS 1699 : 1995 (RA 2009) AOAC 999.10 / 999.11 / 990.08, 19 th Ed.	0.1 to 50 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	107 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cadmium	IS 1699: 1995, (RA 2009) AOAC 999.10 / 999.11 / 990.08, 19th Ed.	0.1 to 50 mg/kg
		Arsenic	IS 1699: 1995 (RA 2009) AOAC 963.21, 19th Ed.	0.01 to 10 mg/kg
		Mercury	IS 1699: 1995 (RA 2009) AOAC 971.21, 19th Ed.	0.01 to 10 mg/kg
		Moisture & volatile matter	IS 548 (Part I): 1964 (RA 2006)	0.1 to 20% w/w
		Insoluble impurities	IS 548 (Part I): 1964 (RA 2006)	0.01 to 20% w/w
		Acid value	IS 548 (Part I): 1964 (RA 2006)	0.1 to 95
		Free fatty acids	IS 548 (Part I): 1964 (RA 2006)	0.1 to 50.0
		Melting point	IS 548 (Part 1): 1964 (RA 2006)	10 to 100°C
		Refractive index	IS 548 (Part 1): 1964 (RA 2006)	1.350 to 1.700
		Iodine value	IS 548 (Part 1): 1964 (RA 2006)	1 to 150
		Saponification value	IS 548 (Part 1): 1964 (RA 2006)	1 to 300
		Acetyl value & Hydroxyl value	IS 548 (Part 1): 1964 (RA 2006)	1 to 300
		Reichert-Meissl value	IS 548 (Part 1): 1964 (RA 2006)	10 to 50
		Polenske value	IS 548 (Part 1): 1964 (RA 2006)	0.1 to 20
		Peroxide value	IS 548 (Part 1): 1964 (RA 2006)	0.01 to 15.0 meq/kg
		Allyl isothiocyanate	IS 548 (Part 1): 1964 (RA 2006)	0.1 to 1% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	108 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Animal fat		IS 548 (Part 2): 1976 (RA 2006)	Qualitative
	Acidity of extracted oil		IS 1038: 1983 (RA 2006) AOAC 19th Ed.(Ch.33)	0.05 to 5% w/w
	Vitamin A		AOAC 19th Ed.(Ch.45) IS 5886: 1970 (RA 2010) IS 10633: 1999 (RA 2009) USP-2012	0.01 to 10 mg/100g
	Baudouin test		IS 548 (Part2): 1976 (RA 2006)	Qualitative
	Nickel		IS 10633: 1999 (RA2004)	1 to 100 mg/kg
	Mineral oil		IS 548 (Part 2):1976 (RA 2006)	Qualitative
	Flash point		IS 1448 (Part 21):1992	90 to 300°C
	Oil soluble colour		IS 548 (Part 2): 1976 (RA 2006)	Qualitative
	Rancidity		IS 7679: 1978 (RA 2006)	Qualitative
	Cloud point		IS 11069: 1984	5 to 18°C
	Saturated fat		AOAC 996.06 19 th Ed	1 to 50%
	Monounsaturated fat		AOAC 996.06 19 th Ed	1 to 60%
	Polyunsaturated fat		AOAC 996.06 19 th Ed	1 to 50%
	Trans fat		AOAC 996.06 19 th Ed	0.1 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	109 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
16.	Egg & Egg products	Moisture	IS 4723: 1978 (RA 2009)	0.1 to 70% w/w
		Solubility	IS 4723:1978 (RA 2009)	Qualitative
		Protein	IS 7219: 1973 (RA 2005)	1 to 50% w/w
		Lecithin and fat	IS 4723: 1978 (RA 2009)	1 to 75 % w/w
		Boric acid	IS 1479 (Part 2): 1961 (RA 2009)	Qualitative
		Total ash	IS 4723: 1978 (RA 2009)	0.1 to 5 % w/w
		Acid insoluble ash	IS 4723: 1978 (RA 2009)	0.01 to 5 % w/w
		Phosphorus (as P ₂ O ₅)	IS 1479 (Part 2): 1961 (RA 2009) AOAC 19th Ed.(Ch.2) AACC 40-75	0.1 to 10% w/w
		pH	IS 10382: 1982 (RA 2009)	0.5 to 14
		Foaming ability	IS 10382: 1982 (RA 2009)	Qualitative
17.	Meat & Meat products	Nitrogen	IS 5960 (Part-1): 1996, (RA 2009)	0.2 to 16% w/w
		Total available lysine	IS 9808 : 1981 (RA2011)	0.01 to 15% w/w
		Acid insoluble ash	IS 9808 : 1981 (RA2011)	0.01 to 5% w/w
		Fluorine	IS 9808 : 1981 (RA2011) IS 5470 : 2002	1 to 1000 mg/kg
		Total Phosphorous	IS 5960 (Part-9) : 1988 (RA 2009) AOAC 991.27 19 th Ed. AACC 40 : 75	0.1 to 20 % w/w
		Nitrite	IS 5960 (Part 7) : 1996 (RA 2009)	100 to 1000 mg/100g
		Arsenic	AOAC 963.21 AOAC 986.15,19th Ed.	0.002 to 100 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	110 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cadmium	AOAC 999.11,19th Ed.	1 to 100 mg/kg
		Zinc	AOAC 969.32 AOAC 999.11,19th Ed.	1 to 100 mg/kg
		Copper	AOAC 999.11,19th Ed.	1 to 100 mg/kg
		Tin	AOAC 985.16,19th Ed.	1 to 100 mg/kg
		Mercury	AOAC 971.21,19th Ed.	0.01 to 100 mg/kg
		Lead	AOAC 972.23 AOAC 999.11,19th Ed.	1 to 100 mg/kg
		Chloride	IS 5960 (Part 6) : 1997 (RA 2009) AOAC 983.14 19 th Ed.	0.1 to 25% w/w
		Moisture	IS 5960 (Part 5) : 2001 (RA 2009)	0.1 to 80% w/w
		Free fat	IS 5960 (Part 4) : 1997 (RA 2009)	0.1 to 15% w/w
		Total fat	IS 5960 (Part 3) : 1970 (RA 2010)	0.1 to 40% w/w
		Protein	IS 7219 : 1973 (RA2012)	1.0 to 95% w/w
		Total ash	IS 5960 (Part 2): 2000 (RA 2009)	0.1 to 10% w/w
18.	Spices & condiments	Solubility in cold water	IS 1797: 1985 (RA 2009)	Qualitative
		Moulds & insect infestation	IS 1797 : 1985 (RA 2009)	Qualitative
		Peroxidase Test	IS 4627 : 1968 (RA 2009)	Qualitative
		Extraneous matter	IS 1797 : 1985 (RA 2009) IS 5453 (Part 2) : 1996 (RA2007)	0.1 to 10% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	111 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Empty & malformed capsules	IS 1797 : 1985 (RA 2009)	0.1 to 10% w/w
		Immature, damaged & shriveled capsules	IS 1797 : 1985 (RA 2009)	0.1 to 10% w/w
		Mass per litre	IS 1797 : 1985 (RA 2009)	250 to 1000 g
		Moisture & volatile matter	IS 5453 (Part 2) : 1996 (RA2007)	0.1 to 40% w/w
		Moisture	IS 1797 : 1985 (RA 2009)	1 to 15% w/w
		Alcohol soluble extract	IS 1797 : 1985 (RA 2009)	0.1 to 50% w/w
		Ether soluble extract	IS 1797 : 1985 (RA 2009)	0.1 to 50% w/w
		Cold water soluble extract	IS 1797 : 1985 (RA 2009)	0.1 to 50% w/w
		Sulphur dioxide	IS 4625 : 1968 (RA2001) IS 4627 : 1968 (RA 2009)	10 to 3000 mg/kg
		Total ash	IS 1797 : 1985 (RA 2009)	0.1 to 10% w/w
		Acid insoluble ash	IS 1797 : 1985 (RA 2009) IS 5453 (Part 2) : 1996 (RA2007)	0.01 to 1% w/w
		Curcumin	IS 10925 : 1984	0.1 to 10 % w/w
		Starch	IS 4706 (Part 2) : 1978	0.5 to 75 % w/w
		Test for lead chromate	IS 3576 : 1994	Qualitative
		Arsenic	AOAC 986.15 19th Ed.	0.002 to 10 mg/kg
		Lead	AOAC 999.11 19th Ed.	0.1 to 50 mg/kg
		Cadmium	AOAC 999.11 19th Ed.	0.1 to 50 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	112 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
19.	Sugar & By-products	Copper	AOAC 999.11 19th Ed.	1 to 3000 mg/kg
		Zinc	AOAC 969.32 19th Ed.	1 to 1000 mg/kg
		Tin	AOAC 985.16 19th Ed.	1 to 250 mg/kg
		Total Nitrogen	IS 5194 : 1969 (RA 2010)	0.1 to 25% w/w
		Crude fiber	IS 1797 : 1985 (RA 2009)	1 to 50% w/w
		Volatile oil	IS 1797 : 1985 (RA 2009)	0.1 to 40% w/w
		Moisture	IS 6287 : 1985 (RA 2010) IS 15279 : 2003 (RA 2008)	0.1 to 50% w/w
		Pol %	IS 15279 : 2003 (RA 2008)	10 to 99%
		Total Reducing matter as invert sugar	IS 1162 : 1958 (RA 2009) IS 6287 : 1985 (RA 2010)	1 to 70% w/w
		Reducing sugar	IS 15279 : 2003 (RA 2008) IS 6287 : 1985 (RA 2010)	0.1 to 1.0% w/w
		Conductivity ash	IS 15279 : 2003 (RA 2008)	0.01 to 1.0 % w/w
		Sulphur dioxide	IS 15279 : 2003 (RA 2008)	5 to 1000 mg/kg
		Water insolubles	IS 15279 : 2003 (RA 2008)	0.01 to 5% w/w
		Color in ICUMSA units	IS 15279 : 2003 (RA 2008)	5 to 1500
		Sulphated ash	IS 1162 : 1958 (RA 2009) IS 6287 : 1985 (RA 2010) IS 15279 : 2003 (RA 2008)	0.01 to 10% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	113 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Unfermentable reducing substances	AOAC 948.23,19th Ed.	1 to 60% w/w
		Sucrose	IS 6287 : 1985 (RA 2010) IS 15279 : 2003 (RA 2008)	1 to 99.9 % w/w
		Density in °Brix	IS 1162 : 1958 (RA 2009)	5 to 95
		Fat	IS 6287 : 1985 (RA 2010)	0.1 to 50 % w/w
		Protein	IS 6287 : 1985 (RA 2010)	0.1 to 25 % w/w
		Starch	IS 15279 : 2003 (RA 2008)	0.1 to 10.0% w/w
		Zinc	AOAC 969.32,19th Ed.	0.1 to 50 mg/kg
		Copper	AOAC 999.11,19th Ed.	0.1 to 300 mg/kg
		Tin	AOAC 985.16,19th Ed.	0.1 to 1000 mg/kg
		Arsenic	AOAC 986.15,19th Ed.	0.01 to 20 mg/kg
		Lead	AOAC 999.11,19th Ed.	0.5 to 250 mg/kg
20.	Starch & Starchy Products	Moisture	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 20% w/w
		Total ash	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 20% w/w
		Total ash excluding NaCl	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 20% w/w
		Sulphated ash	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 10% w/w
		Acid insoluble ash	IS 4706 (Part 2): 1978 (RA 2010)	0.01 to 5% w/w
		Starch	IS 4706 (Part 2): 1978 (RA 2010)	1 to 99.9% w/w
		Protein	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 25% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	114 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphur dioxide	IS 4706 (Part 2): 1978 (RA 2010)	10 to 3000 mg/kg
		Crude fiber	IS 4706 (Part 2): 1978 (RA 2010)	1 to 25% w/w
		pH of aqueous extract	IS 4706 (Part 2): 1978 (RA 2010)	0.5 to 14
		Free acidity	IS 4706 (Part 2): 1978 (RA 2010)	0.01 to 10% w/w
		Alcoholic acidity	IS 4706 (Part 2): 1978 (RA 2010)	0.01 to 10% w/w
		Presence of Hydrocyanic acid	IS 4706 (Part 2): 1978 (RA 2010)	Qualitative
		Particle size	IS 4706 (Part 1): 1978 (RA 2010)	1 to 100% w/w
		Microscopic examination	IS 4706 (Part 1): 1978 (RA 2010)	Qualitative
		Cold water soluble	IS 4706 (Part 1): 1978 (RA 2010)	0.2 to 10%
		Rodent excreta	IS 4706 (Part 1): 1978 (RA 2010)	Qualitative
		Gelatinization & starch in gruel	IS 4706 (Part 1): 1978 (RA 2010)	1 to 35% w/w
		Color of gelatinized alkaline starch paste	IS 4706 (Part 2): 1978 (RA 2010)	0.1 to 70 R & Y units
		Alkaline paste	IS 4706 (Part 2): 1978 (RA 2010)	Qualitative
		Gelling power	IS 4706 (Part 2): 1978 (RA 2010)	Qualitative
		Reducing sugar	IS 5448: 1980 (RA2004)	1 to 70% w/w
		Arsenic	AOAC 986.15, 19th Ed.	0.001 to 10 mg/kg
		Copper	AOAC 999.11, 19th Ed.	0.1 to 3000 mg/kg
		Lead	AOAC 999.11, 19th Ed.	0.1 to 100 mg/kg
		Aflatoxins B1, B2, G1, G2	AOAC 993.16, 19th Ed.	2 to 10000 µg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	115 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
21.	Food color & coal tar dyes	Total Dye content	IS 1699 : 1995 (RA 2009)	1 to 99.9 % w/w
			IS 1695 : 1994 (RA 2008)	
			IS 1694 : 1994 (RA 2008)	
			IS 2923 : 1995 (RA 2008)	
			IS 5346 : 1994 (RA 2009)	
			IS 1697 : 1994 (RA 2008)	
			IS 1698 : 1994 (RA 2008)	
		Loss on drying /Moisture	IS 1699 : 1995 (RA 2009)	1 to 25 % w/w
			IS 1695 : 1994 (RA 2008)	
			IS 1694 : 1994 (RA 2008)	
			IS 2923 : 1995 (RA 2008)	
			IS 5346 : 1994 (RA 2009)	
			IS 1697 : 1994 (RA 2008)	
			IS 1698 : 1994 (RA 2008)	
		Water insoluble matter	IS 1699 : 1995 (RA 2009)	0.01 to 1.0% w/w
			IS 1695 : 1994 (RA 2008)	
			IS 1694 : 1994 (RA 2008)	
			IS 2923 : 1995 (RA 2008)	
			IS 5346 : 1994 (RA 2009)	
			IS 1697 : 1994 (RA 2008)	
			IS 1698 : 1994 (RA 2008)	
		Combined ether extract	IS 1699 : 1995 (RA 2009)	0.1 to 20% w/w
			IS 1695 : 1994 (RA 2008)	
			IS 1694 : 1994 (RA 2008)	
			IS 2923 : 1995 (RA 2008)	
			IS 5346 : 1994 (RA 2009)	
			IS 1697 : 1994 (RA 2008)	
			IS 1698 : 1994 (RA 2008)	
		Chlorides as Cl	IS 1699 : 1995 (RA 2009)	0.1 to 10% w/w
			IS 1695 : 1994 (RA 2008)	
			IS 1694 : 1994 (RA 2008)	
			IS 2923 : 1995 (RA 2008)	
			IS 5346 : 1994 (RA 2009)	
			IS 1697 : 1994 (RA 2008)	
			IS 1698 : 1994 (RA 2008)	

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	116 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphates as Na ₂ SO ₄	IS 1699 : 1995 (RA 2009) IS 1695 : 1994 (RA 2008) IS 1694 : 1994 (RA 2008) IS 2923 : 1995 (RA 2008) IS 5346 : 1994 (RA 2009) IS 1697 : 1994 (RA 2008) IS 1698 : 1994 (RA 2008)	1 to 1000 mg/kg
		Artificial coloring matter	IS 12711 : 1989 (RA 2010)	Qualitative
		Color identification of Annexatto	IS 2557 : 1994 (RA 2009)	Qualitative
		Norbixin/ Bixin	IS 2557 : 1994 (RA 2009)	0.1 to 5% w/w
		Solid content	IS 4467 : 1996 (RA 2009)	1 to 90% w/w
		Colour intensity	IS 4467 : 1996 (RA 2009)	0.01 to 0.9
		Ammonical nitrogen	IS 4467 : 1996 (RA 2009)	0.01 to 2% w/w
		4-Methyl imidazole	IS 4467 : 1996 (RA 2009)	Qualitative
		Total sulphur	IS 4467 : 1996 (RA 2009)	0.1 to 25 % w/w
		Sulphur dioxide	IS 4467 : 1996 (RA 2009)	10 to 10000 mg/kg
		Total nitrogen	IS 4467 : 1996 (RA 2009)	0.1 to 25% w/w
		Heavy Metals as Pb	IS 1699 : 1995 (RA 2009)	Qualitative
		Arsenic	IS 1699 : 1995 (RA 2009)	0.001 to 10 mg/kg
		Mercury	IS 1699 : 1995 (RA 2009)	0.01 to 10 mg/kg
		Copper	IS 1699 : 1995 (RA 2009)	1 to 300 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	117 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chromium	IS 1699 : 1995 (RA 2009)	1 to 1000 mg/kg
		Lead	IS 1699 : 1995 (RA 2009)	1 to 250 mg/kg
22.	Residue in Milk and Dairy Products (Fresh Milk)	Pesticide Residues Lindane Endosulphan Chlordane Heptachlor Methoxychlor Aldrin Dieldrin Dichlorvos Ethion Diazinon Malathion Methyl Parathion Alpha-HCH Beta-HCH Delta-HCH Fenthion o,p-DDT Beta-Endosulfan pp-DDT Endosulfan –sulphate Permethrin Cypermethrin Fenvalerate Deltamethrin Chlorothionol Chlorpyrifos methyl Propanil	(SRI/ SOP-Residue/Milk & Dairy Product/01) ISSUE NO. 01 DATE 10.03.2008 REVISION NO. 03 DATE 01.04.2014	1 to 1000 µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	118 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Vinclozolin		(SRI/ SOP-Residue/Milk & Dairy	1 to 1000 µg/kg
	Parathion		Product/01)	(LOD 0.5 µg/kg)
	Allethrin		ISSUE NO. 01	
	Pretiachlor		DATE 10.03.2008	
	pp-DDE		REVISION NO. 03	
	op-DDD		DATE 01.04.2014	
	Endrin			
	Chlorobenzilate			
	pp-DDD			
	Bromopropylate			
	Amitraz			
	Cyhalothrin			
	Coumaphos			
	Cyfluthrin			
	Fluvalinate			
	Alachlor			
	Dicofol			
	Heptachlor epoxide			
	Butachlor			
	Fenarimol			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			
	Buprofezin			
	Cymoxanil			
	Difenconazole			
	Difenthrin			
	Fenamidon			
	Flusilazole			
	Isoproturon			
	Methomyl			
	Omethoate			
	Primiphos methyl			
	Pyraclostrobin			
	Tebuconazole			
	Thiodicarb			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	119 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Trifloxystrobin		(SRI/ SOP-Residue/Milk & Dairy	1 to 1000 µg/kg
	Abamectin		Product/01)	(LOD 0.5 µg/kg)
	Acetamiprid		ISSUE NO. 01	
	Carbendazim		DATE 10.03.2008	
	Chlorfenviphos		REVISION NO. 03	
	Diflubenzuron		DATE 01.04.2014	
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			
	Malaxon			
	Methamidofos			
	Methyl Paraxon			
	Myclobutanil			
	Penconazole			
	Phorate sulfoxide			
	Phorate Sulfone			
	Phorate			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Eamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			
	Iprovalicarb			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	120 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Kresoxim Methyl Metalaxyl Thiamethoxam Acephate Aldicarb Atrazine Diazinon Diclorovos Dimethoate Ethion Monocrotophos Phophamidone Simazine		(SRI/ SOP-Residue/Milk & Dairy Product/01) ISSUE NO. 01 DATE 10.03.2008 REVISION NO. 03 DATE 01.04.2014	1 to 1000 µg/kg (LOD 0.5 µg/kg)
	Heavy Metals Hg } As }			50 to 5000 µg/kg (LOD 25 µg/kg)
	Pb } Cd } Cr }			0.3 to 100 µg/kg (LOD 0.3 µg/kg) 1 to 100 µg/kg (LOD 0.5 µg/kg)
	Antibiotics & veterinary Drugs Chloramphenicol Nitrofurantoin (Furazolidone) Nitrofurantoin metabolites Furazolidone [AOZ] Furazolidone [AMOZ] Nitrofurantoin [AHD] Nitrofurazone [SEM] Ronidazole Metronidazole			1 to 100 µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	121 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Sulfonamides		(SRI/ SOP-Residue/Milk & Dairy Product/01)	1 to 100 µg/kg (LOD 0.5 µg/kg)
	Sulfadimidine		ISSUE NO. 01	
	Sulfadiazine		DATE 10.03.2008	
	Sulfadimethoxine		REVISION NO. 03	
	Sulfadoxine		DATE 01.04.2014	
	Sulfamerazine			
	Sulanilamide			
	Sulfamethoxypyridazine			
	Trimethoprim			
	Sulfamethiazole			
	Sulfamethazine			
	Tetracycline grp.			
	Chlortetracycline			
	Oxytetracycline			
	Tetracycline			
	Macrolides			10 to 500 µg/kg (LOD 5 µg/kg)
	Erythromycin			
	Spiramycin			
	Tilmicosin			
	Tylosin			
	Thiamphenicol			
	Aminoglycosides group			50 to 1000 µg/kg (LOD 25 µg/kg)
	Dihydrostreptomycin			
	Gentamicin			
	Kanamycin			
	Neomycin			
	Framycetin			
	Spectinomycin			
	Streptomycin			5 to 1000 µg/kg (LOD 2.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	122 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Anthelmintics	(SRI/ SOP-Residue/Milk & Dairy Product/01)	1 to 100 µg/kg
		Albendazole	ISSUE NO. 01	(LOD 0.5 µg/kg)
		Fenbendazole	DATE 10.03.2008	5 to 1000 µg/kg
		Ivermectin	REVISION NO. 03	(LOD 2.5 µg/kg)
		DATE 01.04.2014		
		Non steroidal anti-inflamatory drugs		
		Phenyl Butazone		1 to 100 µg/kg
		Miscellaneous		(LOD 0.5 µg/kg)
		Enrofloxacin Norfloxacin		
		Diclofenac		50 to 1000 µg/kg
		Melamine		(LOD 25 µg/kg)
		Environmental Pollutants		1 to 1000 µg/kg
		PAH		(LOD – 0.5 µg/kg)
		PCBs		
23.	Residue in Honey (Raw and Processed)	Pesticide residues	(SRI/ SOP-HONEY - RESIDUES/00)	1 to 1000 µg/kg
		Chlorobenzilate	ISSUE NO. 00	(LOD 0.5 µg/kg)
		Hexachlorobenzene	DATE 10.03.2008	
		DDT	REVISION NO. 05	
		op-DDT	DATE 01.04.2014	
		pp-DDE		
		pp-DDD		
		αHCH		
		βHCH		
		Lindane		
		Vinclozolin		
		Aldrin		
		Dieldrin		
		Endosulfan		
		Heptachlor		
		Coumaphos		
		Malathion		
		Phosalone		
		Cyfluthrin		
		Cypermethrin		

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	123 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Deltamethrin		(SRI/ SOP-HONEY -	1 to 1000 µg/kg
	Permethrin		RESIDUES/00)	(LOD 0.5 µg/kg)
	Fenvalerate		ISSUE NO. 00	
	Fluvalinate		DATE 10.03.2008	
	Cyhalothrin Carbofuran		REVISION NO. 05	
	Propoxur		DATE 01.04.2014	
	Carbaryl			
	Cymiazol			
	Amitraz			
	Brompropylate			
	Chinomethioate			
	Delta-HCH			
	Parathion Methyl			
	Fenthion			
	Chlordane			
	Beta-Endosulfan			
	Endosulfan- sulphate			
	Chlorothalonil			
	Chlorpyrifos methyl			
	Chlorpyrifos			
	Propanil			
	Parathion			
	Allethrin			
	Pretiachlor			
	op-DDD			
	Endrin			
	Chlorobenzilate			
	pp-DDT			
	Methoxychlor			
	Alachlor			
	Parathion Methyl			
	Dicofol			
	Heptachlor epoxide			
	Butachlor			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	124 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fenarimol		(SRI/ SOP-HONEY -	1 to 1000 µg/kg
	Esfenvalerate		RESIDUES/00)	(LOD 0.5 µg/kg)
	Dimethomorphe		ISSUE NO. 00	
	Azoxystrobin		DATE 10.03.2008	
	Bitertanol		REVISION NO. 05	
	Buprofezin		DATE 01.04.2014	
	Cymoxanil			
	Difenoconazole			
	Difenthiuron			
	Fenamidon			
	Flusilazole			
	Isoproturon			
	Methomyl			
	Omethoate			
	Primiphos methyl			
	Pyraclostrobin			
	Tebuconazole			
	Thiodicarb			
	Trifloxystrobin			
	Abamectin			
	Acetamiprid			
	Carbendazim			
	Chlorfenviphos			
	Diflubenzuron			
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			
	Malaxon			
	Methamidofos			
	Methyl Paraxon			
	Myclobutanil			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	125 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Penconazole		(SRI/ SOP-HONEY -	1 to 1000 µg/kg
	Phorate sulfoxide		RESIDUES/00)	(LOD 0.5 µg/kg)
	Phorate Sulfone		ISSUE NO. 00	
	Phorate		DATE 10.03.2008	
	Primiphos methyl		REVISION NO. 05	
	Profenfos		DATE 01.04.2014	
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Enamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			
	Iprovalicarb			
	Kresoxim Methyl			
	Metalaxyl			
	Thiamethoxam			
	Acephate			
	Aldicarb			
	Atrazine			
	Diazinon			
	Diclorovos			
	Dimethoate			
	Ethion			
	Monocrotophos			
	Phophamidone			
	Simazine			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	126 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Antibiotics & veterinary Drugs	(SRI/ SOP-HONEY - RESIDUES/00)	
		Chloramphenicol	ISSUE NO. 00	0.3 to 100 µg/kg (LOD 0.3 µg/kg)
		Nitrofurans	DATE 10.03.2008	
		Furazolidone (AOZ)	REVISION NO. 05	1 to 100 µg/kg
		Furatadone (AMAZ)	DATE 01.04.2014	(LOD 0.5 µg/kg)
		Nitrofurantoin (AHD)		
		Nitrofurazone (SEM)		
		Sulfonamide		
		Sulfadimidine		
		Sulfadiazine		
		Sulfadimethoxine		
		Sulfadoxine		
		Sulfamerazine		
		Sulanilamide		
		Sulfamethoxypyridazine		
		Sulfamethoxazol		
		Sulfamethiazole		
		Trimethoprim		
		Streptomycin		
		Fluoroquinolone		
		Ciprofloxacin		10 to 1000 µg/kg (LOD 5 µg/kg)
		Norfloxacin		
		Enrofloxacin		
		Tetracycline		
		Oxytetracyclin		
		Chlortetracyclin		
		Doxycyclin		
		Heavy Metals		
		Hg		100 to 5000 µg/kg (LOD 50µg/kg)
		As		
		Pb		50 to 5000 µg/kg
		Cd		(LOD 25 µg/kg)
		Cr		

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	127 of 275

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Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	128 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fenthion		(SRI/SOP/RESIDUES-NUTS/00)	10 to 1000µg/kg
	Chlordane		ISSUE NO. 00	(LOD 5µg/kg)
	Endosulfan		DATE 01.02.2013	
	Dieldrin		REVISION NO. 01	
	Beta-Endosulfan		DATE 01.04.2014	
	Endosulfan –sulphate			
	Permethrin			
	Cypermethrin			
	Fenvalerate			
	Chlorothalonil			
	Chlorpyrifos methyl			
	Chlorpyrifos			
	Propanil			
	Vinclozolin			
	Parathion			
	Allethrin			
	Prethachlor			
	Endrin			
	Chlorobenzilate			
	Bromopropylate			
	Methoxychlor			
	Amitraz			
	Cyhalothrin			
	Coumaphos			
	Cyfluthrin			
	Fluvalinate			
	Heptachlor			
	Alachlor			
	Dicofol			
	Heptachlor epoxide			
	Butachlor			
	Fenarimol			
	Fenvalerate			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	129 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Buprofezin		(SRI/SOP/RESIDUES-NUTS/00)	10 to 1000µg/kg
	Cymoxanil		ISSUE NO. 00	(LOD 5µg/kg)
	Difencconazole		DATE 01.02.2013	
	Difenturon		REVISION NO. 01	
	Fenamidon		DATE 01.04.2014	
	Flusilazole			
	Isoproturon			
	Methomyl			
	Omethoate			
	Primiphos methyl			
	Pyraclostrobin			
	Tebuconazole			
	Thiodicarb			
	Trifloxystrobin			
	Abamectin			
	Acetamiprid			
	Atrazine			
	Carbaryl			
	Carbofuran			
	Diazinon			
	Ethion			
	Monocrotophos			
	Phophamidone			
	Propoxur			
	Simazine			
	Carbendazim			
	Chlorfenviphos			
	Diflubenzuron			
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	130 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Malaxon		(SRI/SOP/RESIDUES-NUTS/00)	10 to 1000µg/kg
	Methamidofos		ISSUE NO. 00	(LOD 5µg/kg)
	Methyl Paraxon		DATE 01.02.2013	
	Myclobutanil		REVISION NO. 01	
	Penconazole		DATE 01.04.2014	
	Phorate sulfoxide			
	Phorate Sulfone			
	Phorate			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Enamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			
	Iprovalicarb			
	Kresoxim Methyl			
	Metalaxyl			
	Thiamethoxam			
	Acephate			
	Aldicarb			
	Heavy Metals			
	Hg			100 to 5000 µg/kg
	As			(LOD 50 µg/kg)
	Pb			50 to 5000 µg/kg
	Cd			(LOD 25 µg/kg)
	Cr			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	131 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Mycotoxins	(SRI/SOP/RESIDUES-NUTS/00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	1 to 100 µg/kg (LOD 0.5 µg/kg)
		Aflatoxins B1, B2, G1, G2		
		Zearalenone DON		0.2 to 5 mg/kg (LOD 0.1 µg/kg)
		Environmental Pollutants		
		PAH PCBs		10 to 1000 µg/kg (LOD 5 µg/kg)
25.	Residue in Fresh and processed fruits and vegetables (Grapes, Pomegranate, Apple, Pear, Orange and Spinach, Beans, Cauliflower, Gourd, Bittergourd, Tinda, Parval, Brinjal, Potato, Tomato, cabbage etc.)	Pesticide residues 4-Bromo-2-chlorophenol, Aldrin Chlordane Cyfluthrin Cypermethrin DDT Deltamethrin Dicofol Dieldrin Endosulfan Endrin Fenvalerate & Esfenvalerate HCH Lindane Heptachlor Lambda-Cyhalothrin Chlorothalonil Permethrin Acephate Atrazine	(SRI/SOP/RESIDUE/FRUIT & VEGETABLES /00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000µg/kg (LOD 5µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	132 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Carbaryl	(SRI/SOP/RESIDUE/FRUIT &	10 to 1000µg/kg
		Carbofuran	VEGETABLES /00)	(LOD 5µg/kg)
		Cymoxanil	ISSUE NO. 00	
		Dimethoate	DATE 01.02.2013	
		Hexaconazole Imidacloprid	REVISION NO. 01	
		Metalaxyl Methamidophos	DATE 01.04.2014	
		Methomyl		
		Monocrotophos		
		Myclobutanil Omethoate		
		Oxydemetonmethyl		
		Penconazole		
		Phosalone		
		Phosphomidone Propiconazole		
		Quinalphos		
		Thiamethoxam		
		Iprodione		
		Fipronil		
		Thiodicarb Carbosulfan		
		Dichlorovos Etrimphos		
		Triademefon Diazinon		
		Triazophos		
		Malathion		
		Profenphos Flusilazole		
		Dimethomorph		
		Spinosyn A & D		
		Difenthiuron		
		Methyl Parathion		
		Fenitrothion		
		Phorate		
		Chlorpyrifos methyl		
		Fenamidone		
		Ethofenprox		
		Tridemorph		
		Carbendazim		
		Iprovalicarb		
		Kresoxim methyl		

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	133 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Trifloxystrobin Pyraclostrobin		(SRI/SOP/RESIDUE/FRUIT & VEGETABLES /00)	10 to 1000µg/kg
	Famoxadone Diflubenzuron			(LOD 5µg/kg)
	Triadimenol		ISSUE NO. 00	
	Acetamiprid Thiophanate-methyl		DATE 01.02.2013	
	Ethyl Parathion		REVISION NO. 01	
	Oxyfluorfen		DATE 01.04.2014	
	Captan			
	Captafol			
	Fenarimol			
	Bitertanol			
	Dinocap			
	Dithiocarbamates (estimated as CS ₂)			500 µg/kg (LOD 200µg/kg)
	Butachlor			
	Fenarimol			
	Dimethomorph			
	Parathion Methyl			
	Heptachlor epoxide			
	Heptachlor			
	Alachlor			
	Thiacloprid Buprofezin			10 to 1000µg/kg (LOD 5µg/kg)
	Cartap Hcl			
	Abamectin Azoxystrobin			
	Flufenoxuron Propargite			
	Fenpyroximate			
	Clothianidin			
	Emamectin- Benzoate			
	Iprobenphos Difenconazole			
	Chlorfenvinphos Chlorpyrifos			
	Ethion			
	Simazine			
	Indoxacarb Tebuconazole			
	Aldrin			
	Malathion			
	Fenthion			
	Chlordane			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	134 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Beta-Endosulfan Endosulfan sulphate Cypermethrin Fenvalerate Chlorothionol Propanil Vinclozolin Parathion Allethrin Pretiachlor Chlorobenzilate Bromopropylate Methoxychlor Amitraz Coumaphos Cyfluthrin Fluvalinate		(SRI/SOP/RESIDUE/FRUIT & VEGETABLES /00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000µg/kg (LOD 5µg/kg)
	Heavy Metals			
	Hg As			100 to 5000 µg/kg (LOD 50 µg/kg)
	Pb Cd Cr			50 to 5000 µg/kg (LOD 25 µg/kg)
	Environmental Pollutants			
	PAH PCBs			10 to 1000 µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	135 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
26.	Residues in Spices and Herbs (Raw and processed) Chilies, Cumin)	Pesticides Residues Alpha-HCH Beta-HCH Gamma-HCH Delta-HCH Aldrin Malathion Fenthion Chlordane Endosulfan Dieldrin o,p-DDT Beta-Endosulfan pp-DDT Endosulfan- sulphate Permethrin Cypermethrin Fenvalerate Deltamethrin Chlorothalonil Chlorpyrifos methyl Chlorpyrifos Propanil Vincozolin Parathion Allethrin Pretiachlor pp-DDE op-DDD Endrin Chlorobenzilate pp-DDD Bromopropylate Methoxychlor Amitraz Cyahaloethrin	(SRI/SOP/RESIDUE-SPICES & HERBS /00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to1000 µg/kg (LOD 0.5 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	136 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Coumaphos		(SRI/SOP/RESIDUE-SPICES &	10 to1000 µg/kg
	Cyfluthrin		HERBS /00)	(LOD 5 µg/kg)
	Fluvalinate		ISSUE NO. 00	
	Heptachlor		DATE 01.02.2013	
	Alachlor		REVISION NO. 01	
	Parathion Methyl		DATE 01.04.2014	
	Dicofol			
	Heptachlor epoxide			
	Butachlor			
	Funarimol			
	Fenvalerate			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			
	Buprofezin			
	Cymoxanil			
	Difenconazole			
	Difenthruron			
	Fenamidon			
	Flusilazole			
	Isoproturon			
	Methomyl			
	Omethoate			
	Primiphos methyl			
	Pyraclostrobin			
	Tebuconazole			
	Thiodicarb			
	Trifloxystrobin			
	Abamectin			
	Acetamiprid			
	Alaclor			
	Carbendazim			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	137 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Chlorfenviphos		(SRI/SOP/RESIDUE-SPICES &	10 to 1000 µg/kg
	Diflubenzuron		HERBS /00)	(LOD 5 µg/kg)
	Etofenpros		ISSUE NO. 00	
	Etrimphos		DATE 01.02.2013	
	Fenpyroximate		REVISION NO. 01	
	Flufenoxuron		DATE 01.04.2014	
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			
	Malaxon			
	Methamidofos			
	Methyl Paraxon			
	Myclobutanil			
	Penconazole			
	Phorate sulfoxide			
	Phorate Sulfone			
	Phorate			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Flufenoxuron			
	Iprovalicarb			
	Kresoxim Methyl			
	Metalaxyl			
	Thiamethoxam			
	Acephate			
	Aldicarb			
	Atrazine			
	Carbaryl			
	Carbofuran			
	Diazinon			
	Diclorovos			
	Dimethoate			
	Ethion			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	138 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Monocrotophos Phosalone Phophamidone Propoxur Simazine Thiodiclopid Thiophenate Methyl Triazophos Tridimenal Enamectin- Benzoate Famoxadone Spinosad A Spinosad D		(SRI/SOP/RESIDUE-SPICES & HERBS /00) ISSUE NO. 00 DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000 µg/kg (LOD 5 µg/kg)
	Heavy Metals Hg As Pb Cd Cr			100 to 5000 µg/kg (LOD 50µg/kg) 50 to 5000 µg/kg (LOD 25µg/kg)
	Environmental Pollutants PAH PCBs			10 to 1000 µg/kg (LOD 5 µg/kg)
	Banned Dyes Sudan dyes			10 to 500 µg/kg (LOD 5 µg/kg)
	Mycotoxins Aflatoxins B1, B2, G1, G2 Zearalenone DON			1 to 100 µg/kg (LOD 0.5 µg/kg) 2.5 to 5 mg/Kg (LOD 0.1 µg/kg)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	139 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
VI.	COSMETICS & ESSENTIAL OILS			
1.	Cosmetics & Toiletries	Dispensing & stability	IS 6356 : 2001 (RA 2006)	Qualitative
		Cold water extract	IS 7159 : 1984 (RA 2005)	10 to 50% w/w
		Mineral matter	IS 7159 : 1984 (RA 2005)	1 to 25% w/w
		Extraneous sand	IS 7159 : 1984 (RA 2005)	1 to 10% w/w
		Acid insoluble ash	IS 7159 : 1984 (RA 2005)	1 to 15% w/w
		Lawsone pigment	IS 7159 : 1984 (RA 2005)	0 to 5% w/w
		Extraneous dye	IS 7159 : 1984 (RA 2005)	Qualitative
		Moisture & volatile matter	IS 3959 : 2004 (RA 2009) IS 7159 : 1984 (RA 2005) IS 5339 : 2004 (RA 2009) IS 7679 : 1978 (RA2001) IS 9740 : 1981 (RA 2006)	1 to 95% w/w
		Heavy metals (as Pb)	IS 3959 : 2004 (RA 2009) IS 6356 : 2001 (RA 2006) IS 5339 : 2004 (RA 2009)	Qualitative
		Arsenic	AOAC 963.21 19 th Edn	0.01 to 100 mg/kg
		Thermal stability	IS 6608 : 2004 (RA 2009) IS 7679 : 1978 (RA2001)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	140 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		pH	IS 6356 : 2001 (RA 2006) IS 5339 : 2004 (RA 2009) IS 6608 : 2004 (RA 2009) IS 7679 : 1978 (RA2001) IS 7884 : 2004 (RA 2009)	0.5 to 14
		Peroxide value	IS 7123 : 1993 (RA 2009)	0.1 to 100 mEq./kg
		Acid value	IS 7123 : 1993 (RA 2009)	0.1 to 10
		Total fatty matter	IS 7679 : 1978 (RA2001) IS 6608 : 2004 (RA 2009)	1 to 50% w/w
		Foaming power	IS 6356 : 2001 (RA 2006) IS 9740 : 1981 (RA 2006)	Qualitative
		Free alkali matter	IS 9740 : 1981 (RA 2006)	Qualitative
		Fluoride	IS 6356 : 2001 (RA 2006)	10 to 5000 mg/kg
		Sieve test	IS 6356: 2001 (RA 2006) IS 5339: 2004 (RA 2009)	Qualitative
		Matter insoluble in boiling water	IS 3959 : 2004 (RA 2009) IS 5339 : 2004 (RA 2009)	80 to 100% w/w
		Fineness	IS 3959 : 2004 (RA 2009) IS 6356 :2001 (RA 2006) IS 5339 : 2004 (RA 2009)	0.01 to 20% w/w

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	141 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Essential Oils	Colour & appearance	IS 326 (Part 2):1980 (RA2000)	Qualitative
		Optical rotation	IS 326 (Part 4): 2005 (RA 2010)	- 20° to + 15°
		Specific gravity	IS 326 (Part 3): 2006 (RA 2010)	0.593 to 0.999
		Refractive Index	IS 326 (Part 5): 2006 (RA 2010)	1.3 to 1.6
		Solubility	IS 326 (Part 6): 2005 (RA 2010)	Qualitative
		Ester value /Esters calculated as santalyl acetate	IS 326 (Part 8): 2005 (RA 2010) IS 329: 2004 (RA 2010)	0.5 to 15.0% w/w
		Free / Total alcohol calculated as Santalol	IS 326 (Part 9):1980 (RA 2006) IS 329: 2004 (RA 2010)	5 to 95% w/w
		Residue on evaporation	IS 326 (Part 10): 2005 (RA 2010)	0.5 to 10% w/w
		Acid value	IS 326 (Part 7): 2006 (RA 2010)	0.1 to 25
		Freezing point	IS 326 (Part 18): 1984 (RA 2008)	-22 to -40°C
		Carbonyl value	IS 326 (Part 11): 1986 (RA 2010)	20 to 80
		Geraniol	IS 512 1988 (RA 2008)	25 to 90%
		Citral	IS 327 1991 (RA 2008)	15 to 80%
		Melting Point	IS 326 (Part 16): 1989 (RA 2008)	-10 to 40°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	142 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
VII.	SOAPS DETERGENTS & TOILETRIES			
1.	Soaps and Synthetic Detergents	Moisture and volatile matter	IS 286: 1978 (RA 2008)	0.1-20% w/w
		Matter insoluble in alcohol	IS 286: 1978 (RA 2008)	0.1 to 20% w/w
		Free caustic alkali	IS 286: 1978 (RA 2008)	0.1 to 1% w/w
		Matter insoluble in water	IS 286: 1978 (RA 2008)	0.1 to 80% w/w
		Total alkalinity	IS 286: 1978 (RA 2008)	0.1 to 5% w/w
		Rosin acids	IS 286: 1978 (RA 2008)	0.1 to 50% w/w
		Total fatty matter	IS 286: 1978 (RA 2008)	5 to 90% w/w
		Titre of fatty acids	IS 286: 1978 (RA 2008)	25 to 75°C
		Chlorides	IS 286: 1978 (RA 2008)	0.1 to 10% w/w
		pH of aqueous solution	IS 286: 1978 (RA 2008)	0.1 to 14
		Starch	IS 286: 1978 (RA 2008)	Qualitative
		Active ingredient (Anionic type)	IS 4955-2001 (RA 2006) IS 8401-1994 (RA2011)	1 to 99% w/w
		Sodium tripoly phosphates	IS 4955-2001 (RA 2006)	0.2 to 50% w/w
		Total phosphates	IS 286: 1978 (RA 2008)	0.2 to 10% w/w
		Unsaponifiable matter	IS 286: 1978 (RA 2008)	0.1 to 5% w/w
		Clear point	IS 4956-2002 (RA 2008)	0.5 to 50°C
		Sieve analysis of water insoluble ingredients	IS 6047: 1970 (RA 2008)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	143 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Glycerol	IS 286:1978 (RA 2008) IS 1796-1986 (RA2011)	0.1 to 99% w/w
		Free carbonated alkali	IS 286:1978 (RA 2008)	0.1 to 5% w/w
		Carbonates	IS 286:1978 (RA 2008)	0.1 to 5 % w/w
		Lather	IS 13498: 1997(RA 2010)	Qualitative
		Foam Height	IS 7669:1990 (RA 2006) IS 7884: 2004 (RA 2009)	50 to 500 mm
VIII.	DRUG & PHARMACEUTICALS			
1.	Pharmaceutical (Raw Materials) (General Tests)	Solubility	IP.2014/ BP.2014/USP-37.2014	Qualitative
		Identification	IP.2014/ BP.2014/USP-37.2014	
		pH		1 to 14
		Clarity and Colour of solution		Qualitative
		Limits of Heavy Metals		Qualitative
		Optical Rotation		± 0 to 360°
		Limits test for Lead		Qualitative
		Limits test for Arsenic		Qualitative
		Limits test for Iron		Qualitative
		Limits test for Calcium		Qualitative
		Test for Carbonate		Qualitative
		Test for Nitrate		Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	144 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Limit Test for Fluorides	IP.2014/ BP.2014/USP-37.2014	Qualitative
		Limits test for Chloride	IP.2014/ BP.2014/USP-37.2014	Qualitative
		Test for Silver compounds		Qualitative
		Limits test for Sulphate		Qualitative
		Weight per ml		1 to 2g
		Related Substances- TLC		Qualitative (Qualitative)
		Refractive Index		1.35 to 1.70
		Viscosity		5 to 50 cps
		Boiling Point		25°C to 280°C
		Melting Range		25°C to 280°C
		High Pressure Liquid Chromatography Analysis		0.001% to 100%
		Gas Chromatography Analysis		0.001% to 100%
		Thin layer Chromatography Test		Qualitative
		Infra Red Spectroscopy Analysis		Qualitative
		Ultra violet Spectroscopy Test		0.001% to 100%
		Limits test for free formaldehyde		Qualitative
		Nitrogen Content		0.001% to 100%
		Assay		0.1 to 103%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	145 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Residual Solvents	IP.2014/ BP.2014/USP-37.2014 IP.2014/ BP.2014/USP-37.2014	0.001% to 40%
		Organic Volatile impurities		0.001% to 5%
		Methanol & Iso Propyl alcohol		0.001% to 40%
		Titrimetry		20% to 100 %
		Potentiometric Analysis		20% to 100 %
		Acid Insoluble Ash		0.1% to 50 %
		Differential Scanning Colorimeter Analysis		50°C to 400°C
		Thermogravimetric analysis		50°C to 1000°C
		Acid Value		0.1 to 10
		Hydroxyl Value		1 to 300
		Iodine Value		1 to 250
		Saponification Value		1 to 300
		Volatile matter		0.01 to 10%
		Peroxide Value		0.1 to 10
		Alkalinity/Acidity		Qualitative
		Oxygen Flask Analysis		1.0% to 100 %
		Particle Size		8 to 2800 nanometer

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	146 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Related Foreign Steroids-TLC	IP.2014/ BP.2014/USP-37.2014 IP.2014/ BP.2014/USP-37.2014	Comparative
		Loss on Drying		0.05 to 50%
		Water (By KF)		0.1 to 50%
		Loss on Ignition		0.1 to 50%
		Sulphated Ash		0.01 to 50%
		Total Organic Carbon		0.1 to 100 mg/l
		Fluorescence Spectrophotometry		1.0 to 100 %
		Conductivity		0.1 to 1000 micmho/cm
		Polymorphism (Crystallinity)		Qualitative
2.	All Natural Drugs	Moisture Content(LOD)	As per Ayurvedic Pharmacopoeia of India 1986, 1999, 2001, 2006, 2009. Unani 1999 & Siddha 1992	0.1 to 50 %
	AYUSH Drugs	Total Ash		0.1 to 80 %
	Asava & Arishta (Fermentated liquid)	Volatile oil		1.0 to 50 %
	Arka/Theeneer/Distillates	Alcohol soluble extractive		0.1 to 80 %
	Avachurnam	Water Soluble Extractive		0.1 to 100 %
	yoga(Dusting Powder)	Ether Soluble Extractive		0.1 to 80 %
	Avaleha/Leham/Modak/Ilagam (Confection/Semi solid)	Determination of Foreign Matter		0.01 to 50 %
	Pishti			
	Bhasma			
	Sindura			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	147 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Purpum	Acid soluble extractives	As per Ayurvedic Pharmacopoeia of India 1986, 1999, 2001, 2006, 2009. Unani 1999 & Siddha 1992	0.1 to 100 %
	Chewing Candy	Acid insoluble extractives		0.1 to 100 %
	Churna	Alcohol soluble extractives		0.1 to 100 %
	Ghansatva	Alcohol insoluble extractives		0.1 to 100 %
	Lepa			
	Medicated			
	Wax/Cream			
	Netrabindu			
	Sharbat	Heavy Metals		
	GrAnnexules	Hg		0.2mg/kg-100mg/kg
	Tailas	Cd		0.2mg/kg-20mg/kg
	Ghritas	As		0.2mg/kg-2mg/kg
	Vati/Gutika	Pb		0.2mg/kg-100mg/kg
		Chloride		1 mg/kg to 1000mg/kg
		Lead		0 to 1000mg/kg
		Iron		0.001 to 1000 mg/kg
		Sulphated Ash		0.001 to 100 %
		Steroids		Absent/Present
		Sulphates		0.001to 1000mg/kg
		Powder fineness		Qualitative
		Refractive Index		1.35 to1.70
		Weight per ml & Specific Gravity		1 to 2g
		Total Alkaloids		Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	148 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Arsenic	As per Ayurvedic Pharmacopoeia of India 1986, 1999, 2001, 2006, 2009. Unani 1999 & Siddha 1992	0.1 to 100 mg/kg
		Test for complete Extraction of Alkaloids		Qualitative
		Continuous Extraction of Drugs		Qualitative
3.	Pharmaceuticals Formulation Capsules (List attached)	Assay	IP.2014/ BP.2014/USP-37.2014	90 to 110%
		Related Impurities		0.1 to 2%
		Uniformity of Weight fill		5 to 100%
		Uniformity of Content of API		85 to 115%
		Disintegration Time		1 min to 30min
		Dissolution		20% to 120%
4.	Cream/ Ointment/Gels (List attached)	Assay	IP.2014/ BP.2014/USP-37.2014	90 to 110%
		Related Impurities		0.1 to 2%
		Uniformity of Weight fill		10% to 100%
5.	Oral Powders (List attached)	Assay	IP.2014/ BP.2014/USP-37.2014	80 to 120%
		Related Impurities		0.1 to 2.0%
		Uniformity of Weight		90 to 110%
		Uniformity of Content of API		90 to 110%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	149 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
6.	Tablets (List attached)	Assay	IP.2014/ BP.2014/USP-37.2014	80 to 120%
		Related Impurities		0.1 to 2%
		Uniformity of weight of Dosage Units		5 to 100%
		Uniformity of Content of API		85 to 115%
		Uniformity of Container contents		10% to 100%
		Disintegration Time		1 min to 120min
		Dissolution		20% to 120%
		Friability		0.1% to 10 %
		Uniformity of dispersion/ fineness of dispersion		Qualitative
7.	Oral Liquid/ Suspension (List attached)	Uniformity of weight	IP.2014/ BP.2014/USP-37.2014	10% to 100%
		Assay Content		80 to 120%
8.	Veterinary preparations (Tablet/Capsule) (List attached)	Assay	IP.2014/ BP.(Vet)2014/USP-37.2014	90 to 110%
		Related Impurities		0.1 to 2%
		Disintegration Time		1 min to 120min

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	150 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
9.	Vitamins A,B1,B2, B6, C, D, E, Niacinamide, K, Biotin	Assay	IP.2014/ BP.2014/USP-37.2014	80 to 150%
10.	Injectables/Vaccines (list attached)	pH	IP.2014/ BP.2014/USP-37.2014	1 to 14
		Assay		80 to 120%
		Related Impurities/Substances		0.1 to 2.0%
		Extractable Volume		1ml to 1000ml
		Uniformity of weight		50 to 1500mg
		Particulate matter (instrumentation)		0.1% to 100%
11.	Hormones & Enzymes	Assay	IP.2014/ BP.2014/USP-37.2014	80 to 150%
12.	Dressing & Gauges	Physical Dimension	IS 863-1988 & Drugs & Cosmetics Act (Schedule F-II)	
		Scouring Loss	IP-2007	0.1 to 2.0%
		Fluorescence		Qualitative
		Absorbency		1s to 5min
		Sinking Time		0.1gm to 50gm/gm
		Water Absorbency		
		pH		1 to 14

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	151 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IX.	PLASTICS & RESINS			
1.	Plastics & polymers Raw materials Plastic films	Identification	RAPRA technology FTIR, DSC, TGA ASTM D 6370: 1999 (2009)	Qualitative
		Melting point	ASTM D 3895-2007 and DSC	-80 to 500°C
		Solvent extraction	ISO 6427	0.5 to 20 %
		Titanium dioxide	ASTM D 5630: 2013	0.1 to 75 %
		Ash content	ASTM D 5630: 2013	0.01 to 80 %
		Accelerated weathering	ISO 4892: 1981 ASTM G 154-2012a IS 14887 (Part 1): 2000 (RA 2010) IS 14887 (Part 2) : 2002 (RA 2010)	Qualitative
		HCl gas generation	IEC 754 (Part 1):1994	5 to 300 mg/g
		Molecular Weight Distribution	ASTM D 5296 : 2011	1000 to 300000
		Nitrogen content	SRI/R&P/C.H.N.S/002	0.1 to 10 %
		Intrinsic viscosity	ASTM D 4603: 2003 (2011)e1	0.1-1 dl/g
		Moisture content	IS 4669:1968 (RA2003)	0.1 to 50 %
		Volatile content	IS 4669:1968 (RA2003)	1 to 90%
		Limiting oxygen index	ASTM D 2863: 2013 IS 13501 : 1992 (2008)	25 to 50 %
		Water absorption	IS 1998:1962(RA2003) IS 12866:1989 (RA 2009) ASTM D 570-1998 (2010) ASTM D 3575-93 (2014)	0.1 to 50 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	152 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Smoke density	ASTM D 2843-1999(2010)	1 to 100 %
		Visibility due to smoke	UIC 564 part 2 Appendix 15	Qualitative
		Resistance to chemical action	SRI/R&P/Chemical Resistance /003.Issue no. 01, date 01.01.2014 Rev no. 00 date nil	Qualitative
		Resistance to staining	IS 2046: 1995(RA2010)	Qualitative
		Oxygen induction time	ASTM D3895-2007	10 sec to 120 min
		Carbon black content	IS 2530: 1963 (RA 2008) ASTM D 1603-94 (2012)	0.01 to 50 %
		Carbon black dispersion	IS 2530: 1963(RA2003)	Qualitative
		Moisture vapor transmission rate	IS 7290: 1979 (RA 2010) ASTM D 3575-93 (2014)	0.001 to 50 g/m ² /24hrs
		Migration test	IS 9845:1998 (RA 2010)	1 to100 mg/Kg.
		Plasticizer Content	ISO 6427:92	1 to 75 %
		Toxicity index	NCD 1409 SRI/R&P/TOXICITYINDEX/001 Issue no. 01, date 01.01.2014 Rev no. 00 date nil	0.1 to 10
		Visibility due to smoke	UIC 564-2 1991 appendix 15	Qualitative
		Resistance to Spread of flame	UIC 564 -2 1991 appendix 5, 8 & 11	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	153 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
X.	RUBBER AND SYNTHETIC RUBBER			
1.	Natural rubber Synthetic rubber	Identification	RAPRA technology FTIR.DSC IS 3400 (Part 22): 1984 (RA 2008)	Qualitative
		Carbon black content	ASTM D 297-1993 (RA 2013) IS 3400 (Part 22): 1984 (RA 2008)	2 to 40 %
		Nitrogen content	ASTM D297- 2013 IS 3400 (Part 22):1984	0.1 to 10 %
		Sulfur content	ASTM D 297- 2013 IS 34000 (Part 22): 1984 (RA 2008)	0.1 to 5 %
		Solvent extractable matter	ASTM D 297- 2013 IS 3400 Part 22- 2008	1 to 20 %
		Ash content	ASTM D 297- 2008 IS 3400 (Part 22): 1984 (RA2003)	0.01 to 50%
		Ash analysis, (Ca, Al, Mg, Zn, Si, Fe)	Chemical analysis by N. H. Furman, A. A. S. ICP Technique SRI/R&P/Ash analysis /004	0.01 to 50% 1 to 1000 mg/kg
		Volatile matter	IS 3660 Part.2-1985 (RA 2009)	0.01 to 20%
		Rubber Content	ASTM D297- 2013 IS 3400 (Part 22) :1984 (RA 2008)	1 to 100%
		Resistance to liquid	IS 3400 (Part 6): 2012	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	154 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
XI.	TEXTILES & TEXTILE AUXILIARIES			
1.	Fibre & Filaments Yarns & Chords, Fabrics, Garments and madeups Auxiliaries Technical textile	Identification of material	IS 667: 1981 (RA2008)	Qualitative
2.	Woolen products (Protein fibres with non-protein fibers)	Composition	IS 2006: 1988 (RA2009)	0.5 to 100%
3.	Acrylic products (Acrylic, modacrylic and other fibers)'	Composition	IS 3421: 1988 (RA2010)	0.5 to 100%
4.	Nylon products (Nylon 6 or Nylon 66 and other fibers)	Composition	IS 2005: 1988 (RA 2009)	0.5 to 100%
5.	Cotton & viscose products (Regenerated cellulose fiber and cotton)	Composition	IS 1889 (Part 1): 1976 (RA2004)	0.5 to 100%
6.	Woolen & nylon products (Protein fibers, Nylon 6,Nylon 66 and other fibers)	Composition	IS 1889 (Part 4): 1979 (RA 2010)	0.5 to 100%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	155 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Cellulose acetate products (Cellulose acetate and other fibers)	Composition	IS 6503: 1988 (RA 2010)	0.5 to 100%
8.	Viscose, Cotton & woolen products (Viscose rayon, cotton and protein fibers)	Composition	IS 2176:1988 (RA 2009)	0.5 to 100%
9.	Polypropylene Products (Polyolefins fibers and other fibers)	Composition	IS 6504: 1979 (RA 2010)	0.5 to 100%
10.	Polyester & cotton Products (Polyester with cotton or regenerated cellulose)	Composition	IS 9896: 1981 (RA 2008)	0.5 to 100%
11.	All kinds of Fabrics	Solvent Extractable Matter	IS 4390: 2001 (RA2012)	0.1 to 10%
		Chloride content	IS 4202: 1967 (RA2004)	0.01 to 10%
		Sulphate content	IS 4203: 1967 (RA2004)	0.01 to 10%
		pH of water extract	IS 1390: 1983 (RA2004)	1 to 14
		Chromium content	IS 4655: 1968 (RA2004)	0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	156 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Moisture content	IS 199: 1989 (RA 2005) IS 6637: 1972 (RA 2010)	0.1 to 20%
		Colour fastness to Various conditions	IS 686:1985 (RA 2006) IS 688: 1988 (RA 2009) IS 971: 1983 (RA2004) IS 767: 1988 (RA 2009) IS/ISO 105C 10-2006 (RA 2009) IS 4802: 1988 (RA 2010) IS 2454: 1985 (RA 2010)	(Qualitative) 1 to 8 dyed blue wool standards for change in colour 1-5 grey scale for change in colour and staining
		Shrinkage to water	IS 2977: 1989 (RA 2010) IS 665: 1989 (RA 2010)	0.1 to 10%
		Flammability	IS 11871: 1986 (RA2004) IS 1259: 1984 (RA2012)	Qualitative
		Iron content	IS 4655: 1968 (RA2004)	0.01 to 10%
XII.	LEATHER			
1.	Synthetic leather	Volatile content	IS 582 :1970 (RA 2009)	0.1 to 10%
		Ash content		0.1 to 50%
		Water soluble matter		0.1 to 10%
		pH of water solubles		1 to 14
		Solvent extractable matter		0.5 to 10%
		Nitrogen content		0.5 to 5%
		Chromium oxide content		1 to 50 mg/kg
		Aluminium content		0.1 to 50 mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	157 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron content	IS 582 :1970 (RA 2009)	0.1 to 50 mg/kg
		Copper content		0.1 to 50 mg/kg
		Silica content		0.1 to 100 mg/kg
		Chloride content		0.1 to 50 mg/kg
		Sulphate content		1 to 50 mg/kg
		Formaldehyde content		0.1 to 100 mg/kg
		Oil content		0.1 to 25 %
		Hide substance		0.1 to 25%
		Degree of Tannage		Qualitative
XIII.	PAPER AND PULP			
1.	Base paper for carbon paper, Writing & printing paper, Computer paper, Coated paper & Board, Cover paper, Plain copier paper, Base paper for tracing paper. Germination paper, Map printing paper, Volatile corrosion inhibitor (VCI) treated paper	pH	IS 1060 (Part 1): 1966 (RA 2009)	1 to14
		Ash	IS 1060 (Part 1): 1966 (RA 2009)	0.1 to 20%
		Chloride content	IS 1060 (Part 2): 1960 (RA 2009)	0.01 to 10%
		Sulphate content	IS 1060 (Part 2): 1960 (RA 2009)	0.01 to 10%
		Ether soluble matter	IS 1060 (Part 2): 1960 (RA 2009)	0.01 to 10%
		Water absorbancy	IS 1060 (Part1): 1966 (RA 2009)	1 to 50 mm
		Cobb test	IS 1060 (Part 1): 1966 (RA 2009)	0.01 to 100 g/m ²

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	158 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
XIV.	WATER			
1.	Waste Water (Liquid Effluent)	Colour	IS 3025 (Part 4):1983 (RA2012)	Qualitative
		Odour	IS 3025 (Part 5) :2002 (RA2012)	Qualitative
		Total Dissolved Solids	IS 3025 (Part 16): 2002 (RA2012)	1 to 25000mg/l
		pH	IS 3025 (Part 11): 2002 (RA2012)	1 to 14
		Nitrate	IS 3025 (Part 34): 2003 (RA 2009)	2 to 1000mg/l
		Nitrite	IS 3025 (Part 34): 2003 (RA2009)	0.01 to100 mg/l
		Sulfide	IS 3025 (Part 29): 2003 (RA 2009) / APHA 22 nd Ed 2012 Ed.,4500-S	0.05 to 1000 mg/l
		Manganese	APHA 22 nd Ed. 2012 , 3111, Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to500 mg/l
		Copper	APHA 22 nd Ed 2012, 3111, Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
		Zinc	APHA 22 nd Ed 2012, 3111, Lab-SOP/Instrumental/ICP/00	0.01 to 500 mg/l
		Fluoride	APHA 22 nd Ed 2012,4500 F, IS 3025 (Part 60): 2008 (RA 2012)	0.1 to 1000mg/l
		Barium	IS 15402: 2003 (RA 2009) / APHA 22 nd Ed 2012, 3111, Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.05 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	159 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Antimony		APHA 22nd Ed. 2012 . 3111 Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.005 to 50 mg/l
	Silver		APHA 22nd Ed 2012, 3111, Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 100 mg/l
	Chloride		IS 3025 (Part 32): 2003 (RA 2009)	1 to 10000 mg/l
	Sulfates		IS 3025 (Part 24): 2003 (RA 2009)	1 to 10000mg/l
	Magnesium		IS 3025 (Part 46): 2003 (RA 2009)	1 to 10000 mg/l
	Calcium		IS 3025, Part 40-2003 (RA 2009)	1 to 10000 mg/l
	Sodium		APHA 22nd Ed 2012, 3111, Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	1 to 1000 mg/l
	Alkalinity		IS 3025 (Part 23): 2009 (RA 2009)	1 to 10000 mg/l
	Selenium		APHA 22nd Ed. 2012, 3114 IS 15303-2009	0.005 to 50 mg/l
	Anionic Detergents		APHA 22 nd Ed 2012, 5540	0.01 to 50 mg/l
	Arsenic		APHA 22 nd Ed 2012, 3114	0.005 to 50 mg/l
	Cadmium		APHA 22 nd Ed 2012, 3111, Lab SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
	Cyanide		APHA 22 nd Ed 2012, 4500 CN	0.01 to 500 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	160 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Chromium		APHA 22 nd Ed 2012, 3111, Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
	Mercury		APHA 22 nd Ed 2012, 3112	0.001 to 50 mg/l
	Lead		APHA 22 nd Ed 2012, 3111, Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
	Nickel		APHA 22 nd Ed 2012, 3111, SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
	Electrical conductivity		IS 3025 (Part 14): 2002 (RA 2013)	1 to 50000, μ mhos/ cm
	Dissolved oxygen		APHA 22 nd Ed. 2012, 4500 O, IS 3025 (Part 38): 1989 (RA 2009)	0.1 to 10mg/l
	BOD		APHA 22 nd Ed 2012, 5210 IS 3025 (Part 44): 2003 (RA 2009)	1 to 25000mg/l
	COD		IS 3025 (Part 58): 2006, (RA 2012) APHA 22 nd Ed 5220	2 to 50000 mg/l
	Oil & Grease		APHA 22 nd Ed 2012, 5520 IS 3025(Part 39): 2003 (RA 2009)	1 to 10000 mg/l
	Iron		APHA 22 nd Ed 2012, 3111 & 3550, Lab-SOP/ Instrumental/ ICP /00 dated 01.04.2014	0.1/0.01 to 500 mg/l
	Aluminum		APHA 22 nd Ed 2012, 3111 & 3500 Al, SOP/Instrumental/ ICP/00 dated 01.04.2014	0.02 to 500 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	161 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Phenolic Compounds	IS 3025 (Part 43) : 2003 (RA 2009) APHA 22 nd Ed 2012, 5530 C & D	0.01 to 100 mg/l
		Suspended solids	IS 3025 (Part 17): 2002 (RA2012)	1 to 25000 mg/l
		Total Hardness	IS 3025 (Part 21): 2011	1 to 10000mg/l
		Calcium Hardness	IS 3025 (Part 40): 2003 (RA 2009)	1 to 10000 mg/l
		Magnesium Hardness	IS 3025 (Part 46): 2003 (RA 2009)	1 to 10000mg/l
		Phosphates	APHA 22 nd Ed. 2012, 4500 , IS 3025 (Part 31) :2003 (RA 2009) , Lab- SOP/ Instrumental/ICP/00 dated 01.04.2014	0.1 to 500mg/l
		Acidity as CaCO ₃	IS 3025 (Part 22) :2003 (RA 2009)	1 to 10000 mg/l
		Residual Chlorine	IS 3025 (Part 26): 2003 (RA 2009) /SOP/Validation of E-Merck Chlorine Kit /06 dt 17.11.2014	1 to 100 mg/l 0.1 to 2 mg/l
		Total Chromium	APHA 22 nd Ed. 2012, 3111, Lab SOP/ Instrumental/ICP/00 dt 01.04.2014	0.01 to 500 mg/l
		Hexavalent Chromium	APHA 22 nd Ed. 2012, 3500 Cr	0.01 to 500 mg/l
		Aluminum	APHA 22 nd Ed. 2012, 3500 Al, Lab- SOP /Instrumental/ICP/00 dt 01.04.2014	0.02 to 500 mg/l
		Sulfite	APHA 22 nd Ed. 2012, 4500 SO ₃	2 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	162 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sludge Volume Index	APHA 22 nd Ed. 2012, 2710	1 to 250 ml/l
		Chlorine Demand	IS 3025 (Part 25) :2002 (RA 2009)	0.1 to 100 mg/l
		Oxygen absorbed for 4 hours	IS 3025 (Part 63): 2012	0.1 to 100 mg/l
		Temperature	IS 3025 (Part 9): 2002 (RA 2012)	1 to 50°C
		Total Organic Carbon, (Total Inorganic Carbon and Total Carbon)	APHA 22 nd Ed. 2012, 5310 B	0.5 to 1000 mg/l
		Ammoniacal Nitrogen	IS 3025 (Part 34): 2003 (RA 2009)	0.1 to 500 mg/l
		Total Kjeldhal's Nitrogen	IS 3025 (Part 34): 2003 (RA 2009)	0.1 to 1000 mg/l
		Tin	APHA 22 nd Ed 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l
		Potassium	APHA 22 nd Ed 2012, 3111, SOP/Instrumental/ICP/00 dated 01.04.2014	1 to 1000mg/l
		Strontium	APHA 22 nd Ed 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
		Cobalt	APHA 22 nd Ed, 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	163 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Vanadium	APHA 22 nd Ed, 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 100 mg/l
		Volatile Acids	APHA 22 nd Ed. 2012, 5560	1 to 1000 mg/l
		Dissolved Solids (Fixed & Volatile)	IS 3025 (Part 18): 2002 (RA 2012)	1 to 10000mg/l
		Suspended Solids (Fixed & Volatile)	IS 3025 (Part 18): 2002 (RA 2012)	1 to 10000 mg/l
		Total Residue /Solid	IS 3025 (Part 15): 2003 (RA 2009)	1 to 25000 mg/l
2.	Residue in Waste water / Effluent water	Pesticide residue o,p- DDT p,p- DDT o,p – DDE p,p – DDE o,p- DDD p,p- DDD Lindane (γ-HCH) α-HCH β-HCH δ-HCH α-Endosulfan β-Endosulfan Endosulfan- Sulphate Monocrotophos Ethion Chlorpyrifos	SRI/SOP/WATER & WASTE WATER/00) ISSUE NO 00, DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000 ng/l (LOD 5 ng/l)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	164 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Phorate		SRI/SOP/WATER & WASTE	10 to 1000 ng/l
	Phorate Sulfone		WATER/00)	(LOD 5 ng/l)
	Phorate Sulfoxide		ISSUE NO 00, DATE 01.02.2013	
	2,4 – D		REVISION NO. 01	
	Butachlor		DATE 01.04.2014	
	Isoproturon			
	Alachlor			
	Atrazine			
	Methyl Parathion			
	Paraxon methyl			
	Malathion			
	Malaoxon			
	Aldrin			
	Dieldrin			
	Fenthion			
	Chlordane			
	Endosulfan			
	Permethrin			
	Cypermethrin			
	Fenvalarate			
	Deltamethrin			
	Chlorothionol			
	Chlorpyrifos methyl			
	Propanil			
	Vinclozolin			
	Parathion			
	Allethrin			
	Pretilaclor			
	Endrin			
	Chlorbenzilate			
	Bromopropylate			
	Methoxyclor			
	Amitraz			
	Cyahalothrin			
	Coumaphos			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	165 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Cyfluthrin		SRI/SOP/WATER & WASTE	10 to 1000 ng/l
	Fluvalinate		WATER/00)	(LOD 5 ng/l)
	Heptaclor		ISSUE NO 00, DATE 01.02.2013	
	Dicofol		REVISION NO. 01	
	Heptaclor Epoxide		DATE 01.04.2014	
	Fenarimol			
	Fenvalerate			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			
	Buprofezin			
	Cymoxanil			
	Difenconazole			
	Difenthruron			
	Fenamidon			
	Flusilazole			
	Methomyl			
	Omethoate			
	Pyraclostrobin			
	Tebuconazole			
	Thiodicarb			
	Metalaxyl			
	Thiamethoxam			
	Acephate			
	Aldicarb			
	Abamectin			
	Acetamiprid			
	Carbendazim			
	Chlorfenviphos			
	Diiflubenzuron			
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	166 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Indoxacarb		SRI/SOP/WATER & WASTE	10 to 1000 ng/l
	Iprobenphos		WATER/00)	(LOD 5 ng/l)
	Methamidofos		ISSUE NO 00, DATE 01.02.2013	
	Myclobutanil		REVISION NO. 01	
	Penconazole		DATE 01.04.2014	
	Phorate			
	Trifloxystrobin			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Enamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			
	Iprovalicarb			
	Kresoxim Methyl			
	Carbaryl			
	Carbofuran			
	Diazinon			
	Diclorovos			
	Dimethoate			
	Phosalone			
	Phophamidone			
	Propoxur			
	Simazine			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	167 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Antibiotics & veterinary Drugs	SRI/SOP/WATER & WASTE WATER/00)	50 to 1000 µg/l (LOD 50 µg/l)
		Ciprofloxacin	ISSUE NO 00, DATE 01.02.2013	
		Norfloxacin	REVISION NO. 01	
		Levofloxacin	DATE 01.04.2014	
		Ofloxacin		
		Metronidazole		
		Tinidazole		
		Sulfamethoxazole		
		Erythromycin		
		Ibuprofen		
		Diclofenac		
		Amoxycillin		
		Doxycycline		
		Cefoperazone		200 to 1000 µg/l (LOD 200 µg/l)
		Ceftriaxone		
		Environmental Pollutants		0.1 to 100 µg/l (LOD 0.05 µg/l)
		Acrylamide		
		VOCs		1 to 1000 µg/l (LOD 0.5 µg/l)
		PAH		10 to 1000 ng/l (LOD 5 ng/l)
		PCBs		
		Pentachlorophenol		10 to 1000 µg/l (LOD 5 µg/l)
		Heavy Metals		100 to 5000 µg/l (LOD 50 µg/l)
		Hg		
		As		
		Pb		50 to 5000 µg/l (LOD 25 µg/l)
		Cd		
		Cr		

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	168 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Residue in Packaged Drinking Water Mineral Drinking Water Water from any other source	Pesticide residue o,p- DDT p,p- DDT o,p – DDE p,p – DDE o,p- DDD p,p- DDD Lindane (γ-HCH) α-HCH β-HCH δ-HCH α-Endosulfan β-Endosulfan Endosulfan- Sulphate Monocrotophos Ethion Chlorpyrifos Phorate Phorate Sulfone Phorate Sulfoxide 2,4 – D Butachlor Isoproturon Alachlor Atrazine Methyl Parathion Paraxon methyl Malathion Malaoxon Aldrin Dieldrin Fenthion Chlordane Endosulfan Permethrin	SRI/SOP/WATER & WASTE WATER/00) ISSUE NO 00, DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000 ng/l (LOD 5 ng/l)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	169 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Cypermethrin		SRI/SOP/WATER & WASTE	10 to 1000 ng/l
	Fenvalarate		WATER/00)	(LOD 5 ng/l)
	Deltamethrin		ISSUE NO 00, DATE 01.02.2013	
	Chlorothionol		REVISION NO. 01	
	Chlorpyrifos methyl		DATE 01.04.2014	
	Propanil			
	Vinclozolin			
	Parathion			
	Allethrin			
	Pretilaclor			
	Endrin			
	Chlorbenzilate			
	Bromopropylate			
	Methoxycor			
	Amitraz			
	Cyahalothrin			
	Coumaphos			
	Cyfluthrin			
	Fluvalinate			
	Heptaclor			
	Dicofol			
	Heptaclor Epoxide			
	Fenarimol			
	Dimethomorphe			
	Azoxystrobin			
	Bitertanol			
	Buprofezin			
	Cymoxanil			
	Difenconazole			
	Difenthrun			
	Fenamidon			
	Flusilazole			
	Methomyl			
	Omethoate			
	Pyraclostrobin			
	Tebuconazole		SRI/SOP/WATER & WASTE	10 to 1000 ng/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	170 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Thiodicarb		WATER/00)	(LOD 5 ng/l)
	Metalaxyl		ISSUE NO 00, DATE 01.02.2013	
	Thiamethoxam		REVISION NO. 01	
	Acephate		DATE 01.04.2014	
	Aldicarb			
	Abamectin			
	Acetamiprid			
	Carbendazim			
	Chlorfenviphos			
	Diflubenzuron			
	Etofenpros			
	Etrimphos			
	Fenpyroximate			
	Flufenoxuron			
	Hexaconazole			
	Imidacloprid			
	Indoxacarb			
	Iprobenphos			
	Methamidofos			
	Myclobutanil			
	Penconazole			
	Phorate			
	Trifloxystrobin			
	Primiphos methyl			
	Profenfos			
	Propargit			
	Quinalophos			
	Spinosad A			
	Spinosad D			
	Thiodicloprid			
	Thiophenate Methyl			
	Triazophos			
	Tridimenal			
	Enamectin- Benzoate			
	Famoxadone			
	Flufenoxuron			

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	171 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Iprovalicarb Kresoxim Methyl Carbaryl Carbofuran Diazinon Diclorovos Dimethoate Phosalone Phophamidone Propoxur Simazine		SRI/SOP/WATER & WASTE WATER/00) ISSUE NO 00, DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	10 to 1000 ng/l (LOD 5 ng/l)
	Environmental Pollutants Acrylamide			0.1 to 100µg/l (LOD 0.05µg/l)
	VOCs			1 to 1000 µg/l (LOD 0.5 µg/l)
	PAH PCBs			10 to 1000 ng/l (LOD 5 ng/l)
	Pentachlorophenol			1 to 100 µg/l (LOD 0.5 µg/l)
	Antibiotics & veterinary Drugs Ciprofloxacin Norfloxacin Levofloxacin Ofloxacin Metronidazole Tinidazole Sulfamethoxazole Erythromycin Ibuprofen Diclofenac Amoxycillin Doxycycline Cefoperazone			50 to 1000 µg/l (LOD 50 µg/l)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	172 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ceftriaxone	SRI/SOP/WATER & WASTE WATER/00) ISSUE NO 00, DATE 01.02.2013 REVISION NO. 01 DATE 01.04.2014	200 to 1000 µg/l (LOD 200 µg/l)
4.	Potable & Domestic Water for drinking purpose	Colour	IS 3025 (Part 4) : 2002 (RA2012)	5 to 70 Hazen Units
		Odour	IS 3025 (Part 5) :2002 (RA 2012)	Qualitative
		Taste	IS 3025 (Part 7) : 2002 (RA 2012)	Qualitative
		Turbidity, NTU	IS 3025 (Part 10) : 2002 (RA 2012)	1 to 1000,NTU
		pH	IS 3025 (Part 11) : 2002 (RA 2012)	1 to 14
		Total Dissolved Solids (Residue on Evaporation)	IS 3025 (Part 16) : 2002 (RA 2012)	1 to 20000mg/l
		Ammonia	IS 3025 (Part 34): 2003 (RA 2009)	0.02 to 50 mg/l
		Anionic Detergents	Annex K of IS 13428 : 2009 (RA 2009) , APHA, 22 nd Ed.2012, 5520	0.01 to 100 mg/l
		Calcium	IS 3025 (Part 40) (RA2003) (RA 2009)	1 to 10000mg/l
		Chloramines	APHA 22 nd Ed 2012, 4500-Cl & IS 3025 (Part 29): 2003 (RA 2009)	0.1 to 10 mg/l
		Chlorides	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	173 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fluoride		APHA 22nd Ed 2012, 4500 F, IS 3025 (Part 60): 2008 (RA2012)	0.1 to 50 mg/l
	Residual Free Chlorine		IS 3025 (Part 26): 2003 (RA 2009) / SOP/Validation of E-Merck Chlorine Kit /06 dtd 17.11.2014	0.1 to 100mg/l 0.1 to 2 mg/l
	Magnesium		IS 3025 (Part 46): 2003 (RA 2009)	1 to 10000 mg/l
	Mineral Oil		IS 3025 (Part 39): 2003 (RA 2009)	0.01 to 100 mg/l
	Nitrate		IS 3025 (Part 34): 2003 (RA 2009)	2 to 500 mg/l
	Phenols		IS 3025 (Part 43) : 2003 (RA 2009) , APHA 22 nd Ed. 2012, 5530 C&D	0.001 to 100 mg/l
	Sulfates		IS 3025 (Part 24) :2003 (RA 2009)	1 to 10000 mg/l
	Sulphide		IS 3025 (Part 29): 2003 (RA 2009) APHA 22 nd Ed.2012 ,4500-S	0.05 to 20 mg/l
	Total Alkalinity		IS 3025 (Part 23): 2003 (RA 2009)	2 to 10000 mg/l
	Total Hardness		IS 3025 (Part 21): 2011	1 to 10000mg/l
	Cyanide		IS 3025 (Part 27) : 2003 (RA 2009) / APHA 22 nd Ed.2012 4500 CN –E&F	0.01 to 100 mg/l
	Hexavalent Chromium		APHA 22 nd Ed.2012 3500 Cr	0.01 to 500 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	174 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Natural Mineral water	Colour	IS 3025. (Part 4) : 2002 (RA2012)	2 to 70Hazen Unit
		Odour	IS 3025 (Part 5) –2002 (RA2012)	Qualitative
		Taste	IS 3025 (Part 8) : 2002 (RA2012)	Qualitative
		Turbidity	IS 3025 (Part 10) : 2002 (RA 2012)	1 to 1000,NTU
		Total Dissolved Solids	IS 3025 (Part 16) : 2002 (RA 2012)	1 to 10000mg/l
		pH	IS 3025 (Part 11) : 2002 (RA 2012)	1 to 14
		Nitrate	IS 3025 (Part 34) : 2003 (RA 2009)	2 to 500mg/l
		Nitrite	IS 3025 (Part 34) : 2003 (RA 2009)	0.01 to 100 mg/l
		Sulfide	IS 3025 (Part 29) : 2003 (RA 2009) / APHA 22 nd Ed. 2012 4500S	0.05 to 20 mg/l
		Fluoride	APHA 22 nd Ed 2012 4500 F IS 3025 (Part 60) : 2008 (RA2012)	0.1 to 50mg/l
		Borate	Annexex. H of IS 13428 : 2005 (RA 2009)	0.1 to 10 mg/l
		Chloride	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
		Sulfates	IS 3025 (Part 24) : 2003 (RA 2009)	1 –10000 mg/l
		Magnesium	IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000 mg/l
		Calcium	IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	175 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Alkalinity	IS 3025 (Part 23) : 2003 (RA 2009)	1 to 10000 mg/l
		Mineral oil	IS 3025 (Part 39) : 2003 (RA 2009) APHA 22 nd Ed 2012 5520	0.01 to 100 mg/l
		Anionic Detergents	Annexex. K of IS 13428 : 2005 (RA 2009)	0.01 to 50 mg/l
		Cyanide	IS 3025 (Part 27) : 2003 (RA 2009) / APHA 22 nd Ed.2012 4500CN	0.01 to 50 mg/l
6.	Packaged Drinking Water	Colour	IS 3025. (Part 4) : 2002 (RA2012)	2 to 70,Hazen Unit
		Odour	IS 3025 (Part 5) : 2002 (RA2012)	Qualitative
		Taste	IS 3025 (Part 8) : 2002 (RA2012)	Qualitative
		Turbidity, NTU	IS 3025 (Part 10) : 2002 (RA2012)	1 to 1000,NTU
		Total Dissolved Solids	IS 3025 (Part 16) : 2002 (RA2012)	1 to 10000mg/l
		pH	IS 3025 (Part 11) : 2002 (RA2012)	1 to 14
		Nitrate	IS 3025 (Part 34) : 2003 (RA 2009)	2 to 500 mg/l
		Nitrite	IS 3025 (Part 34) : 2003 (RA 2009)	0.01 to 50 mg/l
		Sulfide	IS 3025 (Part 29) : 2003 (RA 2009) APHA 22 nd Ed. 2012 4500S	0.05 to 20 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	176 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Fluoride		APHA 22nd Ed 2012 4500 F IS 3025 (Part 60) : 2008 (RA2012)	0.1 to 50 mg/l
	Borate		Annexex. H of IS 13428 : 2005 (RA 2009)	0.1 to 10 mg/l
	Chloride		IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
	Sulfates		IS 3025 (Part 24) : 2003 (RA 2009)	1 to 1000 mg/l
	Magnesium		IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000 mg/l
	Calcium		IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
	Alkalinity		IS 3025 (Part 23) : 2003 (RA 2009)	1 to 10000 mg/l
	Mineral oil		IS 3025 (Part 39) : 2003 (RA 2009) / APHA 22 nd Ed 2012 5520	0.01 to 100 mg/l
	Anionic Detergents		Annexex. K of IS 13428 : 2005 (RA 2009)	0.01 to 100 mg/l
	Cyanide		IS 3025 (Part 27) : 2003 (RA 2009)	0.01 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	177 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Irrigation Water	Total salt concentration, (on the basis of electrical conductivity),	IS 3025 (Part 14) : 2013	1 to 50000 µmhos/cm
		Sodium adsorption ratio	IS 11624 : 1986 (RA 2009)	1 to 50 (millimole/litre)
		Residual sodium Carbonate	IS 11624 : 1986 (RA 2009)	1 to 50 meq/l
		Boron	IS 3025 (Part 57): 2005 (RA 2010) SOP/ Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l
8.	Industrial / Cooling Purpose Quality Tolerance for water for Processed Food Industry	Turbidity	IS 3025 (Part 10) : 2002 (RA2012)	1-1000 NTU
		Colour	IS 3025 (Part 4) : 2002 (RA 2012)	5-70 HU
		Odour	IS 3025 (Part 5) : 2002 (RA 2012)	Qualitative
		Total solids	IS 3025 (Part 15) : 1984 (RA 2009)	1-10000 mg/l
		Total Hardness	IS 3025 (Part 21) : 2011	1-10000 mg/l
		Chlorides	IS 3025 (Part 32) : 2003 (RA 2009)	1-10000 mg/l
		Sulfates	IS 3025 (Part 24) : 2003 (RA 2009)	1-10000 mg/l
		Magnesium	IS 3025 (Part 46) : 2003 (RA 2009)	1-10000 mg/l
		pH	IS 3025 (Part 11) : 2002 (RA2012)	1-14
		Fluorides	APHA 22nd Ed 4500 F IS 3025 (Part 60) : 2008 (RA2012)	0.1-50 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	178 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
9.	Water for Construction Purpose	Nitrates	IS 3025 (Part 34) : 2003 (RA 2009)	1-500 mg/l
		Phenols	IS 3025 Part 43 : 2003 (RA 2009)	0.001-100 mg/l
		Cyanide	IS 3025 (Part 27) : 2003 (RA 2009) / APHA 22 nd Ed 2012 4500 CN	0.01-100 mg/l
		Alkalinity	IS 456 : 2000 (RA2011) IS 3025 (Part 23): 2003 (RA 2009)	1 to 100ml
		Acidity	IS 456 : 2000 (RA2011) IS 3025 (Part 22) : 2003 (RA 2009)	1 to 100 ml
		Chloride	IS 3025 (Part 32): 2003 (RA 2009)	1 to 10000 mg/l
		Sulfate	IS 3025 (Part 24) : 2003 (RA 2009)	1 to 10000 mg/l
		Inorganic solids	IS 3025 (Part 18): 2002 (RA2012)	1 to 20000 mg/l
		Organic solids	IS 3025 (Part 18) : 2002 (RA2012)	1 to 10000 mg/l
		Suspended mater	IS 3025 (Part 17) : 2002 (RA2012)	1 to 10000 mg/l
10.	Routine Physico-Chemical tests	pH	IS 3025 (Part 11) : 2002 (RA2012)	1 to 14
		Appearance	Qualitative	Qualitative
		Odour	IS 3025 (Part 5) : 2002 (RA2012)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	179 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		pH	IS 3025 (Part 11) : 2002 (RA2012)	1 to 14
		Total Dissolved Solids (Residue on Evaporation)	IS 3025 (Part 16) : 2002 (RA2012)	1 to 20000 mg/l
		Colour	IS 3025 (Part 4): 2002 (RA2012)	5 to 70 hazen Unit
		Turbidity	IS 3025 (Part 10) : 2002 (RA2012)	1 to 5000 NTU
		Chlorides	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
		Total Alkalinity	IS 3025 ((Part 23) : 2003(RA 2009)	1 to 10000 mg/l
		Total Hardness	IS 3025 (Part 21) : 2011	1 to 10000 mg/l
		Calcium Hardness	IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
		Magnesium hardness/	IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000 mg/l
		Temp. Hardness	IS 3025 (Part 21) : 2011	1 to 10000 mg/l
		Perm. Hardness	IS 3025 (Part 21) : 2011	1 to 10000 mg/l
		Molybdate Reactive Silica	IS 3025 (Part 35) : 2003 (RA 2009) SOP/Instrumental /ICP/00 dated 01.04.2014	0.05 to 100 mg/l
		Phenolphthalein Alkalinity	IS 3025 (Part 23): 2003 (RA 2009)	1 to 1000 mg/l
		Sulfates	IS 3025 (Part 24): 2003 (RA 2009)	1 to 10000 mg/l
11.	Water Used for Swimming Pool Purpose	Clearness	IS 3328 : 1993 (RA 2008)	Qualitative
		Odour	IS 3025 (Part 5): 2002 (RA2012)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	180 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		pH	IS 3025 (Part 11) :2002 (RA 2012)	1 to 14
		Turbidity, NTU	IS 3025 (Part 10) :2002 (RA 2012)	1 to 1000 NTU
		Colour	IS 3025 (Part 4): 2002 (RA 2012)	5 to 70 Hazen Unit
		Total Dissolved Solids (Residue on Evaporation)	IS 3025 (Part 16) : 2002 (RA 2012)	1 to 10000 mg/l
		Total alkalinity	IS 3025 (Part 23): 2003 (RA 2009)	1 to 10000 mg/l
		Aluminum	IS 3025 (Part 55) : 2003 (RA 2009) SOP/Instrumental/ ICP/00 dated 01.04.2014	0.02 to 50 mg/l
		Total Residual Chlorine	IS 3025 (Part 26) : 2003 (RA 2009) SOP/Validation of E : Merck Chlorine Kit /06 dt 17.11.2014	0.1 to 100 mg/l 0.2 to 2 mg/l
		Oxygen absorbed in 4 hours	IS 3025 (Part 63) : 2007 (RA2012)	0.1 to 100 mg/l
		Chlorides	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
12.	Quality Tolerance for Water for Pulp & Paper Industry	Colour	IS 3025 (Part 4) : 2002 (RA2012)	5 to 70 hazen Unit
		Odour	IS 3025 (Part 5) : 2002 (RA2012)	Qualitative
		Turbidity	IS 3025 (Part 10): 2002 (RA2012)	1 to 1000 NTU
		Total Dissolved Solids	IS 3025 (Part 16): 2002 (RA2012)	1 to 10000 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	181 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total hardness	IS 3025 (Part 21) : 2011	2 to 10000 mg/l
		pH	IS 3025 (Part 11) : 2002 (RA2012)	1 to 14
		Sulfate	IS 3025 (Part 24) : 2003 (RA 2009)	1 to 10000 mg/l
		Chloride	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
		Corrosivity	IS 201 : 1982 (RA 2008)	Qualitative
		Total Alkalinity	IS 3025 (Part 23): 2003 (RA 2009)	1 to 10000 mg/l
		Total hardness	IS 3025 (Part 21): 2011	1 to 10000 mg/l
13.	Specification for Feed Water & Boiler Water for Low & Medium Pressure Land Boilers	Feed water		
		Total Hardness	IS 3025 (Part 21): 2011	1 to 10000 mg/l
		pH	IS 3025 (Part 11):2002 (RA2012)	1 to 14
		Dissolved Oxygen	25 of IS 3550: 1965 (RA 2009) / APHA 22 nd Ed . 2012 4500-O IS 3025 (Part 38): 1989 (RA 2009)	0.5 to 10 mg/l
		Silica	IS 3025 (Part 35): 2003 (RA 2009)	0.05 to 100 mg/l
		Boiler Water		
		Total Hardness	IS 3025 (Part 21): 2011	1 to 10000 mg/l
		Total Alkalinity	IS 3025 (Part 23): 2002 (RA 2009)	1 to 10000 mg/l
		Caustic Alkalinity	IS 3025 (Part 23) : 2002 (RA 2009) APHA 22 nd Ed 2012 2320	1 to 10000 mg/l
		Residual Sodium Sulfite	21 of IS 3025-: 2005	1 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	182 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
14.	Waste Water (Non point Source)	Residual Hydrazine	26 of IS 3550 (RA 2009) / ASTM-D 1385-1988	0.1 to 10 mg/l
		Ratio of NaNO ₃ / Total Alkalinity	Guidelines of IS 3025 Part 34-2003 (RA 2009) & IS 3025 (Part 23): 2003 (RA 2009)	1 to 50 (by calculation)
		Phosphates	APHA 22nd Ed 2012 4500 PO ₄	0.05 to 100mg/l
		Total Dissolved Solids	IS 3025 (Part 16): 2002 (RA2012)	1 to 10000 mg/l
		Silica	IS 3025 (Part 35): 2003 (RA 2009)	0.05 to 100 mg/l
		Colour	IS 3025 (Part 4): 1983 (RA 2012)	Qualitative
		Odour	IS 3025 (Part 5): 2002 (RA2012)	Qualitative
		Turbidity	IS 3025 (Part 10): 2002 (RA2012)	1 to 5000 NTU
		Total Dissolved Solids	IS 3025 (Part 16) : 2002 (RA2012)	1 to 20000 mg/l
		pH	IS 3025 (Part 11): 2002 (RA2012)	1 to 14
		Nitrate	IS 3025 (Part 34): 2003 (RA 2009)	2 to 1000 mg/l
		Nitrite	IS 3025 (Part 34): 2003 (RA 2009)	0.01 to 100 mg/l
		Sulfide	IS 3025 (Part 29): 2003 (RA 2009) / APHA 22nd Ed. 2012 4500:S	0.05 to 1000 mg/l
		Fluoride	APHA 22nd Ed 2012 4500 F IS 3025 (Part 60) : 2008 (RA2012)	1 to 1000mg/l
		Chloride	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l
		Sulfates	IS 3025 (Part 24): 2003 (RA 2009)	1 to 10000mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	183 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Magnesium	IS 3025 (Part 46): 2003 (RA 2009)	1 to 10000 mg/l
		Calcium	IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
		Alkalinity	IS 3025 (Part 23): 2003 (RA 2009)	1 to 10000 mg/l
		Anionic Detergents	APHA 22nd Ed 2012 5540	0.01 to 50 mg/l
		Cyanide	APHA 22nd Ed 2012 4500 CN	0.01 to 500 mg/l
		Electrical conductivity	IS 3025 (Part 14): 2002 (RA2013)	1 to 50000, μ mhos/ cm
		Dissolved oxygen	APHA 22nd Ed. 2012 4500 O	0.1 to 10mg/l
		BOD	APHA 22nd Ed 2012 5210 IS 3025 (Part 44): 2003 (RA 2009)	1 to 25000mg/l
		COD	IS 3025 (Part 58): 2006 (RA 2012) APHA 22nd Ed 2012 5220	2 to 50000 mg/l
		Oil & Grease	APHA 22nd Ed 2012 5520 IS 3025 (Part 39): 2003 (RA 2009)	1 to 10000 mg/l
		Phenolic Compounds	IS 3025 (Part 43): 2003 (RA 2009) APHA 22nd Ed 2012 5530 C & D	0.01 to 100 mg/l
		Suspended solids	IS 3025 (Part 17): 2002 (RA 2012)	1 to 25000 mg/l
		Total Hardness	IS 3025 (Part 21) : 2011	1 to 10000mg/l
		Calcium Hardness	IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
		Magnesium Hardness	IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	184 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Molybdate Reactive Silica	IS 3025 (Part 35) : 2003 (RA 2009) Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.05 to 1000 mg/l
		Total Silica	IS 3025 (Part 35) : 2003 (RA 2009) Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.05 to 1000mg/l
		Molybdate Unreactive Silica	IS 3025 (Part 35) : 2003 (RA 2009)	0.1 to 100 mg/l
		Hydrazine	ASTM-D 1385 : 1988	0.1- 50 mg/l
		Phosphates	APHA 22nd Ed.4500 IS 3025 (Part 31) : 2003 (RA 2009) Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 500mg/l
		Acidity as CaCO ₃	IS 3025 (Part 22) : 2003 (RA 2009)	1 to 10000 mg/l
		Residual Chlorine	IS 3025 (Part 26) : 2003 (RA 2009) /SOP/Validation of E : Merck Chlorine Kit /06 dtd 17.11.2014	1 to 100 mg/l 0.1 to 2 mg/l
		Hexavalent Chromium	APHA 22nd Ed. 2012 3500 Cr	0.01 to 500 mg/l
		Sulfite	APHA 22nd Ed. 2012 4500 SO ₃	1 to 100 mg/l
		Dissolved Carbon Dioxide	APHA 22nd Ed. 2012 4500 CO ₂	1 to 10,000 mg/l
		Chlorine Demand	IS 3025 (Part 25) : 2002 (RA 2009)	0.1 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	185 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Oxygen absorbed for 4 hours	IS 3025 (Part 63) : 2007 (RA 2012)	0.1 to 1000 mg/l
		Temperature	IS 3025 (Part 9) : 2002 (RA 2012)	1 to 50°C
		Total Organic Carbon	APHA 22nd Ed. 2012 5310 B	0.5 –1000 mg/l
		Ammoniacal Nitrogen	IS 3025 (Part 34) : 2003 (RA 2009)	0.1 to 500 mg/l
		Total Kjeldhal's Nitrogen	IS 3025 (Part 34) : 2003 (RA 2009)	0.1 to 1000 mg/l
		Corrosivity	IS 201 : 1982 (RA 2008)	Qualitative
		Volatile Acids	APHA 22nd Ed. 2012 5560	1 to 1000 mg/l
		Dissolved Solids (Fixed & Volatile)	IS 3025 : (Part 18) : 2002 (RA 2012)	1 to 20000mg/l
		Suspended Solids (Fixed & Volatile)	IS 3025 : (Part 18) : 2002 (RA 2012)	1 to 10000 mg/l
15.	Packaged Drining Water, Mineral Drinking Water, Water from Other Sources	Trace Metal Elements		
		Manganese	IS 3025 (Part 59): 2012 SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 100 mg/l
		Copper	IS 3025 (Part 42) : 2003 (RA 2009)/ APHA 22nd Ed 2012 3111 SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 100 mg/l
		Zinc	IS 3025 (Part 49) : 2003 (RA 2009)/ APHA 22nd Ed 2012 3111 SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	186 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Barium		Annexex. F of IS 13428 : 2005 (RA 2009) IS 15302 : 2003	0.05 to 50 mg/l
	Silver		Annexex. J of IS 13428 : 2005 (RA 2009) SOP/Instrumental/ICP/00 d ated 01.04.2014	0.01 to 50 mg/l
	Sodium		IS 3025 (Part 45) : 2003 (RA 2009)/ APHA 22nd Ed 2012 3111 SOP/Instrumental/ICP/00 dated 01.04.2014	1 to 1000 mg/l
	Cadmium		IS 3025 (Part 41) : 2003 (RA 2009)/ APHA 22nd Ed 2012 3111	0.001 to 50 mg/l
	Chromium		Annexex. J of IS 13428 : 2005 (RA 2009)	0.01 to 100 mg/l
	Lead		IS 3025 (Part 47) : 2003 (RA 2009)/ APHA 22 nd Ed 2012 3111 SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 100 mg/l
	Nickel		Annexex. L of IS 13428 : 2005 (RA 2009) SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 50 mg/l
	Boron		IS 3025 (Part 57): 2005 (RA 2010) SOP/ Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	187 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Iron		APHA 22 nd Ed 2012 3111 & 3550 Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.1/0.01 to 500 mg/l
	Aluminium		APHA 22 nd Ed 2012, 3111 & 3500 Al, SOP/Instrumental/ICP/00 dated 01.04.2014	0.02 to 500 mg/l
	Tin		APHA 22 nd Ed 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l
	Potassium		APHA 22 nd Ed 2012, 3111, SOP/Instrumental/ICP/00 dated 01.04.2014	1 to 1000mg/l
	Strontium		APHA 22 nd Ed 2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.01 to 500 mg/l
	Cobalt		APHA 22 nd Ed,2012, 3111 Lab- SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 50 mg/l
	Molybdenum		IS 3025 (Part 2 : 2004, (RA 2009)	0.01 to 100 mg/l
	Vanadium		APHA 22 nd Ed,2012, 3111 Lab-SOP/Instrumental/ICP/00 dated 01.04.2014	0.1 to 100 mg/l
	Arsenic		IS 3025, (Part 37) : 2003, (RA 2009)/ APHA 22 nd Ed 3114	0.005 to 50 mg/l
	Selenium		APHA 22 nd Ed 2012, 3111/ IS 15303 : 2003, (RA 2009)	0.005 to 50 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	188 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
16.	Bore Water	Mercury	APHA 22 nd Ed 2012, 3112	0.001 to 50 mg/l
		Antimony	Annexex. G of IS 13428 : 2005 (RA 2009) IS 15302 : 2003	0.005 to 50 mg/l
		Colour	IS 3025. (Part 4): 2002 (RA 2012)	5 to 500, Hazen Unit
		Odour	IS 3025 (Part 5) : 2002 (RA 2012)	Qualitative
		Taste	IS 3025 (Part 8) : 2002 (RA 2012)	Qualitative
		Turbidity, NTU	IS 3025 (Part 10) : 2002 (RA 2012)	1 to 1000,NTU
		Total Dissolved Solids	IS 3025 (Part 16) : 2002 (RA 2012)	1 to 25000mg/l
		pH	IS 3025 (Part 11) : 2002 (RA 2012)	1 to 14
		Nitrate	IS 3025 (Part 34) : 2003 (RA 2009)	2 to 1000mg/l
		Nitrite	IS 3025 (Part 34) : 2003 (RA 2009)	0.01 to 100 mg/l
		Sulfide	IS 3025 (Part 29) : 2003 (RA 2009) / APHA 22 nd Ed. 2012 4500-S	0.05 to 1000 mg/l
		Fluoride	APHA 22 nd Ed 4500 F IS 3025 (Part 60) : 2008 (RA2012)	0.1 to 50mg/l
		Chloride	IS 3025 (Part 32) : 2003 (RA 2009)	1 to 10000 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	189 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Sulfates		IS 3025 (Part 24): 2003 (RA 2009)	1 to 10000mg/l
	Magnesium		IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000 mg/l
	Calcium		IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
	Alkalinity		IS 3025 (Part 23) : 2003 (RA 2009)	1 to 10000 mg/l
	Mineral oil		IS 3025 (Part 39) : 2003 (RA 2009) / APHA 22 nd Ed 2012 5520	0.01 to 50 mg/l
	Anionic Detergents		APHA 22 nd Ed 2012 5540	0.01 to 50 mg/l
	Cyanide		APHA 22 nd Ed 2012 4500 CN	0.01 to 500 mg/l
	Electrical conductivity		IS 3025 (Part 14) : 2002 (RA 2013)	1 to 50000, μ mhos/ cm
	Dissolved oxygen		APHA 22 nd Ed. 2012 4500 O	0.1 to 10mg/l
	BOD		APHA 22 nd Ed 5210 IS 3025 (Part 44) : 2003 (RA 2009)	1 to 25000mg/l
	COD		IS 3025 (Part 58) : 2006, (RA 2012) APHA 22 nd Ed 2012, 5220	2 to 50000 mg/l
	Oil & Grease		APHA 22 nd Ed 2012, 5520 IS 3025 (Part 39) : 2003 (RA 2009)	1 to 10000 mg/l
	Phenolic Compounds		IS 3025 (Part 43) : 2003 (RA 2009) APHA 22 nd Ed 2012, 5530 C & D	0.001 to 100 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	190 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Suspended solids	IS 3025 (Part 17) : 2002 (RA 2012)	1 to 25000 mg/l
		Total Hardness	IS 3025 (Part 21) : 2011	1 to 10000mg/l
		Calcium Hardness	IS 3025 (Part 40) : 2003 (RA 2009)	1 to 10000 mg/l
		Magnesium Hardness	IS 3025 (Part 46) : 2003 (RA 2009)	1 to 10000mg/l
		Molybdate Reactive Silica	IS 3025 (Part 35) : 2003 (RA 2009) Lab- OP/Instrumental/ICP/00dated 01.042014	0.05 to 1000 mg/l
		Total Silica	IS 3025 (Part 35) : 2003 (RA 2009)	0.05 to 1000mg/l
		Molybdate Unreactive Silica	IS 3025 (Part 35) : 2003 (RA 2009)	0.1 to 100 mg/l
		Hydrazine	ASTM-D 1385 : 1988	0.1 to 50 mg/l
		Phosphates	APHA 22 nd Ed. 2012 4500 IS 3025 (Part 31) : 2003 (RA 2009) Lab- SOP/Instrumental/ ICP/0000 dated 01.042014	0.1 to 500mg/l
		Acidity	IS 3025 (Part 22) : 2003 (RA 2009)	1 to 10000 mg/l
		Residual Chlorine	IS 3025 (Part 26) : 2003 (RA 2009) / SOP/Validation of E-Merck Chlorine Kit /06 dtd 17.11.2014	1 to 100 mg/l 0.1 to 2 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	191 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Hexavalent Chromium		APHA 22 nd Ed. 2012 3500 Cr	0.01 to 500 mg/l
	Sulfite		APHA 22 nd Ed. 2012 4500 SO ₃	1 to 100 mg/l
	Dissolved Carbon Dioxide		APHA 22 nd Ed. 2012 4500 CO ₂	1 to 10,000 mg/l
	Chlorine Demand		IS 3025 (Part 25) : 2002 (RA 2009)	0.1 to 100 mg/l
	Oxygen absorbed for 4 hours		IS 3025 (Part 63) : 2007 (RA 2012)	0.1 to 1000 mg/l
	Temperature		IS 3025 (Part 9) : (RA 2002) (RA 2012)	1 to 50°C
	Total Organic Carbon,		APHA 22 nd Ed. 2012, 5310 B	0.5 to 1000 mg/l
	Ammoniacal Nitrogen		IS 3025 (Part 34) : 2003 (RA 2009)	0.1 to 500 mg/l
	Total Kjeldhal's Nitrogen		IS 3025 (Part 34) : 2003 (RA 2009)	0.1 to 1000 mg/l
	Corrosivity		IS 201 : 1982 (RA 2008)	Qualitative
	Volatile Acids		APHA 22 nd Ed. 2012, 5560	1 to 1000 mg/l
	Dissolved Solids (Fixed & Volatile)		IS 3025 (Part 18) : 2002 (RA 2012)	1 to 10000mg/l
	Suspended Solids (Fixed & Volatile)		IS 3025 (Part 18) : 2002 (RA 2012)	1 to 10000 mg/l
	Total Residue/ Solids		IS 3025 (Part 15) : 2003 (RA 2012)	1 to 25000 mg/l

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	192 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
XV.	METAL & ALLOYS			
1.	Low Alloy steel	Carbon	ASTM E415-08/ IS 228 (Part 1): 1987 (RA 2002)	0.01 to 1%
		Sulphur	IS 228 (Part 9): 1989 (RA1999)	0.005 to 0.50%
		Phosphorous	IS 228 (Part 3): 1987 (RA 2002)	0.005 to 0.50%
		Silicon	IS 228 (Part 8): 1989 & (Part 11): 1990 (RA2004)	0.01 to 1.5%
		Manganese	IS 228 (Part 2): 1987 & (Part 12) : 2001 (RA2002 & 2004)	0.01 to 2%
		Aluminum	SOP/Metal & Alloy/06 DOI- 12.11.12	0.01 to 0.5%
		Molybdenum	IS 228 (Part 7): 1990 & (Part 10) : 1989 (RA 2006)	0.01 to 0.5%
		Copper	IS 228 (Part 15): 1987 (RA 2002)	0.01 to 1%
		Titanium	SOP /Metal & Alloy/06 DOI- 12.11.12	0.01 to 0.5%
		Nickel	IS 228 (Part 5): 1987 (RA 2002)	0.01 to 2%
		Chromium	IS 228 (Part 6): 1987 (RA 2002)	0.01 to 2%
		Vanadium	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 1%
		Niobium	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 0.5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	193 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Stainless steel	Cobalt	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 0.5%
		Boron	SOP/Metal & Alloy/06, DOI-12.11.12	0.0001 to 0.01%
		Nitrogen	IS 228 (Part 19): 1998 (RA 2005)	0.002 to 0.50%
		Carbon	ASTM E-1086-94/ IS 228(Part 1):1987 (RA 2002)	0.01 to 1%
		Sulphur	IS 228 (Part 9): 1989 (RA1999)	0.005 to 0.50%
		Phosphorous	IS 228 (Part 3): 1987 (RA 2002)	0.005 to 0.50%
		Silicon	IS 228 (Part 8) : 1989 & (Part 11): 1990 (RA1999)	0.01 to 2%
		Manganese	IS 228 (Part 2): 1987& (Part 12) : 2001 (RA 2002) & (RA2004)	0.01 to 15%
		Molybdenum	IS 228 (Part 7) : 1990 & (Part 10): 1989 (RA 2006)	0.01 to 3.5%
		Tungsten	IS 228 (Part 16): 1992 (RA1999)	0.01 to 0.5%
		Copper	IS 228 (Part 15): 1987 (RA 2002)	0.01 to 2%
		Titanium	SOP/Metal & Alloy/06, DOI- 12.11.12	0.01 to 1%
		Nickel	IS 228 (Part 5): 1987 (RA 2002)	0.01 to 25%
		Chromium	IS 228 (Part 6) : 1987 (RA 2002)	0.01 to 35%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	194 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Tool Steel	Vanadium	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 0.8%
		Niobium	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 1%
		Cobalt	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 1%
		Nitrogen	IS 228(Part 19): 1998 (RA 2005)	0.002 to 0.50%
		Carbon	IS 228 (Part 1): 1987 (RA2002)	0.20 to 2%
		Sulphur	IS 228 (Part 9): 1989 (RA1999)	0.005 to 0.05%
		Phosphorous	IS 228(Part 3): 1987 (RA 2002)	0.005 to 0.05%
		Silicon	IS 228(Part 8): 1989 & (Part 11) : 1990 (RA2004)	0.01 to 1%
		Manganese	IS 228(Part 2: 1987 (RA 2002) & (Part 12) : 2001 (RA2004)	0.10 to 1%
		Molybdenum	IS 228 (Part 7) : 1990 (Part : 10) : 1990 (RA 2006)	0.01 to 10%
		Tungsten	IS 228(Part 16): 1992 (RA1999)	0.1 to 20%
		Copper	IS 228(Part 15): 1987 (RA 2002)	0.01 to 2%
		Chromium	IS 228 (Part 6): 1987 (RA 2002)	0.01 to 8%
		Vanadium	SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 2%
		Cobalt	SOP/Metal & Alloy/06, DOI-12.11.12	0.1 to 8% 0.01 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	195 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Cast Iron	Carbon	IS 228(Part 1): 1987 (RA 2002)	0.50 to 5%
		Sulphur	IS 228(Part 9): 1989 (RA1999) &	0.005 to 0.50%
		Phosphorous	IS 228 (Part 3) : 1987 (RA 2002)	0.005 to 0.50%
		Silicon	IS 228 (Part 8):1989 & (Part 11): 1990 (RA2004)	0.01 to 3%
		Manganese	IS 228 (Part 2): 1987 (RA 2002) & (Part 12): 2001 (RA2004)	0.1 to 2%
		Copper	IS 228 (Part 15):1987 (RA 2002)	0.01 to 1%
		Titanium	SOP/Metal & Alloy/06 DOI-12.11.12	0.01 to 0.5%
		Nickel	IS 228 (Part 5): 1987 (RA 2002)	0.01 to 1%
		Chromium	IS 228 (Part 6):87 (RA 2002)	0.01 to 1%
		Vanadium	SOP/Metal & Alloy/06 DOI-12.11.12	0.01 to 0.5%
		Niobium	SOP/Metal & Alloy/06 DOI-12.11.12	0.01 to 0.5%
		Cobalt	SOP/Metal & Alloy/06 DOI-12.11.12	0.01 to 0.5%
		Nitrogen	IS 228(Part 19): 1998 (RA 2005)	0.002 to 0.50%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	196 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Ferro alloys (Sponge Iron, Ferro Silicon, Ferro Manganese, Ferro Vanadium, Ferro Boron, Ferro Titanium, Ferro Chromium, Ferro Moly & Silico Manganese)	Carbon	ASTM E 31-2006 & 32-2006	0.1 to 5%
		Sulphur	IS 1559 (Part 2): 1982 (RA2002)	0.01 to 3%
		Phosphorous	IS 1559 (Part 3): 1982 (RA2002)	0.001 to 80%
		Silicon	IS 1559 (Part 4): 1982 (RA2002)	0.01 to 80%
		Aluminium	IS 1559 (Part 1): 1988 (RA2004)	0.01 to 10%
		Calcium	IS 1559 (Part 5): 1982 (RA2004)	0.01 to 10%
		Manganese	IS 1559 (Part 6): 1982 (RA 2002)	0.01 to 80%
		Boron	IS 1559 (Part 7): 1982 (RA 2002)	0.01 to 50%
		Titanium	IS 3295: 1969 (RA2004)	0.01 to 80%
		Chromium	IS 1468: 2000 (RA2004)	0.01 to 70%
		Vanadium	IS 1170:19 92 (RA2004)	0.01 to 70%
		Tungsten	IS 1466: 1985 (RA2004)	0.01 to 80%
		Iron	IS 1467: 1993 (RA2004)	0.1 to 50%
		Molybdenum	IS 12614 (Part 1): 1988 (RA2004)	0.1 to 50%
		Metallic Iron	IS 1493: 1959 (RA 2006) IS 15774: 2011 SOP/Metal & Alloy/06, DOI-12.11.12	0.1 to 95%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	197 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
6.	Copper & Its alloys.	Copper	IS 3685:19 66 (RA 2006)	0.01 to 99.99%
		Lead	IS 4027: 1987 (RA 2006)	0.01 to 15%
		Iron	IS 440: 1964 (RA 2006)	0.01 to 5%
		Aluminium	IS 3187: 1965 (RA 2006)	0.1 to 5%
		Phosphorous	IS 3863: 1966 (RA 2006) IS	0.1 to 1.0%
		Nickel	4548: 1967 (RA 2006)	0.1 to 5%
		Zinc	SOP/Metal & Alloy/06, DOI-	0.1 to 60%
		Tin	12.11.12	0.1 to 90%
		Antimony	BS EN-1057-1996	0.1 to 5%
		Silver		0.1 to 10%
		Bismuth		0.1 to 5%
		Gold		0.001 to 5%
		Selenium		0.001 to 5%
		Tellurium		0.001 to 5%
		Arsenic		0.001 to 0.5%
		Beryllium		0.001 to 15%
		Cadmium		0.001 to 10%
		Manganese		0.001 to 10%
7.	Aluminium and Its alloys	Copper	IS 504: 63 (RA2000)	0.01 to 20%
		Iron	IS 4354: 67 (RA 2005)	0.01 to 5%
		Nickel	ASTM E-34-2002 &	0.01 to 0.5%
		Zinc	SOP/Metal & Alloy/06, DOI-	0.01 to 10%
		Manganese	12.11.12,	0.01 to 5%
		Magnesium	ASTM E-1251-2011	0.01 to 5%
		Silicon		0.01 to 15%
		Lead		0.01 to 0.5%
		Chromium		0.01 to 0.5%
		Titanium		0.01 to 0.5%
		Vanadium		0.01 to 0.5%
		Zirconium		0.01 to 0.5%
		Strontium		0.01 to 0.5%
		Tin		0.01 to 0.5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	198 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Tin and Its alloys	Copper	IS 964: 56 (RA2003)	0.001 to 0.01
		Lead	IS 998: 83 (RA2003)	0.01 to 10%
		Iron	IS 999: 59 (RA2003)	0.01 to 1%
		Antimony	IS 8097: 76 RA2005	0.01 to 15%
		Arsenic	IS 7255: 74 (RA2004) ,	0.005 to 0.5%
		Silver	SOP/Metal & Alloy/06, DOI-	0.001 to 55%
		Zinc	12.11.12	0.001 to 15%
		Nickel		0.001 to 5%
		Bismuth		0.001 to 20%
		Cadmium		0.001 to 15%
		Aluminum		0.001 to 15%
9.	Zinc & Its alloys	Copper	IS 2600 (Part 1): 1988 (RA2003)	0.01 to 5%
		Lead	IS 2600 (Part 2): 1988 (RA2003)	0.001 to 5%
		Cadmium	IS 2600 (Part 3): 19 93 (RA2003)	0.001 to 2%
		Tin	IS 2600 (Part 4): 1993 (RA 2006)	0.001 to 2%
		Aluminium	ASTM E- 536: 2005 &	0.001 to 2%
		Magnesium	SOP/Metal & Alloy/06, DOI-	0.001 to 2%
		Iron	12.11.12	0.001 to 2%
		Chromium		0.001 to 2%
		Nickel		0.001 to 2%
		Bismuth		0.001 to 2%
		Antimony		0.001 to 2%
10.	Lead & Its alloy	Copper	IS 403: 1964 (RA 2005)	0.001 to 5%
		Tin	IS 4354: 1967 (RA 2005)	0.001 to 2%
		Arsenic	SOP/Metal & Alloy/06, DOI-	0.001 to 0.5%
		Iron	12.11.12	0.001 to 0.5%
		Zinc		0.001 to 0.5%
		Antimony		0.001 to 15%
		Silver		0.001 to 5%
		Bismuth		0.001 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	199 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
11.	Magnesium & Its alloys	Silicon	IS 4354 : 1967 (RA 2005)	0.001 to 10%
		Iron	& SOP/Metal & Alloy/06, DOI-	0.001 to 5%
		Copper	12.11.12	0.001 to 5%
		Zinc	Only Trace elements Analysed by	0.001 to 5%
		Manganese	ICP-OES /AAS	0.001 to 5%
		Lead		0.001 to 5%
		Nickel		0.001 to 5%
		Aluminium		0.001 to 55
12.	Nickel, chromium , Cobalt & their alloys	Nickel	IS 228: 1987 (RA 2002)	0.01 to 99.9%
		Copper	IS 1952: 1963 (RA 2005)	0.001 to 10%
		Iron	IS 2390: 1967 (RA 2005)	0.01 to 10%
		Carbon	IS 2766: 1968 (RA 2005)	0.01 to 5%
		Silicon	IS 3187: 1965 (RA 2006)	0.01 to 5%
		Sulphur	IS 12122: 1987 (RA2004)	0.01 to 0.5%
		Chromium	ASTM E-34-2011 ASTM E-1086	0.001 to 99.9%
		Cobalt	2014& SOP/Metal & Alloy/06,	0.001 to 99.9%
		Phosphorous	DOI-12.11.12	0.01 to 0.5
		Aluminium		0.01 to 15%
		Manganese	Only Trace elements Analysed by	0.01 to 20%
		Molybdenum	ICP-OES /AAS	0.01 to 5%
		Vanadium		0.01 to 5%
13.	Titanium & Its alloys	Copper	ASTM E 37-2005	0.001 to 10%
		Nickel	& SOP/Metal & Alloy/06, DOI-	0.001 to 10%
		Cobalt	12.11.12	0.001 to 10%
		Iron	Only Trace elements Analysed by	0.001 to 10%
		Carbon	ICP-OES /AAS	0.001 to 5%
		Silicon		0.001 to 5%
		Sulphur		0.005 to 0.05%
		Manganese		0.001 to 55

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	200 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
14.	Tungsten & Its alloys	Cobalt Nickel Copper Iron Carbon Silicon Sulphur Manganese	ASTM E-34-2002 & SOP/Metal & Alloy/06, DOI-12.11.12 Only Trace elements Analysed by ICP-OES /AAS	0.001 to 0.5% 0.001 to 0.5% 0.001 to 0.5% 0.001 to 0.5% 0.01 to 0.5% 0.001 to 0.5% 0.001 to 0.5% 0.001 to 1%

XVI. METAL & METALLIC COATINGS & TREATMENT SOLUTION

1.	Metal&Metallic coatings & Treatment Solution	Mass of Zinc coating of sheet	IS 6745: 72 (RA 2006) & IS 2633: 86 (RA 2006)	5 to 50g/m ² 50 to 200g/m ²
		Mass of Zinc coating of tube	IS 6745: 72 (RA 2006)	200 to 400 g/m ² 400 to 2000g/m ²
		Silver coating	IS 3203: 1982 (RA 2006)	0.1 to 25 microns
		Aluminium coating	IS 1868: 96 (RA 2006)	10 to 50 microns
		Gold coating	IS 12114: 87 (RA2007) IS 3266: 1982 (RA 2006)	0.1 to 10microns
		Copper /Silver coating	IS 3438 : 1994 (RA 2006)	10 to 20microns
		Chromium/Nickel coating	IS 3203: 1982 (RA 2006)	1 to 20 microns
		Phosphate Coating	IS 3618: 1966 (RA2007)	0.1 to 0.5 microns
		Mass of Tin coating	IS 1327-88 (RA 2006) ISO-8442-1&ISO-8442-2 SOP/Metal & Alloy/06, DOI-12.11.12	0.1 to 1g/m ² 1 to 50g/m ² 0.5 to 50g/m ²

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	201 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Plating Solutions Silver Potassium cyanide Gold Potassium cyanide	Silver	IS 6267-71 RA1997, SOP/inorganic chemical & Fertilizer/06, DOI-05.01.12	10 to 99.9%
		Gold	IS 5761 (Part I&II)-84	10 to 99.9%
		Silver	(RA2003) SOP/inorganic chemical & Fertilizer/06, DOI- 05.01.12	0.5 to 10%
		Turbidity		N/A
		Loss on drying		0.05 to 10%
		Silica		0.02 to 10%
		Tin		0.05 to 5%
3.	Zinc salt	Zinc oxide	IS 1880-77-71	10 to 99.9%
		Cyanide	(RA2003) SOP/inorganic chemical & Fertilizer/06, DOI- 05.01.12	0.1 to 10%
		Cyanide –insolubles		0.05 to10%
4.	Nickel salt	pH	IS 1809-79	2 to 14
		Insoluble matter	(RA2003) , SOP/inorganic chemical & Fertilizer/06, DOI- 05.01.12	0.05 to 2%
		Nickel		1 to 50%
		Cobalt		0.1 to 5%
		Copper		0.001 to 2%
		Lead		0.001 to 2%
		Iron		0.001 to 2%
		Zinc		0.001 to 2%
		Nitrates		0.001 to 2%
		Sulphate		0.001 to 2%
				0.1 to 5%
XVII. CORROSION TESTS				
1.	Stainless Steel, Roof Sheet	Corrosion Tests		
		Anodized Al coating for Acetic acid salt spray	IS 6910: 85 (RA 2006)	Qualitative
		Anodized Al Coating for cu accelerated acetic acid salt spray	IS 5528: 85 (RA 2006)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	202 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Phosphate treatment of Iron & Steel	IS 3618: 66 (RA2007)	Qualitative
		Corrosion test for Ag/ cu coated plane mirror	IS 3438: 94 (RA 2006)	Qualitative
		Anodized Al coating for Neutral salt spray	ASTM B-117-2009 IS 9844: 81 (RA 2006) QM-333-1-Sep90	Qualitative
		Intergranular Corrosion	IS 13316: 1992 (RA 2008) / ASTM-A 262-2010 IS 10461: 1994	Qualitative
		Heat Resistance Test	ASTM D-2244-2009	Qualitative
		Toxic metal release Leach able toxic elements in metal wares (Pb, Cd, Hg, As, Cr, Hexavalent Cr)	ASTM C-378-2005 BS 6748: 2008 IS 12038: 87 (RA 2002) IS 9806: 2001 (RA 2006) SOP/Metal & Alloy/06, DOI-12.11.12	0.01 to 0.10mg/kg 0.10 to 1.0mg/kg 0.1 To 10mg/kg 10.0 to 50mg/kg 50.0 to 100mg/kg
XVIII	ORES & MINERALS			
1.	Iron Ores	Total Iron	IS 1493 : 1959 (RA2001)	30 to 70%
		Ferrous Oxide	IS 1493 : 1959 (RA2001)	0.5 to 2%
		Alumina	IS 1493 (Part 4) : 1988	0.5 to 15%
		Silica	IS 1493 (Part 1) : 1981 (RA2001)	1 to 15%
		Phosphorous	IS 1493 (Part 1) : 1981	0.01 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	203 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Manganese	IS 1493 : 1959 (RA2001)	0.01 to 2%
		Magnesia	IS 1493 (Part 3): 1987 (RA2001)	0.1 to 2%
		Lime	IS 1493 (Part 3): 1987 (RA2001)	0.1 to 5%
		Titania	IS 1493 (Part 3): 1987 (RA2001)	0.1 to 1%
		Sulphur	IS 1493 (Part 1): 1981 RA2001	0.01 to 1%
		Vanadium	IS 1493 (Part 3): 1987 RA2001	0.01 to 1%
		Total Moisture	IS 1493 (Part 3): 1987 RA2001	0.5 to 10%
2.	Limestone , Dolomite	Loss on ignition	IS 1760 (Part 1) :1991 ASTM C 25 -1999	40 to 60%
		Silica	IS 1760 (Part 2): 1991 (RA2001) ASTM C 25 -1999	0.1 to 35%
		Alumina	IS 1760 (Part 3):1992 (RA2001) ASTM C 25 -1999	0.1 to 10%
		Iron oxide	IS 1760 (Part 3): 1992 (RA2001) ASTM C 25 -1999	0.1 to 5%
		Lime	IS 1760 (Part 3): 1992 (RA2001) ASTM C 25 -1999	1 to 60%
		Magnesia	IS 1760 (Part 3):1992 (RA2001) ASTM C 25 -1999	1 to 40%
		Chlorides	IS 1760 (Part 5):1991 (RA2001) ASTM C 25 -1999	0.01 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	204 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Chrome Ores	Chromic Oxide	IS 4737 : 1982	25 to 50%
		Total Iron	IS 4737 : 1982	1 to 20%
		Alumina	IS 4737 : 1982	1 to 15%
		Silica	IS 4737 : 1982	0.5 to 10%
		Lime	IS 4737 : 1982	0.5 to 3%
		Magnesia	IS 4737 : 1982	1 to 15%
4.	Bauxite	Total Alumina	IS 2000 (Part 3) : 1985	30 to 75%
		Silica	IS 2000 (Part 2) : 1985	1 to 10%
		Iron Oxide	IS 2000 (Part 4) : 1985	0.1 to 10%
		Loss on ignition	IS 2000 (Part 1) : 1985	1 to 30%
		Titania	IS 2000 (Part 5) : 1985	0.1 to 10%
		Vanadium	IS 2000 (Part 6) : 1985	0.01 to 1%
		Phosphorus Pentoxide	IS 2000 (Part 7) : 2001	0.01 to 1%
		Manganese	IS 2000 (Part 8) : 1989	0.01 to 1%
		Magnesium	IS 2000 (Part 9) : 1989	0.01 to 1%
		Lime	IS 2000 (Part 9) : 1989	0.01 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	205 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Manganese Ores	Total Manganese (Mn)	IS 1473 : 2004	30 to 70%
		Manganese Dioxide (MnO ₂)	IS 1473 : 2004	25 to 65%
		Total Iron (Fe)	IS 1473 : 2004	1 to 20%
		Silica	IS 1473 : 2004	0.5 to 10%
		Alumina	IS 1473 : 2004	0.1 to 6.0%
		Phosphorous	IS 1473 : 2004	0.01 to 1%
		Sulphur	IS 1473 : 2004	0.01 to 0.2%
6.	Mineral Gypsum	Free Water	IS 1288 : 1982	0.1 to 10%
		Combined Water	IS 1288 : 1982	0.1 to 30%
		Silica & Acid Insoluble	IS 1288 : 1982	0.5 to 40%
		Iron & Aluminium Oxides	IS 1288 : 1982	0.1 to 20%
		Calcium Oxide	IS 1288 : 1982	20 to 70%
		Magnesium Oxide	IS 1288 : 1982	0.1 to 20%
		Sulphur trioxide	IS 1288 : 1982	20 to 50%
		Calcium Sulphate dihydrate	IS 1288 : 1982	70 to 90%
7.	Talc	Fineness	IS 1462 : 1985	0 to 100 %
		pH	IS 1462 : 1985	4 to 10
		Matter soluble in water	IS 1462 : 1985	0.01 to 5 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	206 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Heavy metal	IS 1462 : 1985	0.01 to 50 mg/kg
		Lead (Pb)	IS 1462 : 1985	0.005 to 10 mg/kg
		Arsenic (As ₂ O ₃)	IS 1462 : 1985	0.01 to 50 %
		Magnesium(MgO)	IS 1462 : 1985	0.5 to 3.0 g/cc
		Bulk Density	IS 1462 : 1985	0.01 to 20 %
		Loss on Ignition	IS 1462 : 1985	Qualitative (Qualitative)
		Carbonates	IS 1462 : 1985	0.01 to 5 %
		Acid soluble Iron	IS 1462 : 1985	Qualitative (Qualitative) 0.01 to 15 %
		Water soluble iron	IS 1462 : 1985	0.01 to 5 %
		Acid soluble matter Loss on drying	IS 1462 : 1985	
8.	Silica Gel	Loss on drying	IS 3401 : 1992 (RA2003) Annex A	0.01 to 25%
		Moisture	IS 3401 : 1992 (RA2003) Annex A	0.01 to 10%
		pH	IS 3401 : 1992 (RA2003) Annex C	2 to 10
		NaCl	IS 3401 : 1992 (RA2003) Annex E : 3	0.01 to 2%
		Na ₂ SO ₄	IS 3401 : 1992 (RA2003) Annex E-6	0.01 to 2%
		CaOCl ₂	IS 3401 : 1992 (RA2003) Annex E-4	0.01 to 10%
		Bulk density	IS 3401 : 1992 (RA2003)	1 to 5 g/cc

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	207 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Loss on attrition	IS 3401 : 1992 (RA2003) Annex D	0.01 to 25%
		Particle size/Sieving	IS 3401 : 1992 (RA2003)	0.01 to 100%
		Loss on ignition	IS 3401 : 1992 (RA2003) Annex A	0.01 to 25%
9.	Mineral for Insulation Materials (Mineral wool/ Glass wool/ Rock wool/ Fiber)	Dimension	IS 3144 : 92 (RA2004) IS 8183 : 1993	50 to 100mm
		Bulk density	IS 8183 : 1993	10 to 200kg/m ³
		Recovery after Compression	IS 8183 : 1993	1 to 99%
		Moisture Absorption	IS 8183 : 1993	0.01 to 5%
		Shot Content	IS 8183 : 1993	0.01 to 5%
		Odour emission	IS 8183 : 1993	Qualitative
		Corrosive attack	IS 8183 : 1993	Qualitative
		Sulphur	IS 8183 : 1993	0.01 to 2%
		Oil content	IS 8183 : 1993	0.01 to 2%
		Chloride	IS 8183 : 1993	0.01 to 10%
		Alkalinity (pH)	IS 8183 : 1993	0.01 to 5%
		Organic matter	IS 8183 : 1993	0.01 to 5%
		Carbon	IS 8183 : 1993	0.01 to 2%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	208 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
10.	Activated Alumina	Loss on ignition	IS 9700 : 1991 (RA2003)	0.1 to 10%
		Attrition loss	IS 9700 : 1991 (RA2003)	0.01 to 25%
		Moisture	IS 9700 : 1991 (RA2003)	0.01 to 5%
		Adsorption Capacity	IS 9700 : 1991 (RA2003)	25 to 80%
		Bed Crushing Strength	IS 9700 : 1991 (RA2003)	50 to 95%
		Thermal Stability	IS 9700 : 1991 (RA2003)	Qualitative (Qualitative)
		Bulk density	IS 9700 : 1991 (RA2003)	0.1 to 3 g/cc
		Alumina	IS 9700 : 1991 (RA2003)	50 to 95%
		Silica	IS 9700 : 1991 (RA2003)	10 to 50%
		Iron oxide	IS 9700 : 1991 (RA2003)	1 to 10%
		Titania	IS 9700 : 1991 (RA2003)	1 to 6%
11.	High Silica Refractories	Loss on ignition	IS 1527 : 72 (RA 2006)	0.1 to 10%
		Silica	IS 1527 : 72 (RA 2006)	25 to 70%
		Alumina	IS 1335 : 72 (RA 2006)	40 to 95%
		Iron oxide	IS 1527 : 72 (RA 2006)	0.01 to 10%
12.	Sulphur	Purity	IS 6655 : 1972 (RA2003)	80 to 99.9%
		Ash	IS 6655 : 1972 (RA2003)	0.01 to 2%
		Moisture	IS 6655 : 1972 (RA2003)	0.01 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	209 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Organic matter	IS 6655 : 1972 (RA2003)	0.01 to 1%
		Free acidity	IS 6655 : 1972 (RA2003)	0.01 to 1%
		Fineness	IS 6655 : 1972 (RA2003)	0.01 to 10%
		Chloride	IS 6655 : 1972 (RA2003)	0.01 to 1%
		Carbon	IS 6655 : 1972 (RA2003)	0.01 to 1%
		Oil & Bituminous matter	IS 6655 : 1972 (RA2003)	0.01 to 5%
XIX.	INDUSTRIAL AND FINE CHEMICALS			
1.	Sodium Sulphite		IS 247:1986 (RA2003)	
	Sodium Sulphite (as Na ₂ SO ₃)	Apx-2		1.0 to 5 % 5.0 to 15.0% 15 to 30% 30 to 60 % 60 to 99.5
	Insoluble matter	Apx-3		0.01 to 2%
	Free alkali	Apx-4		0.01 to 5%
	Sodium thiosulphate	Apx-5		0.01 – 1%
	Heavy Metals (as Lead)	Apx-6		0.001 to 2%
	Iron (as Fe)	Apx-7		0.001 to 2%
	Arsenic (as As ₂ O ₃)	Apx-8		0.001 to 1%
	Chloride (as Cl)	Apx-9		0.01 to 1%
	Free acid	Apx-10		0.01 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	210 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Sodium bichromate	Free moisture	IS 249: 1979 (RA2003) Apx-2	1 to 20%
		Sodium Bichromate (as Na ₂ Cr ₂ O ₇)	Apx-3	1.0 to 5 % 5.0 to 15.0% 15 to 30% 30 to 60 % 60 to 99.5
		Sulphates (as Na ₂ SO ₄)	Apx-4	0.1 to 2%
		Chlorides (as NaCl)	Apx-5	0.1 to 2%
		Calcium compound (as CaSO ₄)	Apx-6	0.01 to 2%
		Matter insoluble in water	Apx-7	0.02 to 2%
		pH Value	Apx-8	0.5 to 10.0
3.	Soda ash	Bulk density	IS 251:1998 (RA2004) Annexex A	200 – 1500kg/m ³
		Total Alkalinity(as Na ₂ CO ₃)	Annexex C-3	0.01 to 99.99%
		Matter insoluble	Annexex C-4	0.02 to 2%
		Sulphate (as Na ₂ SO ₄)	Annexex C-5	0.1 to 2%
		Chloride (as NaCl)	Annexex C-6	0.1 to 2%
		Iron (as Fe ₂ O ₃)	Annexex C-7	0.001 to 1%
		Volatile matter	Annexex-B	0.1 to 10%
4.	Sodium hydroxide	Sodium carbonate (as Na ₂ CO ₃)	IS 252:1991 (RA2003) AnnexexA-3	0.05 to 5%
		Sodium Hydroxide (as NaOH)	Annexex A-4	0.01 to 99.99%
		Chlorides (as NaCl)	Annexex A-5	0.01 to 2%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	211 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphates	Annexex A-6	0.01 to 2%
		Silicates (as SiO ₂)	Annexex A-7	0.002 to 2%
		Iron (as Fe)	Annexex A-8	5 to 500mg/kg
		Copper (as Cu)	Annexex A-9	1 to 10mg/kg
		Manganese (as Mn)	Annexex A-10	0.5 to 10mg/kg
		Matter Insoluble	Annexex A-12	0.02 to 2%
		Chlorate &Perchlorate	Annexex A-11	5 to 40mg/kg
5.	Sodium sulphate		IS 255: 1982 (RA 2006)	
		Sodium Sulphate (as Na ₂ SO ₄)	Apx A-3	0.01 to 99.99%
		Matter insoluble	Apx A-4	0.02 to 2%
		Chlorides (as NaCl)	Apx A-5	0.01 to 5%
		Fe,Al & Cr(as R ₂ O ₃)	Apx A-6	0.005 to 2%
		Iron (as Fe)	Apx A-6	0.001 to 1%
		PH	Apx A-9	2 to 14
		Loss on drying	Apx A-8	0.5 to 2%
6.	Sodium carbonate		IS 296:1986 (RA2003)	
		Loss on ignition	Apx A-2	0.05 to 5%
		Total Alkalinity(Na ₂ CO ₃)	Apx A-3	0.01 to 99.99%
		Matter insoluble in water	Apx A-4	0.005 to 2%
		Sulphates	Apx A-5	0.001 to 2%
		Chlorides	Apx A-6	0.001 to 2%
		Iron	Apx A-7	0.005 to 1%
		Nitrates	Apx A-8	0.001 to 1%
		Phosphates	Apx A-9	0.001 to 1%
		Silicate	Apx A-10	0.001 to 1%
		Heavy Metal (as Pb)	Apx A-11	2 to 100mg/kg
		Copper (as Cu)	Apx A-12	0.001 to 1%
		Ammonia	Apx A-13	1 to 10mg/kg
		Substances reducing Iodine	Apx A-14	0.001 to 1%
		Arsenic (as As)	Apx A-15	0.1 to 10mg/kg
		Ca & Mg	Apx A-16	0.005 to 1 %
		Aluminium (as Al)	Apx A-17	0.001 to 1 %
		Potassium (as K)	Apx A-18	0.001 to 1 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	212 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Sodium silicate	Matter insoluble in water	IS 381:1995 (RA 2006) Cross ref IS 14212Apx A-3	0.01 to 5%
		Relative density	Apx A-5	1 to 5
		Total Soluble Silicates	Apx A-7or ApxA-12	0.01 to 99.99%
		Ratio of total	Apx A-9	1 1 to 1 5
		Alkalinity to total soluble silica		(Ratio)
		Loss on ignition	Apx A-10	0.01 to 2%
		Iron	Apx A-11	0.001 to 1%
		Viscosity	Apx A-12	10 to 1000cst
		Chloride (as NaCl)	Apx A-14	0.01 to 2%
		Sulphate (as Na ₂ SO ₄)	Apx A-15	0.01 to 2%
8.	Sodium bicarbonate	Total Alkalinity (as NaHCO ₃)	IS 2124: 2000 (RA 2006) Apx A	0.01 to 99.99%
		pH	Apx B	
		Chlorides	Apx C	2 to 14
		Insoluble matter	Apx D	0.1 to 10%
		Sulphate	Apx E	0.001 to 1%
		Iron	Apx F	0.01 to 2%
		Lead	Apx G	0.001 to 1%
		Arsenic	Apx H	5 to 50mg/kg
		Ammonium compounds	Apx I	0.05 to 10mg/kg
		Phosphate	Apx K	5 to 50mg/kg
		Calcium	Apx L	0.0005 to 0.005%
		copper	Apx M	0.001 to 1%
		Nitrates	Apx N	2 to 50mg/kg
		Silicates	Apx P	0.0005 to .05%
		Potassium	Apx R	0.005 to .05%
		Substances reducing iodine	Apx Q	0.001 to 0.01%
			Apx R	0.0005 to 0.01%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	213 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
9.	Sodium chloride		IS 4408: 1979 (RA2003)	
		Sodium Chloride	Apx A-2	0.01 to 99.99%
		Sulphate	Apx A-3	0.001 to 1%
		Nitrates	Apx A-4	0.0005 to 0.005%
		Phosphates	Apx A-5	0.0005 to 0.005%
		Iron	Apx A-6	0.0005 to 0.005%
		Lead	Apx A-7	0.0005 to 0.005%
		Barium	Apx A-8	0.0005 to 0.005%
		Ca & Mg	Apx A-9	0.0005 to 0.005%
		Potassium	Apx A-10	0.0005 to 0.01%
		Ammonium salts	Apx A-11	0.0005 to 0.005%
		Arsenic	Apx A-12	0.000005 to 0.0001%
		PH	Apx A-13	2 to 14
		Bromide & iodides	Apx A-14	0.002 to 0.01%
		Insoluble matter	Apx A-15	0.003 to 0.01%
		Ferro cyanide	Apx A-16	0.0001 to 0.001%
10.	Sodium & Potassium Nitrate		IS 9157: 1979 (RA 2008)	
		Moisture & Volatile matter	Apx A-1	0.1 to 5%
		Matter insoluble in water	Apx A-2	
		Carbonates	Apx A-3	0.01 to 2%
		Nitrites	Apx A-4	
		Chlorides	Apx A-5	Qualitative Qualitative
		Sulphate	Apx A-6	0.01 to 2%
		Copper	Apx A-7	0.05 to 2%
		Iron	Apx A-8	Qualitative
		Manganese	Apx A-9	0.001 to 1%
		Potassium	Apx A-10	Qualitative
		Compound		
		Sodium compound	Apx A-11	0.01 to 2%
		Sodium Nitrate	Apx A-12	0.01 to 2%
		Potassium Nitrate	Apx A-13	0.01 to 99.99%
				0.01 to 99.99%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	214 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
11.	Sodium hypo chlorite	Relative density Available chlorine Total chlorine Free alkali (as NaOH) Free Sodium Carbonate (as Na ₂ CO ₃) Iron Sodium chlorate	IS 11673: 1992 (RA2003) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8	0.500 to 2.000 0.1 to 25% 0.1 to 25% 0.1 to 10g/l 0.1 to 10g/l 0.4 to 10mg/kg 0.001 to 2%
12.	Potassium dichromate	Moisture Matter insoluble in water Potassium dichromate Sulphates Chlorides Calcium as CaSO ₄ Aluminium Sodium	IS 250: 1964 (RA2003) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-7 Apx A-8	0.001 to 2% 0.001 to 2% 0.01 to 99.99% 0.05 to 2% 0.0005 to 1% 0.005 to 1% 0.001 to 1% 0.001 to 1%
13.	Ferric alum	Insoluble matter Soluble iron compound Water soluble Aluminium compounds pH Basicity Arsenic Lead	IS 299: 2012 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-9	0.05 to 5% 0.01 to 2% 1 to 20% 2 to 14 0.2 to 2% 0.5 to 20mg/kg 5 to 100mg/kg
14.	Sodium thiosulphate	Sodium thiosulphate pH Insoluble matter & metal other than alkali metal Sodium sulphide Lead Iron	IS 246: 1986 (RA2003) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7	0.01 to 99.99% 2 to 14 0.01 to 1% 0.001 to 1% 0.0005 to 0.01% 0.0005 to 0.01%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	215 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
15.	Silver nitrate	Silver nitrate Matter insoluble in water Alkalis & Other metals Bi & Pb Copper Iron Chloride Sulphate Insoluble in alcohol	IS 2214:1977 (RA2003) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-9 Apx A-10	0.01 to 99.99% 0.005 to 0.1% 0.005 to 1% 0.001 to 0.1% 0.0002 to 0.001% 0.0002 to 0.001% 0.0005 to 0.01% 0.002 to 0.1% Qualitative
16.	Ammonium Chloride	Moisture Ammonium chloride Iron sulphate Total sulphated residue PH Matter insoluble in water Fe & Pb Arsenic	IS 1113: 1965 (RA2003) Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-9 Apx A-10 Apx A-11	0.02 to 2% 0.01 to 99.99% 0.001 to 0.1% 0.05 to 1% 0.1 to 0.5% 2 to 14 0.005 to 1% 10 to 50mg/kg 0.5 to 20mg/kg
17.	Bleaching powder	Available chlorine Stability Moisture Particle size Keeping Quality	IS 1065:1989 (RA1996) Apx A-2 Apx A-3 (ratio) Apx A-4 Apx A-5 Apx A-2(after 30 days)	1 to 40% 1/30 to 1/10 0.1 to 1% 1 to 100% 1 to 40%
18.	Boric acid	Boric Acid Arsenic Lead Loss on drying Iron Solubility in water Solubility in Alcohol Sulphate	IS 263: 1990 (RA 2005) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-10	0.01 to 99.99% 0.5 to 25mg/kg 5 to 50mg/kg 0.01 to 1% 0.01 to 1% Qualitative Qualitative Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	216 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
19.	Nitric Acid		IS 264: 2005	
		Total Acidity (as HNO ₃)	Annex A	1-80%
		Residue on ignition	Annex B	0.001-1%
		Chloride	Annex C	0.5-2000 mg/kg
		Sulphate	Annex D	0.0002-1%
		Lead	Annex E	0.2-20 mg/kg
		Nitrous acid	Annex F	0.001-1%
		Arsenic	Annex G	0.01-25 mg/kg
		Iodine	Annex H	Qualitative Test
		Iron	Annex J	0.2-20 mg/kg
		Manganese	Annex K	0.2-20 mg/kg
		Phosphates	Annex L	1-20 mg/kg
		Silicates	Annex L	0.5-20 mg/kg
		Ammonium Salts	Annex M	1-20 mg/kg
20.	Hydrochloric acid		IS 265: 1993 (RA2003)	
		Total Acidity (as HCl)	Annex B-2	1 to 40%
		Residue on ignition	Annex B-3	0.0005 to 0.1%
		Sulphate	Annex B-4	0.0002 to 0.5%
		Iron	Annex B-5	0.4 to 100mg/kg
		Free Chlorine & Bromine	Annex B-6	2 to 20mg/kg
		Sulphites	Annex B-7	0.0001 to 0.1%
		Lead	Annex B-8	0.5 to 50mg/kg
		Arsenic	Annex B-9	0.01 to 25mg/kg
		Ammonium compounds	Annex B-10	3 to 20mg/kg
		Mercury	Annex B-11	0. 01 to 20mg/kg
21.	Suphuric Acid		IS 266: 1993 (RA2003)	
		Total Acidity (As H ₂ SO ₄)	Annex A-2	0.01-99.99%
		Residue on ignition	Annex A-3	0.005-1%
		Iron	Annex A-4	0.0005-0.1%
		Chloride	Annex A-5	0.0003-0.1%
		Lead	Annex A-6	0.001-0.1%
		Arsenic	Annex A-7	0.05-25 mg/kg
		Oxidizable impurities	Annex A-8	0.001-0.1%
		Organic matter	Annex A-9	Qualitative test

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	217 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Nitrates	Annex A-10	0.2-10 mg/kg
		Ammonia	Annex A-11	1-20 mg/kg
		Selenium	Annex A-12	1-40 mg/kg
		Manganese	Annex A-13	0.5-40 mg/kg
		Copper	Annex A-14	1-40 mg/kg
		Zinc	Annex A-15	1-40 mg/kg
		Nitrites, Nitrates & Ammonia	Annex A-16	0.0005-0.05 %
22.	Hydrogen Peroxide	Strength (as H ₂ O ₂)	IS 2080:1980 (RA 2006) Annexex A-1	1 to 60%
		Acidity(as H ₂ SO ₄)	Annexex A-2	0.001 to 0.1%
		Residue on evaporation	Annexex A-3	0.05 to 1%
		Residue on ignition	Annexex A-4	0.005 to 1%
		Iron	Annexex A-5	0.01 to 0.05%
		Copper	Annexex A-6	0.1 to 10mg/kg
		Lead	Annexex A-7	5 to 20mg/kg
		Arsenic	Annexex A-8	0.5 to 25mg/kg
23.	Common salt	Moisture Content	IS 797:1982 (RA1997) Annexex A-2	0.005 to 10%
		Sodium Chloride	Annexex A-3	0.01 to 99.99%
		Matter insoluble in water	Annexex A-4	0.005 to 2%
		Calcium Salt	Annexex A-5	0.005 to 1%
		Magnesium salt	Annexex A-5	0.005 to 1%
		Sulphate	Annexex A-6	0.005 to 2%
		Iron compound	Annexex A-7	5 to 100mg/kg
24.	Ammonia liquor	Ammonia	IS 799:1985 (RA 2006) Apx-B-2	1 to 40%
		Residue on evaporation	Apx-B-3	0.002 to 1%
		Carbonates	Apx-B-4	0.005 to 1%
		Chloride	Apx-B-5	0.5 to 10mg/kg
		Phosphates	Apx-B-6	1 to 10mg/kg
		Silicates	Apx-B-7	1 to 10mg/kg
		Sulphate	Apx-B-8	1 to 10mg/kg
		Sulphide	Apx-B-9	0.1 to 5mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	218 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Arsenic	Apx-B-10	0.05 to 20mg/kg
		Ca&Mg	Apx-B-11	1 to 10mg/kg
		Copper	Apx-B-12	0.1 to 10mg/kg
		Iron	Apx-B-13	0.1 to 10mg/kg
		Lead	Apx-B-14	0.4 to 10mg/kg
		Reducing substances	Apx-B-15	Qualitative
		Pyridine homologues	Apx-B-16	Qualitative
		Sulphides	Apx-B-16	0.00001 to 0.00005%
25.	Calcium carbonate (Activated & ppt)		IS 917: 1976	
		Sieve residue	IS 7086 (Part 1): 1973	0.01 to 5%
		pH	Part 5	2 to 14
		Acid insoluble	Part 9	0.005 to 1%
		Loss on ignition	Part 10	1 to 50%
		Mn, Cu	Part 18	0.001 to 0.1%
		Total fatty matter	IS 917-1976 (RA 2005) Apx-A	1 to 5%
		Mixed oxides	IS 917-1976 (RA 2005) Apx-B	0.05 to 2%
		Chloride	Apx-C	0.001 to 0.1%
		Calcium carbonate & Magnesium Carbonate	Apx-D	0.01 to 99.99%
		Moisture & volatile matter	Apx-E or G	0.005 to 2%
26.	Oxalic acid		IS 501:1976 (RA 2005)	
		Solubility in water	Apx A-3	0.01 to 99.9 %
		Oxalic acid	Apx A-4	0.01 to 99.99%
		Sulphated ash	Apx A-5	0.005 to 1%
		Chloride	Apx A-6	0.001 to 1%
		Sulphate	Apx A-7	0.005 to 1%
		Lead	Apx A-8	0.0005 to 0.01%
		Nitrogen	Apx A-9	0.005 to 1%
		Iron	Apx A-10	0.0005 to 1%
		Ca, Mg	Apx A-10	0.005 to 0.1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	219 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
27.	Acetic acid		IS 695:1986 (RA 2002)	
		Solubility in water	Apx A-1	Qualitative
		Relative density	6 of IS 82: 1973	1.000 to 2.000
		Acetic acid content	Apx A-2	0.01 to 99.99%
		Crystallizing point	Apx A-3	10 to 20°C
		Residue on evaporation	Apx A-4	0.001 to 0.1%
		Chloride	Apx A-5	1 to 50mg/kg
		Iron	Apx A-6	1 to 10mg/kg
		Sulphate	Apx A-7	1 to 50mg/kg
		Heavy metal	Apx A-8	1 to 50mg/kg
		Formic acid	Apx A-9	0.005 to 1%
		Acetaldehyde	Apx A-10	0.001 to 1%
		Oxidizable impurities	Apx A-11	Qualitative 0.005 to
		Water content	IS 2362: 1973	0.1%
		Colour	3.2 Of IS 695: 1986	1 to 20 hazen units
28.	Orthophosphoric acid		IS 798: 1986 (RA2003)	
		Relative density	Apx A-2	1.000 to 2.000
		Orthophosphoric acid	Apx A-3	1 to 90%
		Iron	Apx A-4	0.001 to 1%
		Chloride	Apx A-5	0.0005 to 1%
		Sulphate	Apx A-6	0.002 to 10%
		Arsenic	Apx A-7	0.5 to 25mg/kg
		Antimony	Apx A-8	5 to 50mg/kg
		Nitrates	Apx A-9	0.0005 to 0.01%
		Lead	Apx A-10	0.0005 to 0.1%
		Silica	Apx A-11	0.005 to 0.1%
		Calcium	Apx A-12	0.001 to 0.1%
		Oxygen absorbed	Apx A-13	0.001 to 0.1%
		Volatile acids	Apx A-14	Qualitative
		Manganese	Apx A-15	0.001 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	220 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
29.	Citric acid (Monohydrated)	Critic acid sulphate Halides Sulphated ash Lead Iron Oxalates Water content Readily carbonizable substances Arsenic	IS 5464: 1995 (RA2001) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-9 Apx A-10 Apx A-11	0.01 to 99.99% 50 to 200mg/kg 20 to 200mg/kg 0.005 to 1% 5 to 50mg/kg 5 to 50mg/kg Qualitative 1 to 15% Qualitative 0.5 to 25mg/kg
30.	Hydrofluoric acid	Total acidity(as HF) Residue on ignition Hydrofluorosilicic acid Lead Arsenic Iron K ,Na,Ca, Chloride Phosphates Sulphate(as H2SO4) Sulphite(as SO3)	IS 10332: 1982 (RA2003) Apx A-2 Apx A-3 Apx A-4or A15 Apx A-5 Apx A-6 Apx A-7 Apx A-8to10 Apx A-11 Apx A-12 Apx A-14 Apx A-13	1 to 80% 5 to 100mg/kg 0.001 to 1% 0.1 to 20mg/kg 0.05 to 25mg/kg 0.001 to 1% 0.5 to 10mg/kg 1 to 20mg/kg 0.5 to 20mg/kg 0.4 to 20mg/kg 2 to 20mg/kg
31.	Phosphoric acid	Purity (as H3PO4) Nitrates Volatile acids Chloride Sulphate Fluoride Arsenic Heavy metal,Pb	IS 10508: 1983 (RA2001) Annexex A Annexex B Annexex C Annexex D Annexex E Annexex F CI15 OF IS 1699 CI15 OF IS 1699	1 to 90% 1 to 20mg/kg 1 to 20mg/kg 50 to 500mg/kg 0.005 to 1% 5 to 20mg/kg 1 to 20mg/kg 1 to 20mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	221 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
32.	Zinc oxide	Zinc oxide Volatile matter Residue on sieve Oil absorption Water soluble Sulphur content	IS 35: 1975 (RA2007) & Apx A Cl 6.1 OF IS 33-1963 Cl 7 OF IS 33-1963 Cl 8 OF IS 33-1963 Cl 12 OF IS 33-1963 Apx B of IS 35	0.01 to 99.99% 0.1 to 1% 0.1 to 10% 10 to 20 0.1 to 1% 0.01 to 2%
33.	Copper sulphate	Copper Matter insoluble in water Soluble (Fe& Al) pH Chloride Arsenic Pb & Zn	IS 261: 1982 (RA 2006) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8	1 to 30% 0.05 to 1% 0.1 to 1% 2 to 14 0.01 to 1% 10 to 25MG/KG Qualitative
34.	Ferrous sulphate	Ferrous sulphate Free acid PH Fe, Mn Chloride Phosphate Lead Arsenic Cu,Zn Alkaline salts & Alkaline earth	IS 262: 1982 (RA 2006) Apx A-3 Apx A-4 Apx A-5 Apx A-6 Apx A-7 Apx A-8 Apx A-9 Apx A-10 Apx A-13 Apx A-12	0.01 to 99.99% 0.05 to 2% 2 to 14 0.01 to 1% 0.0005 to 0.01% 0.001 to 1% 10 to 100mg/kg 1 to 10mg/kg Qualitative 0.1 to 1%
35.	EDTA	Purity Sulphated ash Iron Heavy metal(Pb) Nitrilotri acetic acid	IS 7220: 1974 (RA2001) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-7	0.01 to 99.99% 0.05 to 1% 0.002 to 0.01% 0.001 to 1% 0.1 to 1%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	222 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
36.	Formaldehyde	Acidity(as HCOOH) Ash Aldehyde(asHCHO) Iron Methanol	IS 3321: 1973 (RA 2005) Apx A-2 Apx A-3 Apx A-4 Apx A-5 Apx A-6	0.01 to 5% 0.01 to 2% 1 to 40% 1 to 25mg/kg 1 to 10%
37.	PolyAluminium Chloride	Aluminium(as Al ₂ O ₃) Basicity Chloride Sulphate Specific gravity Viscosity Hg, As, Cd, Pb,Fe,Mn, Cr Insolubles PH	IS 15573: 2005 Annexex-A Annexex-B Annexex-C Annexex-D IS 3506 IS 9316 (Part 2) Annexex-F,G,H,J,K,L,M,N Annexex-P Annexex-Q	0.5 to 50% 1 to 70% 1 to 40% 1 to 25% 1.00 to 1.50 1.00 to 5.00 cst 0.2 to 500mg/kg 0.1 to 5% 2 to 5
38.	Ammonium Bifluoride	Ammonium Bifluoride Melting point Matter insoluble in water Silica Sulphate Heavy metal Iron	IS 13119: 1991 (RA 2008) Apx A2 Apx A3 Apx A4 Apx A5 Apx A6 Apx A7 Apx A8	0.01 to 99.99% 100 to 150°C 0.05 to 5% 0.05 to 1% 0.01 to 2% 0.01 to 1% 0.01 to 1%
39.	Di calcium phosphate	Fineness Loss on ignition Di calcium phosphate Arsenic lead Carbonate Iron	IS 1767: 1980 (RA 2006) Apx A2 Apx A3 Apx A4 Apx A5 Apx A7 Apx A8 Apx A11	0.01 to 99.99% 1 to 50% 1 to 100% 1 to 10mg/kg 5 to 25mg/kg Qualitative 10 to 500mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	223 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chloride	Apx A12	Qualitative
		Sulphate	Apx A13	Qualitative
		Barium	Apx A14	Qualitative
		Fluoride	Apx A15	0.01 to 1%
			Apx A16	
XX. ORGANIC CHEMICALS				
1.	Acetone	Purity content	IS 170: 2004 (RA2011) Annex A	70 to 99.9%
		Color	IS 8768: 2000 (RA 2010) Cl. 3.2	Qualitative
		Relative density	IS 82: 1973 (RA 2007) Cl. 6	0.5 to 2.0
		Distillation range	IS 1448: 1991 (RA 2010) [P 18] Met B	50 to 60°C
		Water	IS 2362: 1993 (RA 2010)	0.01 to 10 %
		Residue on evaporation	IS 82: 1973 (RA 2007) Cl. 8	1 to 10 mg/100ml
		Acidity	IS 170: 2004 (RA2011) Annex.C/ Annex.D	0.001 to 0.01 g/100ml
		Alkalinity	IS 170: 2004 (RA2011) Annex.C/ Annex.D	Qualitative
		Permanganate test	IS 170: 2004 (RA2011) Annex. E	Qualitative
		Alcoholic impurities	IS 170 : 2004 (RA2011) Annex. F	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	224 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Benzalkonium chloride	Purity content	IP 2010, Vol. II, Pg. 878-879	40 to 99.9%
3.	Dithiocarbamate based biocide	Purity content	IS 13832-1993 (RA 2009)	10 to 80%
4.	Naphthalene	Color	IS 539 : 1974 (RA2011)	Qualitative
		Crystallizing point	IS 539 : 1974 (RA2011) Annex. A	50 to 100°C
		Moisture content	IS 539 : 1974 (RA2011) Annex. B	0.01 to 10 %
		Ash	IS 539 : 1974 (RA2011) Annex. C	0.01 to 10%
		Acid wash test	IS 539 : 1974 (RA2011) Annex. D	Qualitative
		Matter insoluble in benzene.	IS 539 : 1974 (RA2011) Annex. E	0.01 to 2%
		Non-volatile matter at 160°C	IS 539 : 1974 (RA2011) Annex. F	0.01 to 2%
5.	Oxalic acid	Purity content	IS 501 : 1976 (RA 2006) Annex A-3	70 to 99.9%
		Sulphated ash	IS 501 : 1976 (RA 2006) Annex A-4	0.01 to 1%
		Chloride	IS 501 : 1976 (RA 2006) Annex A-5	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	225 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Sulphates	IS 501 : 1976 (RA 2006) Annex A-6	Qualitative
		Heavy metals(as Pb)	IS 501 : 1976 (RA 2006) Annex A-7	Qualitative
		Nitrogen compounds	IS 501 : 1976 (RA 2006) Annex A-8	Qualitative
		Iron	IS 501 : 1976 (RA 2006) Annex A-9	Qualitative
) Calcium	IS 501 : 1976 (RA 2006) Annex A-10	Qualitative
		Magnesium	IS 501 : 1976 (RA 2006) Annex A-10	Qualitative
6.	Trichloroethylene	Alkalinity	IS 245 : 1988 (RA2011) Annex A-5	0.001 to 1%
		Relative density	IS 245 : 1988 (RA2011) Annex A-2	0.5 to 2.0
		Free chlorine	IS 245 : 1988 (RA2011) Annex A-6	Qualitative
		Distillation yield	IS 245 : 1988 (RA2011) Annex A-4	60 to 150°C
		Residue on Evaporation	IS 245 : 1988 (RA2011) Annex A-3	1 to 20mg/100ml
		Resistance to corrosion	IS 245 : 1988 (RA2011) Annex A-8	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	226 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
7.	Formaldehyde	Acidity	IS 3321 : 73 (RA2011) App A-2	0.01 to 10%
		Iron content	IS 3321 : 73 (RA2011) App A-5	Qualitative
		Methanol content	IS 3321 : 73 (RA2011) App A-6	1 to 10%
		Ash content	IS 3321 : 73 (RA2011) App A-3	0.005 to 10%
		Aldehyde content	IS 3321 : 73 (RA2011) App A-4	10 to 50%
8.	Phenyl Ethyl Methyl Ether	Purity content	IS 7697 : 91 (RA 2008) Annex. B	70 to 99.9%
		Relative density	IS 326(Part 3) : 2006 (RA 2008) Cl. 3.1	0.5 to 2.0
		Refractive index	IS 326(Part 5) : 2006 (RA 2008) Cl. 3.1	1.3 to 1.7
		Acid value	IS 326(Part 7) : 2006 (RA 2008) Cl. 3.1	0.01 to 10
		Peroxide value	IS 7697 : 91 (RA 2008) Annex. A	0.5 to 20
		Odour (Sensory)	IS 2284 : 1988 (RA 2008) Cl. 2.5	Qualitative
9.	Perchloroethylene	Relative density	IS 5297 : 77 (RA 2006) App A2	0.5 to 2.0
		Residue on evaporation	IS 5297 : 1977 (RA 2006) App. A-3	0.005 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	227 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Distillation yield	IS 5297 : 77 (RA 2006) App A-4	100 to 150°C
		Alkalinity	IS 5297 : 77 (RA 2006) App. A-5	0.001 to 1%
		Free chlorine	IS 5297 : 77 (RA 2006) App.A-6	Qualitative
XXI. FERTILIZERS				
1.	Nitrogenous Fertilizers			
	Ammonium Sulphate	Moisture Ammonical Nitrogen Sulphur Arsenic Free Acidity	IS 6092: 2004 & FCO - 1985 Amended 2013	0.1 to 2.0% 15 to .30% 10 to 40% 0.001 to 0.01% 0.001 to 0.025%
	Ammonium chloride	Moisture Ammonical Nitrogen Chloride other than ammonium chloride	IS 6092 :2004 & FCO -1985 Amended 2013	0.1 to 2.0% 0.5 to 30% 0.1 to 5.0%
	Calcium Ammonium Nitrate	Moisture Total ammonical & Nitrate Nitrogen Ammonical Nitrogen Calcium Nitrate Particle Size	IS 6092: 2004 & FCO -1985 Amended 2013	0.1 to 2.0% 20 to 50% 10 to 25.0% 0.2 to 1.0% 5 to 100%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	228 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Urea	Moisture Total Nitrogen Biuret Particle Size	IS 5406 :1979 (RA2000) FCO -1985 Amended 2013	0.1 to 2.0% 45 to 60% 0.2 to 2% 5 to 100%
2.	Potassic Fertilizers			
	Potassium chloride (Muriate of Potash)	Moisture Potash Content (as K ₂ O) Sodium as NaCl Particle Size	FCO -1985 Amended 2013 FCO -1985 Amended 2013 FCO -1985 Amended 2013 FCO -1985 Amended 2013	001 to 1% 50 to 80% 0.1 to 3.5% 5 to 100%
	Potassium Sulphate	Moisture Potash Total Chlorides Sodium as NaCl Sulphur	FCO -1985 Amended 2013 FCO - 1985 Amended 2013 FCO -1985 Amended 2013 FCO -1985 Amended 2013 FCO -1985 Amended 2013	0.1 to 2% 40 to 63% 1 to 3% 0.2 to 2% 15 to 30%
3.	Phosphatic Fertilizers			
	Single Super Phosphate	Moisture Free Phosphoric Acid Water Soluble Phosphate Sulphur Neutral ammonium citrate soluble phosphate	FCO -1985 Amended 2013 IS 6092: 2004	1 to 15% 0.2 to 5% 10 to 25% 10 to 25% 10 to 25%
	Triple Super Phosphate	Moisture Free Phosphoric Acid Water Soluble Phosphate Total Phosphate	FCO -1985 Amended 2013 IS 6092 :2004	1 to 15% 0.2 to 5% 10 to 25% 45 to 65%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	229 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Rock Phosphate	Particle Size Total Phosphate	FCO -1985 Amended 2013 IS 6092 :2004	10 to 100% 15 to 50%
4.	Complex Fertilizers			
	Diammonium Phosphate	Moisture Total Nitrogen Ammonical Nitrogen Total Nitrogen in the form of Urea Neutral Ammonium citrate Soluble Phosphate Water Soluble Phosphate Particle Size	FCO -1985 Amended 2013 IS 6092: 2004	0.5 to 3% 15 to 40% 15 to 25% 0.5 to 3% 45 to 60% 40 to 55% 5 to 100%
	Ammonium Phosphate sulphate	Moisture Total Ammonical Nitrogen Neutral Ammonium citrate Soluble phosphate Water Soluble Phosphate Particle Size Sulphur	FCO -1985 Amended 2013	0.1 to 2% 15 to 25% 15 to 35% 18 to 25% 5 to 100% 10 to 20%
	Nitro Phosphate Potash (NPK)	Moisture Total Nitrogen Ammonical Nitrogen Nitrate Nitrogen Neutral Ammonium citrate Soluble phosphate Water Soluble Potash Particle Size	FCO -1985 Amended 2013	0.1 to 2% 10 to 35% 5 to 15% 5 to 15% 10 to 25% 3 to 10% 5 to 100%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	230 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
5.	Micronutrients			
	Zinc Sulphate	Matter insoluble in Water Zinc Lead Copper Magnesium pH Sulphur Cadmium Arsenic	FCO -1985 Amended 2013	0.1 to 2% 20 to 30% 0.001 to 0.005% 0.01 to 0.2% 0.01 to 1% 3 to 8 8 to 20% 0.001 to 0.005% 0.001 to 0.02%
	Manganese Sulphate	Matter insoluble in Water Manganese Lead Copper Magnesium pH Sulphur	FCO -1985 Amended 2013	0.2 to 2% 25 to 50% 0.001 to 0.005% 0.01 to 0.2% 0.1 to 3% 3 to 8 15 to 25%
	Copper Sulphate	Copper Matter insoluble in water Soluble Iron & Aluminium compounds Lead pH Sulphur	FCO -1985 Amended 2013	20 to 30% 0.2 to 2% 0.1 to 1% 0.001 to 0.005% 2 to 5 10 to 20%
	Ferrous Sulphate	Ferrous Iron Free Acid Ferric Iron Matter insoluble in water pH Lead Sulphur	FCO -1985 Amended 2013	15 to 25% 0.2 to 2% 0.1 to 1% 0.1 to 2% 2 to 6 0.001 to 0.005% 10 to 20%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	231 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Magnesium Sulphate	Matter insoluble in water Magnesium Lead pH Sulphur	FCO -1985 Amended 2013	0.1 to 2% 8 to 20% 0.001 to 0.005% 4 to 9 10 to 20%
	Boric Acid	Boron Matter insoluble in water Lead	FCO -1985 Amended 2013	15 to 30% 0.1 to 2% 0.001 to 0.005%
	Micronutrients	Zinc Iron Manganese Copper Boron	FCO -1985 Amended 2013	1 to 12 % 1 to 10 % 1 to 5% 1 to 5% 1 to 5%
XXII. 1.	PETROLEUM HSD & LDO	Acidity, (Inorganic)	IS 1448(Part 2): 1967 (RA2007) ASTM D974: 2008	0.01 to 2 mg KOH/g
		Acidity (Total)	IS 1448(Part 2): 1967 (RA2007) ASTM D974: 2008	0.01 to 10 mg KOH/g
		Ash content	IS 1448(Part 4): 1984 (RA2007)	0.01 to 10%
		Carbon residue	IS 1448(Part 8): 1967 (RA 2008) , ASTM D524: 2009	0.1 to 25 %
		Calculated Cetane index	ASTM D4737: 2009	30 to 80 (Calculations)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	232 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Pour point	IS 1448 (Part 10): 2013 ASTM D97: 2009	-36 to +30 °C
		Cu-strip Corrosion	IS 1448(Part 15): 2004 (RA2011) ASTM D130: 2004	No.1a to 4c (Qualitative)
		Distillation	IS 1448(Part 18): 1991 (RA2011) , ASTM D86: 2010	100 to 400 °C
		Flash Point (Abel)	IS 1448(Part 20): 1998 (RA 2008) ,	19 to 70 °C
		Flash Point (PMCC)	IS 1448(Part 21): 2012 ASTM D93: 2010	30 to 200 °C
		Kinematic Viscosity at 40° C	IS 1448 (Part 25) :1976 (RA 2007) ASTM D 445: 2009	1 to 20 CST
		Sediment	IS 1448(Part 30): 2013 ASTM D473: 2007	0.01 to 2 %
		Density	IS 1448(Part 16): 1990 (RA2007) IS 1448(Part 32): 1992 (RA 2008) ASTM D1298: 2005	700 to 900 kg/m ³
		Cold filter Plugging point	IS 1448(Part 110): 1981 (RA2011)	-30 to 20 °C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	233 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Biodiesel	Sulphated ash	IS 1448(Part 4): 2008 ISO 6245: 2001 ASTM D874: 2013	0.01 to 10 %
		Flash Point (PMCC)	IS 1448 (Part 21): 2012 ASTM D93: 2010	50 to 225 °C
		Density at 15°C	IS 1448 (Part 32) (RA 2008) IS 1448 (Part 16): 1990 (RA2007) ASTM D1298: 2005	0.800 to 1.000 g/cm ³
		Viscosity at 40°C	IS 1448 (Part 25) : 1976 (RA2007) ASTM D445: 2009	1 to 50 cSt
		Carbon residue (Rams bottom)	IS 1448(Part 8): 2012 ASTM D524: 2010	0.1 to 5 %
		Water content	IS 1448(Part 40): 1987 (RA2011) ASTM D95: 2010	0 to 5 %
		Cu strip corrosion	IS 1448 (Part 15): 2004 (RA2011) ASTM D130: 2004	1a to 4c No. (Qualitative)
		Acid value	IS 1448(Part 2): 2007 ASTM D664: 2009	0.01 to 10.0 mgKOH/g
		Iodine value	IS 548(Part 1): 1964 (RA 2006)	0.01 to 10
		Calculated cetane index	ASTM D4737: 2010	40 to 200 (Calculations)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	234 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Ester content	IS 9591: 1996 (RA2003) EN 14103: 2011	80 to 99 %
		Free Glycerol	ASTM D128: 2008 ASTM D6584: 2008	0.001 to 5 %
		Total Glycerol	ASTM D128: 2008 ASTM D6584: 2008	0.1 to 0.25 %
		Methanol or Ethanol	EN 14110 2003 EN 14103 2011	0.1 to 0.2 %
		Distillation	ASTM D86: 2010	100 to 400 °C
		Cloud Point	ASTM D2500: 2009	-30 to +10 °C
		Monoglycerides	EN 14105: 2011	0.01 to 50 %
		Diglycerides	EN 14105: 2011	0.01 to 50 %
		Triglycerides	EN 14105: 2011	0.01 to 50 %
		Cold Filter Plugging Point	EN 116: 1998	-40 to -20 °C
		Oxidation stability	EN 14112: 2003	Qualitative
3.	Kerosene	Acidity, (Inorganic)	IS 1448 (Part 2): 2007 ISO 6619: 1988 ASTM D974: 2008	0.01 to 2 mgKOH/g
		Total acidity	IS 1448(Part 2): 2007	0.01 to 10 mgKOH/g
		Doctor Test	IS 1448(Part 19): 1989 (RA2007)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	235 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Cu-strip Corrosion	IS 1448(Part 15): 2004 (RA 2008) ISO 2160: 1998 ASTM D130: 2004	No.1a to 4c (Qualitative)
		Distillation	IS 1448(Part 18): 1991 (RA2011) ASTM D86: 2010	10 to 100 % (Recovery) °C (FBP)
		Flash Point (Abel)	IS 1448(Part 20): 1998 (RA 2008)	19 to 70 °C
		Smoke point	IS 1448(Part 31): 1968 (RA 2008)	5 to 30 mm
		Burning quality Char value Bloom on glass Chimney	IS 1448(P.5): 1970 (RA 2008)	5 to 30 mg/kg Not greater than Grey(Qualitative)
4.	Motor Gasoline	Density	IS 1448(Part 16): 1990 (RA2007) IS 1448(Part 32): 1992 (RA 2008) ASTM D1298: 2005	650 to 800 kg/m ³
		Cu-strip Corrosion	IS 1448(Part 15): 2011 ASTM D130: 200	No.1a to 4c (Qualitative)
		Distillation Recovery Final boiling point Residue	IS 1448(Part 18): 1991 (RA2011) ASTM D86: 2010	05 to 100 % 40 to 250°C 0.1 to 5%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	236 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Existent gum	IS 1448(Part 29): 2004 (RA2011)	0.01 to 80 g/m ³
		Reid vapour pressure	IS 1448(Part 39): 2012	5 to 100 kPa
5.	Paraffin Waxe, Microcrystalline Wax & Jelly	Melting point	IS 4654: 1993 (RA2011) IS 4887: 1980 (RA 2005) IS 13833: 1993 (RA 2009) Annexex- A	25 to 125 °C
		Ash content	IS 1448 (Part 4): 2008	0.01 to 1.0 %
		Acidity	IS 1448 (Part 2): 1967 (RA2007)	0.01 to 10.0 mgKOH/g
		Saponification value	IS 1448 (Part 55): 1963 (RA 2002) ASTM D94: 2007 IP 136 : 2007	0.01 to 2.0 mgKOH/g
		Oil content	IS 4654: 1993 (RA2011) Annexex- B ASTM D 721: 2006, IP158 2007	0.1 to 10 %
		Colour, ASTM	IS 1448 (Part 12): 2013 ASTM D1500: 2007 IP 196 2014	0 to 8 Scale (Qualitative)
		Free acid & alkalies	IS 4887: 1980 (RA 2005) Annexex- 4	Qualitative
		Arsenic	IS 4887: 1980 Annexex- 5 (RA 2005)	1 to 100 µg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	237 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Heavy metals (as Pb)	IS 4887: 1980 (RA 2005) Annexex- 6	1 to 50 mg/kg
		Consistency	IS 4887: 1980 (RA 2005) Annexex- 12	50 to 350
		Volatile matter	IS 4887: 1980 (RA 2005) Annexex- 13	0.01 to 10 %
		Sulphated ash	IS 4887: 1980 (RA 2005) Annexex- 9	0.001 to 2 %
		Needle penetration	IS 1448 Part 93): 1979 (RA2007)	1 to 80
		Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	2 to 100 cst
		Iodine value	IS 4887: 1980 (RA 2006) Annexex- 7	0 to 20 %
		Sulphur & Sulphides	IS 4887: 1980 (RA 2005) Annexex- 11	Qualitative
		Flash point ,COC	IS 1448 (Part 69): 2013 ASTM D92-2005	50 to 400 °C
6.	Anti Freeze Coolant /Brake Fluid	Freezing point	IS 5759: 2006 JISK 2234 2006	-80°C to20 °C
		Water content	IS 5759: 2006 IS 1448 (Part 40): 1987 (RA2011) Annexex- 15	0.05 to 50 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	238 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		pH	IS 5759: 2006, Annexex- G IS 8654: 2001 (RA2011)	0.1 to 14
		Specific gravity	IS 5759: 2006 Annexex- D	0.800 to 2.000
		Foaming property	IS 5759: 2006 Annexex- C IS 1448 (Part 67): 1982 (RA2011)	10 to 200 ml
		Effect on rubber	IS 5759: 2006 Annexex Q	Qualitative
		Boiling point	JISK-2234 2006 IS 5759: 2006 Annexex- E	100 to 300 °C
		Reserved alkalinity	IS 5759: 2006 Annexex H	0.1 to 5.0
		Glassware metal corrosion property	IS 5759: 2006 Annexex N	(-)10 to +10 mg/cm ²
		Mass change, mg/cm ² Appearance of specimen after test	IS 5759: 2006 Annexex N	Qualitative
		Foaming during test	IS 5759: 2006 Annexex N IS 1448 (Part 67): 1982 (RA2011)	Qualitative
		Properties of coolant after test pH	IS 5759: 2006 Annexex P	
		Change in pH		0.1 to 14
		Change in reserve alkalinity		0.1 to 5
		Amount of precipitation		0.01 to 2 %
		Appearance of liquid phase		Qualitative
		Storage stability	IS 5759: 2006 Annexex K	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	239 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	0.5 to 50 cst
XXIII.	LUBRICANTS			
1.	Insulating Oils Transformer oils/ Mineral inhibited oil	Density	IS 1448(Part 16): 1990 (RA2007) ASTM D1298: 2005	0.800 to 1.250 g/cm ³
		Kinematic viscosity	IS 1448(Part 25): 1976 (RA2007) ASTM D445: 2009	0.5 to 100 cSt
		Interfacial tension	IS 6104: 1971 (RA 2006) ASTM D971: 2004	10 to 100 mN/m
		Flash point (PMCC)	IS 1448(Part 21): 2012 ASTM D93: 2010	50 to 200 °C
		Pour point	IS 1448(Part 10): 2013 ASTM D97: 2009	-45 to +12 °C
		Neutralization value Total acidity	IS 1448 (Part 2): 1967 (RA2007) ASTM D974: 2008	0.001 to 10.0 mg KOH/g
		Inorganic acidity / Alkalinity		
		Corrosive sulphur	IS 335: 1993 (RA 2005) Annex.: B	Qualitative
		Electric strength (BDV)	IS 6792: 1992 (RA2003) ASTM D1816: 2004	10 to 100 kV
		Dielectric dissipation factor (Tan-delta)	IS 6262: 1971 (RA 2006) ASTM D924: 2008	0.0001 to 1.5

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	240 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Specific resistance (resistivity)	IS 6103: 1971 (RA 2006) ASTM D924: 2008	10 x 10 ² to 5000 x 10 ¹² ohm cm
		Oxidation stability Neutralization value	IS 335: 1993 (RA 2005) Annexex- C IS 12422: 1988 (RA 2008) ASTM D943-2004	0.01 to 10.0 mg KOH/g 0.01 – 2.0 %
		Ageing characteristics after accelerated ageing Specific resistance Tan delta Total acidity	IS 12177: 1987 (RA2003)	
		Total sludge	IS 6103: 1971 (RA 2006) IS 1448(Part 2): 1967 (RA2007) IS 12177: 1987 (RA2003)	0.05 x 10 ¹² to 100 x 10 ¹² 0.001 to 10.0 0.001 to 2 %
		Presence of oxidation inhibitor	IS 13631: 1993	Qualitative
		Water content	IS 13567: 1992 (RA2003) ASTM D1533: 2005	2 to 500 mg/kg
		S K value	IS 335: 1983 (RA 2005) Annexex- D	0.01 to 6 %
		Dissolved Gas Analysis (DGA)	IS 9434: 1974 (RA2003) IS 10593: 2006	0.0001 % to 10%
		Furan Analysis	IS 15668: 2006 ASTM D5837 : 2005 IEC: 61198: 1994	0.01 to 1000 mg/kg
		PCB content, mg/kg	SRI / SOP/ Residue- Fuel oil / 001 dt 01-02-13	1 to 1000 mg/kg
		PolycyclicAromatic hydrocarbon(PAH,% by mass	SRI/SOP/Residue fuel oil/001 dt 01-02-13	1 to 1000mg/kg

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	241 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Furnace oil	Acidity, inorganic	IS 1448 (Part 2): 1967 (RA2007)	0.01 to 5 mg/KOHg
		Ash content	IS 1448 (Part 4): 2008	0.001 to 5 %
		Calorific value (GROSS) (NET)	IS 1448 (Part 6): 1984 (RA2007) IS 1448 (Part 7): 2004 (RA2011)	5000 to 13000 cal/g
		Relative density	IS 1448 (Part 32): 1992 (RA 2008)	0.75 to 1.50
		Flash point (PMCC)	IS 1448 (Part 21): 2012 ASTM D93-2010	30 to 300 °C
		Kinematic viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	10 to 500 cSt
		Sediment	IS 1448 (Part 30): 2013	0.01 to 10 %
		Water content	IS 1448 (Part 40): 1987 (RA2011)	0.01 to 50 %
		Pour Point	IS 1448 (Part 10): 2013	(-)20 to 100 °C
3.	Quenching Oil	Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 100 cst
		Viscosity index	IS 1448 (Part 56): 2013 ASTM D2270-2004	50 to 250 (calculations)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	242 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Pour point	IS 1448 (Part 10): 2013 ASTM D97-2009	- 45 to +12 °C
		Flash point	IS 1448 (Part 69): 2013 ASTM D92-2005	50 to 350 °C
		Acidity (Inorganic & Organic, IA & OA)	IS 1448 (Part 2): 1967 (RA2007) Method C - IA Method A – OA ASTM D974-08	0.01 to 10 mg KOH/g
		Carbon residue (Conradson)	IS 1448 (Part 122): 2013 ASTM D189-2006	0.5 to 25 %
		Insoluble in oxidized oil	ISL 2664: 1980 (RA 2009) Appendix B	0.01 to 1.0 %
		Resistance to Oxidation	IS 1448 (Part 63) : 1967	Calculations Basis
		Ash content	IS 1448 (Part 4) : 2008 ASTM D 482-2007	0.001 to 1 %
		Saponification value	IS 1448 (Part 55): 1963 (RA2011)	0.1 to 10 mg KOH/g
		Cu strip corrosion	IS 1448 (Part 15): 2004 (RA2011) ASTM D130-2004	No.1a to 4c Qualitative
		Volatility loss on heating	IS 2664: 1980 (RA 2009) Appendix A	0.01 to 10 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	243 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
4.	Turpentine oil	Relative Density	IS 326 (Part 3): 2006 ASTM D1298-2005	0.5 to 1.5 g/cm ³
		Refractive index	IS 326 (Part 5): 2006	0.5 to 2.5
		Acid value	IS 326 (Part 7): 2006, IP 182	0.005 to 2.0 %
		Distillation range	IS 326 (Part 20): 1993 (RA 2002)	0.5 to 400 °C
		Residue on evaporation	IS 326 (Part 10): 2005	0.05 to 5 %
5.	Rubber Processing Oil	Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 800 cSt
		Pour point	IS 1448 (Part 10): 2013 ASTM D97-2009	- 45 to +12 °C
		Flash point	IS 1448 (Part 69): 2013 ASTM D92: 2005	50 to 350 °C
		Relative Density	IS 1448 (Part 32): 1992 (RA 2008)	0.5 to 1.5 g/cm ³
		Aniline Point	IS 1448 (Part 3): 2007 ASTM D611: 2007	2.0 to 50 °C
6.	Greases- Automotive General Purpose Locomotive Lithium Base Wheel Bearing Antifriction grease	Four ball test	ASTM D-2596: 2008	0.01 to 2 mm
		Scar dia	ASTM D 4172: 2004	
		Weld load	ASTM D 2266 : 2008	40 to 600 kgf
		Co-efficient of friction	ASTM D 2783: 2009	
		Consistency	IS 1448 (Part 60): 1994 (RA2011)	50 to 500

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	244 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Copper strip corrosion	IS 1448 (Part 51): 1963 (RA 2008) ASTM D 4048: 2008	No.1a to 4c (Qualitative)
		Free organic acidity (as Oleic acid)	IS 1448 (Part 53): 1979 (RA2007)	0.01 to 5 %
		Free alkalinity [as Ca (OH) ₂]	IS 1448 (Part 53): 1979 (RA2007)	0.01 to 5 %
		Heat stability	IS 1448 (Part 62): 1976 (RA 2008) IS 1448 (Part 89): 1979 (RA2007)	0.01 to 20 %
		Sulfated ash	IS 1448 (Part 4): 2008	0.01 to 15 %
		Glycerin content	ASTM D128: 2008	Qualitative
		Water content	IS 1448 (Part 40): 1987 (RA2011)	0.01 to 50 %
		Evaporation loss	IS 1448 (Part 61): 1974 (RA 2008)	0.01 to 10 %
		Pour Point	ASTM D97 : 2009	(-)40 to +30 °C
		Insoluble in greases	IS 1448 (Part 58): 1991 (RA 2008)	1 to 60 %
		Viscosity of oil from grease	IS 1448 (Part 25): 1976 (RA 2007) ASTM D445-2009	10 to 200 cSt

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	245 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Viscosity Index	IS 1448 (Part 56): 2013 ASTM D 2270: 2004	Calculated value from viscosity
		Flash & Fire Point of oil from grease	IS 1448 (Part 69): 2013	100 to 400 °C
		Oxidation stability	ASTM D-942: 2007	2 to 60 Psi
		Drop point	IS 1448 (Part 52):1971 (RA2007) ASTM D566-2009	50 to 400 °C
7.	White oil	Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 100 cSt
		Pour point & Cloud Point	IS 1448 (Part 10) : 2013 ASTM D97-2009	- 45 to +12 °C
		Flash point ,COC	IS 1448 (Part 69) : 2013 ASTM D92-2005	50 to 350 °C
		Saponification value	IS 1448 (Part 55) : 1963 (RA2011)	0.1 to 10 mg KOH/g
		Cu strip corrosion	IS 1448 (Part 15): 2004 (RA2011) ASTM D130-2004	No.1a to 4c Qualitative
		Ash content	IS 1448 (Part 4): 2008, ASTM D 482-2007	0.001 to 1 %
		Sulphur & Sulphides	IS 4887 : 1980 (RA 2005) Annexex 11	Quantitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	246 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Acidity & alkalinity	IS 5759 : 2006	0.1 to 5.0
		Relative Density	IS 1448 (Part 32) : 1992 (RA 2008)	0.5 to 1.5 g/cm ³
8.	Hydraulic Oil	Kinematic viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 100 cSt
		Viscosity Index	IS 1448 (Part 56): 2013 ASTM D2270-2004	50 to 250 (calculations)
		Pour Point	IS 1448 (Part 10): 2013 ASTM D97-2009	- 45 to +12 °C
		Flash Point	IS 1448 (Part 69): 2013 ASTM D92-2005	50 to 350 °C
		Acidity (Inorganic & Organic, IA & OA)	IS 1448 (Part 2): 1967 (RA2007) Method C - IA Method A – OA ASTM D974-2008	0.01 to 10 mg KOH/g
		Foaming characteristics	IS 1448 (Part 67): 1982 (RA2011) ASTM D 892-2008	10 to 400
		Rust preventive characteristics	IS 1448 (Part 96): 1980 (RA 2008)	Pass after 24hrs. (Qualitative)
		Oxidation test	IS 1448 (Part 106) : 1981 (RA2007)	1 to 3000 hr
		Copper strip corrosion	IS 1448 (Part 15) : 2004 (RA2011)	No. 1a to 4c (Qualitative)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	247 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
9.	Engine Oil	Emulsion Characteristics	IS 1448 (Part 91): 1979 (RA2007)	0 to 40 ml emulsion
		Seal Compatability -Volume Change -Change in Hardness	IS 3098 Appendix-A IS 10522 Appendix-A	1 to 8,% 2 to 8
		Molecular Weight	ASTM D 2502 : 2009 (Using Viscosity Correlation method)	100 to 700(Calculated from Viscosity at 38.78 & 98.89 ° C)
		Air Release properties	IS 1448 (Part 102): 1981	2 to 50 minutes
		Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445 : 2009	1 to 1800 cSt
		Viscosity Index	IS 1448 (Part 56): 2013 ASTM D2270-2004	50 to 250 (calculations)
		Pour Point	IS 1448 (Part 10): 2013 ASTM D97-2009	- 45 to +12 °C
		Flash Point	IS 1448 (Part 69): 2013 ASTM D92-2005	50 to 350 °C
		Evaporation loss	IS 1448 (Part 136): 1991 (RA 2008)	0.01 to 3.0 %
		Foaming tendency/ stability	IS 1448 (Part 67): 1982 (RA2011) ASTM D 892-2008	10 to 400
		Molecular Weight	ASTM D 2502-2009 (Using Viscosity Correlation method	100 to 700(Calculated from Viscosity at 38.78 & 98.89 ° C)

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	248 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
10.	Cutting Oil	Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 1800 cSt
		Flash Point,PMCC	IS 1448 (Part 21): 2013 ASTM D93-2010	50 to 350 °C
		Acidity (Inorganic & Organic, IA & OA)	IS 1448 (Part 2): 1967 (RA2007) Method C - IA Method A – OA ASTM D974-2008	0.01 to 10 mg KOH/g
		Ash Content	IS 1448 (Part 4): 2008 , IP 4, ASTM D 482-2007	0.001 to 2%
		Saponification value	IS 1448 (Part 55): 1963 (RA2011)	0.1 to 10 mg KOH/g
		Thermal stability	IS 1448 (Part 100): 1980	Qualitative
		Copper strip corrosion	IS 1448 (Part 15) : 2004 (RA2011)	No. 1a to 4c (Qualitative)
11.	Gear Lubricant	Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	1 to 1800 cSt
		Viscosity Index	IS 1448 (Part 56): 2013 ASTM D2270-2004	50 to 250 (calculations)
		Flash Point,COC	IS 1448 (Part 69): 2013 ASTM D 92-2010	50 to 350 °C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	249 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
12.	Fire Resistant Hydraulic Fluid	Foaming Characteristics	IS 1448 (Part 67): 1982 (RA2011) ASTM D 892-2008	10 to 400
		Copper strip corrosion	IS 1448 (Part 15): 2004 (RA2011)	No. 1a to 4c (Qualitative)
		Kinematic Viscosity	IS 1448 (Part 25): 1976 (RA2007) ASTM D445-2009	10 to 125 cSt
		Relative density	IS 1448 (Part 32):1992 (RA 2008)	0.800 to 1.500
		Rust preventive characteristics	IS 10532: 1983 (Part 1) (RA 2009) Appendix D IS 1448 (Part 96): 1980	Pass after 24hrs. (Qualitative)
		Rubber Swelling test	IS 10532: 1983 (Part 1) (RA 2009) Appen C	2 to 6% volume change
		Emulsion stability characteristics	IS 10532: 1983 (Part 1,2) (RA 2009)	0 to 20 ml (0) is No foam
		Flash point	IS 1448 (Part 69): 2013 (RA2003)	90 to 400 °C
		Fire point	IS 1448 (Part 69): 2013	90 to 400 °C
		Pour point	IS 1448 (Part 10): 2013	-40 to +12 °C
		Total acidity	IS 1448 (Part 2):1967 (RA2007)	0.001 to 10 mg KOH/g
		Thermal Stability test	IS 10532 (Part 1):1983 (RA 2009) Appen D	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	250 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
13.	Sealing Compound	Stability test -Oxidation & Thermal -Hydrolytic corrosion	IS 10532 (Part 4): 1983 Appen A	0.5 to 0.5% 0.5 to 60 %
		Demulsification no.	IS 1448 (Part 95): 1980	250 to 700 seconds
		Air Release properties	IS 1448 (Part 102): 1981	2 to 50 minutes
		Four Ball test (Scar dia)	ASTM D 2266-2008	0.01 to 1.0 mm
		pH	IS 5741 -1970	2 to 12
		Frothing characteristics	IS 1448 (Part 99)	Qualitative
		Foaming stability / Characteristics	IS 1448 (Part 67): 1982 (RA2011) ASTM D892-2008	10 to 400 ml
		Emulsion Stability	IS 10532 1983 Appex A	Qualitative
		Water content	IS 1448 (Part 40): 2008 ASTM D-95	1 to 100 ml
		Pour Point	IS 1834: 1984 (RA 2005)	(-)40 to 100 °C
		Aviation fuel resistance	IS 1834:1984 (RA 2005)	Qualitative
		Increase in penetration	IS 1203: 1978 (RA 2008) IS 1834: 1984 (RA 2005)	1 to 100 (On the basis of calculations)
		Change in mass	IS 1834: 1984 (RA2004)	0.01 to 10 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	251 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
14.	Antistripping Agent	Pour Point	IS 1448 (Part 10): 2013	(-)45 to 50 °C
		Flash Point	IS 1209 : 1978 (RA 2009)	60 to 400 °C
		Water Content	IS 1211 : 1978 (RA 2009)	0.05 to 10 %
		Solubility in HSD	IS 14982 : 2001 (RA 2012) Annexex- A	Qualitative
		Thermal Stability	IS 14982: 2001 (RA 2012) Annexex- B	Qualitative
		Nitrogen	IS 5194 : 1969 (RA 2006)	0.05 to 50 %
		Total Base Number	IS 1448 (Part 86): 1977 (RA2011)	0.01 to 350 mgKOH/g
		Specific Gravity	IS 1202: 1978 (RA 2008)	0.500 to 1.500
15.	Fuel oil / Lubricating oil / Transformer oil	Heavy Metals	(SRI/SOP/RESIDUES-FUEL OIL/00)	100 to 5000 µg/kg (LOD 50 µg/kg)
		Hg	ISSUE NO. 00	
		As	DATE 01.02.2013	
		Pb	REVISION NO. 01	50 to 5000 µg/kg
		Cd	DATE 01.04.2014	(LOD 25µg/kg)
		Cr		
		Environmental Pollutants		
		PAHs		
		PCBs		

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	252 of 275

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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XXIV. COAL, COKE & OTHER SOILD FUELS

1.	Coal / Coke	Proximate Analysis		
		Moisture	IS 1350 (Part 1): 1984 (RA2013) ASTM D3173-2011	0.01 to 50 %
		Ash content	IS 1350 (Part 1): 1984 (RA2013) ASTM D3174-2012	0.01 to 60 %
		Volatile matter	IS 1350 (Part 1):1984 (RA2013) ASTM D3175-2011	0.01 to 60%
		Fixed Carbon	IS 1350 (Part 1):1984 (RA2013) ASTM D3172-2013	By Difference
		Net Calorific Value	IS 1350 (Part 2): 1970 (RA 2010) ASTM D-5865 2013	80 to 10000 cal/g
		Useful Heat Value	IS 1350 (Part 1) : 1984 (RA2013) , Notification by Ministry of Coal (June 1994)	1000 to 9000 kcal/kg
		Forms of Sulphur	IS 1350 (Part 3): 1969 (RA 2010)	0.05 to 15 %
		Hard Groove Griandibility Index	IS 4333:1979 (RA2000) ASTM D 409-2012	20 to 100
		Swelling Number	IS 1353: 1993 (RA 2010)	1 to 9 (Qualitative)
		Total Moisture	IS 1350 (Part 1):1984 (RA2013)	0.01 to 95 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	253 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Gross Calorific Value	IS 1350 (Part 2): 1970 (RA 2010), ASTM D5865-2013	100 to 10000 cal/g
		Sieve Analysis/ Particle Size	IS 2386 (Part 1): 1963 (RA2007) ASTM D4749- 1987 (RA2012) ASTM D293-2010	0 to 100 %
		Caking Index	IS 1353: 1993 (RA 2005)	Ratio calculations
		Ash Fusion Temperature	ASTM D 1857: 2004 (RA 2010)	750 to 1550°C
		Ultimate analysis		
		Ash content	IS 1350 (Part 1):1984 ASTM D3174-2012	0.1 to 60 %
		Carbon	IS 1350 (Part 4): 1984 (RA2013) ASTM D3176-2009 CHNSO analyzer	0.1 to 90 %
		Hydrogen	IS 1350 (Part 4) : 1984 (RA2013) ASTM D3176-2009 CHNSO analyzer	0.1 to 15 %
		Nitrogen	IS 1350 (Part 4): 1984 (RA2013) ASTM D3176-2009 CHNSO analyzer	0.1 to 15%
		Sulphur	IS 1350 (Part 3) : 1969, (RA 2010)	0.1 to 10 %
		Oxygen	ASTM D3176-2009	By calculation
		Bulk Density	IS 33: 1992 (RA 2002) guidelines	20 to 2500 kg/m ³

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	254 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chemical composition of Coal / Coke Ash	IS 1350 (Part 1):1984 (RA2007) AAS, ICP, IS 1355: 1984 (RA2007)	0.5 to 80 % 0.1 to 30 % 0.1 to 30 % 0.1 to 30 % 0.1 to 30 % 0.1 to 30 % 0.1 to 30 %
2.	Bitumen & Allied Materials	K.Viscosity at 135°C	IS 1206 (Part 3):1978 (RA 2009)	5 to 800 cSt
	Paving Bitumen	Absolute Viscosity at 60 °C	IS 1206 (Part 2): 1978 (RA 2009)	
	Industrial Bitumen	Flash point (COC)	IS 1209: 1978 (RA 2009)	20 to 400 °C
	Polymer Modified Bitumen,	Penetration	IS 1203: 1978 (RA 2008) ASTM D 5 : 2006	10 to 200
	Coal Tar	Softening point	IS 1205: 1978 (RA 2009) ASTM D 36: 2009	10 to 200 °C
		Thin film oven test	IS 1203: 1978 (RA 2008)	10 to 200
		-Penetration		
		Penetration ratio	IS 73: 1992	5 to 100 (Calculations)
		Ductility	IS 1208: 1978 (RA 2009) ASTM D 113: 2007	1 to 100 cm
		Matter soluble or Solubility in trichloro ethylene	IS 1216: 1978 (RA 2009) IS 1215: 1978 (RA 2009)	20 to 100 %
		Specific gravity	IS 1202: 1978 (RA 2008)	0.500 to 1.500

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	255 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Water content	IS 1211: 1978 (RA 2009)	0.05 to 90 %
		Ash Content	IS 1217: 1978 (RA2004)	0.1 to 1.0 %
		Phenols	IS 1218: 1978 (RA2004)	1 to 4 %
		NaParthenlens	IS 1219: 1978 (RA2004)	2 to 4 %
		Paraffin wax content	IS 10512: 2003 (RA 2009)	0.5 to 100 %
		Frass breaking point	IS 9381: 1979 (RA 2009)	-30°C to + 50°C
		Loss on heating (TFOT)	IS 1212: 1978 (RA 2009) ASTM D 6: 2006	0.01 to 20 %
		Elastic recovery of half thread in ductilometer	IS 15462: 2004	1 to 100 cm
		Separation difference in softening point (R&B)	IS 15462: 2004	0.2 to 20 °C
		Thin Film Oven Test and Test on Residue		
		- Loss in mass	IS 9382: 1979 (RA 2009)	0.01 to 20%
		-Increase in softening point	IS 1205: 1978 (RA 2009)	0.01 to 10 (Calculation)
		-Reduction in penetration of residue	IS 1203: 1978 (RA 2008)	1 to 100 % (Calculation)
		- Elastic recovery of half thread in ductilometer	IS 15462: 2004	1 to 100%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	256 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
3.	Bitumen Emulsion	Miscibility with water	IS 8887: 2004 (RA 2009)	Qualitative
		Tests on residue from distillation upto 360°C		
		- Ductility	IS 1208: 1978 (RA 2009)	1 to 100 cm
		- Penetration	IS 1203 : 1978 (RA 2009)	20 to 400
		- Solubility in TCl ₃	IS 1216: 1978 (RA 2009)	20 to 100 %
		Residue on 600 micron Sieve	IS 8887 : 2004 (RA 2009)	0.01 to 20%
		Distillation	IS 8887 : 2004 (RA 2009)	50 to 400°C
		Coagulation of emulsion	IS 8887 : 2004 (RA 2009)	Qualitative
		Storage stability.	IS 8887 : 2004 (RA 2009)	0.1 to 5 % (By calculations)
		Particle charge	IS 8887 : 2004 (RA 2009)	Qualitative
		Coating ability for water resistance	IS 8887 : 2004 (RA 2009)	Qualitative
XXV.	PAINTS & SURFACE COATING			
	1. Paints & Surface Coating Paint & Enamels Powder Coating (Test on cured film)	Drying time(Manual)	IS 101 (Part 3) (Sec -1): 1986 (RA2007)	Qualitative
		Consistency (Viscosity)	IS 101(Part 1) (Sec -5): 1989 (RA2004)	15 to 300Sec
		Finish	IS 101(Part 3) (Sec -4): 1987 (RA2004)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	257 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Fineness of Grind	IS 101(Part 3) (Sec -5): 1987 (RA2004)	5 to 50microns
		Gloss 60° Gloss 20°	IS 101(Part 4) (Sec -4): 1988 (RA 2007)	1 to 100 1 to 90
		Colour	IS 5 -2007	Qualitative
		Water Content	IS 101(Part 2) (Sec -1): 1988 (RA2004)	0.5 to 10 %
		Wet Opacity	IS 101 (Part 4) (Sec -1) : 1988 (RA2004) IS 2932: 2003 IS 2933: 1975 (RA 2009)	5 to 50sqm/l in the 0.004 Scale, 2.55 to 25 sqm/l in the 0.008
		Scratch Hardness	IS 101(Part 5) (Sec -2): 1988 (RA2004) IS 2932 : 2003, IS 2933: 1975 (RA 2009) IS 13213	Qualitative
		Flexibility Adhesion	IS 101(Part 5) (Sec -2): 1988 (RA2004) IS 2932 : 2003 IS 2933 : 1975 (RA 2009) IS 13213	Qualitative
		Flash Point	IS 101(Part1) (Sec -6): 1987 (RA2004) IS 2932 : 2003 IS 2933 : 1975 (RA 2009) IS 13213	5 to 80°C

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	258 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Mass in Kg/10Litre	IS 101(Part1) (Sec -7): 1987 (RA2004) IS 13213 IS 2932: 2003 IS 2933 : 1975	8.5 to 34 kg/10 litre
		Volatile Matter	IS 101 (Part 2) (Sec -2): 1986 (RA2007)	5 to 70%
		Pigment Content	IS 101(Part 8) (Sec -2): 1990 (RA2007)	5 to 60%
		Non Volatile matter content	IS 101(Part 8) (Sec -2): 1990 (RA2007)	5 to 60%
		Volume Solid	IS 101 (Part 8) (Sec -6): 1993 (RA2004) IS 2074 : 1992 IS 13238: 1991 IS 13213 : 1991 (RA2000)	10 to 70%
		Phthalic anhydride	IS 101 (Part 8) (Sec-4): 1993 (RA2004)	5 to 35%
		Washabilty & Cleanability	IS 15489 : 2004	Qualitative
		Temperature Stability	IS 15489 : 2004	Qualitative
		Flattening Properties	IS 110: 1993	Qualitative
		Hold out Properties	IS 110 :1993	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	259 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Dry Film thickness	IS 101 (Part 3) (Sec -2) : 1989 (RA 2004) IS 13238: 1991 IS 13213: 1991(RA2000)	10 to 950 micron
		Lead Restriction test	IS 101(Part 8) (Sec -5): 1993 (RA 2004)	0.1 to 10%
		Protection Against Corrosion Salt Spray Test	IS 101(Part 6) (Sec -1): 1988 (RA 2005) IS 13183: 1991	Qualitative
		Colour Fastness to Light	IS 101 (Part 4) (Sec -3): 1988 (RA 2004)	Qualitative
		Accelerated storage stability	IS 133 : 2004 IS 2932 : 2003 IS 13607: 1992 IS 8662: 2004 (RA 2009) IS 2074 : 1992	15 to 300Sec
		Resistance to Acid	IS 2932 : 2003 IS 9862 : 1981 IS 158 : 1981 (RA2004) IS 13781: 1993 IS 14209: 1994 IS 8662: 2004 (RA 2009)	Qualitative
		Resistance to Alkali	IS 2932: 2003 IS 9862 : 1981 IS 158: 1981 IS 13781: 1993 IS 14209: 1994 IS 8662 : 2004 (RA 2009)	Qualitative

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	260 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Recoating Property	IS 164: 1981 (RA2001)	Qualitative
		Application Property	IS 133: 2004 IS 2932: 2003	Qualitative
		Artificial Weathering Test	IS 2932:2003 IS 2933 :1975 (RA 2009)	Qualitative
		Resistance to bleeding	IS 164: 1981 (RA2001)	Qualitative
		Resistance to Wear	IS 164: 1981 (RA2001)	Qualitative
		Resistance to Water	IS 101 (Part 7) (Sec -1):1989 (RA 2005), IS 13183: 1991 IS 3536 : 1999	Qualitative
		Resistance to heat	IS 101 (Part 7) (Sec -3): 1990 (RA 2005) IS 13183 : 1991	Qualitative
		Resistance to chlorine	IS 9862: 1981 (RA2004)	Qualitative
		Zinc Chromate	IS 51 : 1998 (RA 2002) IS 2074:1992 IS 104: 1979	0.5 to 25 %
		Zinc Oxide	IS 51 : 1998 (RA 2002) IS 2074: 1992 IS 104: 1979	0.5 to 40 %
		Chromic Anhydride	IS 51 : 1998 (RA 2002) IS 2074: 1992 IS 104: 1979	0.5 to 50 %

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	261 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron Oxide	IS 44 : 1991	0.5 to 70 %
		Aluminium Content	IS 289 : 1963 (RA2001) IS 2339 : 1963 (RA 2009)	0.5 to 70%
2.	Putty for Window Frame Oil Paste for Paints	Form & Condition	IS 419 : 1967 (RA 2002)	Qualitative
		Calcium Carbonate	IS 419 : 1967 (RA 2002)	5 to 90%
		Consistency	IS 419 : 1967 (RA 2002)	Qualitative
		Residue on sieve	IS 101(Part 8) (Sec- 1): 1989	0.1 to 10%
		Water Content	IS 101(Part 2) (Sec-1): 1988	0.5 to 10 %
		Setting time	IS 419 : 1967 (RA 2002)	Qualitative
3.	Cement Paint Dry & Washable Distemper	Drying time(Hardening & recoating properties)	IS 5410: 1992 IS 427: 2005 IS 428: 2000 (RA 2007)	Qualitative
		Finish	IS 5410: 1992	Qualitative
		Colour	SP-1650: 1973	Qualitative
		Residue on Sieve	IS 5410: 1992 IS 427: 2005 IS 428: 2000 (RA 2007)	0.1 to 10%
		Resistance to dry Rubbing	IS 5410: 1992 (RA 2004)	Qualitative
		Water repellency	IS 5410: 1992 (RA 2004)	50 to 300 g/sqm
		Pot Life	IS 5410: 1992 (RA 2004)	Qualitative
		Portland Cement	IS 5410: 1992 (RA 2004)	5 to 75%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	262 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hydrated Lime	IS 5410: 1992 (RA 2004)	5 to 35%
		Freedom from Organic binders	IS 5410: 1992 (RA 2004)	Qualitative
		Resistance to Alkali	IS 427 : 2005, IS 428 : 2000	Qualitative
		Preparation For use	IS 5410 : 1992 (RA 2004)	Qualitative
		Temperature Stability	IS 428 : 2000 (RA 2007)	Qualitative
		Colour fastness to light	IS 101 (Part 4) (Sec -3) : 1988 (RA2004)	Qualitative
XVI.	POLISHES			
1.	Floor Polish, Liquid Polish, Automobiles Polish, Wooden Polish, Metal Polish, Shoe Polish	Non Volatile Matter	IS 1746 : 1992 (RA2003) IS 5480 : 1983 (RA2003)	10 to 40 10 to 40
		pH Value	IS 1746 : 1992 (RA2003) IS 5480 : 1983 (RA2003)	0 to 14
		Ash Content of NVM	IS 1746 : 1992 (RA2003) IS 5480 : 1983 (RA2003)	0.01 to 10.0
		Acid value of non-volatile matter	IS 5480 : 1983 (RA2003)	0.1 to 10.0 %
		Distillation of volatile portion	IS 5480 : 1983 (RA2003) IS 1746 : 1992 (RA2003)	40 to 300 °C
		Water content	IS 5480 : 1983 (RA2003) IS 1448 (Part 40) : 1987 (RA2011)	0.1 to 50 %
		Oozing test	IS 1746 : 1992 (RA 2003)	Qualitative
		Residue on 53 μ Sieve	IS 5480 : 1983 (RA 2003)	0.1 to 50%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	263 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Softening point of NVM	IS 8541 : 1993 (RA 1999) IS 1746 : 1992 (RA 2003) IS 5480 : 1983 (RA 2003)	10 to 100 °C
		Flash point of organic solvent(Abel)	IS 8541 : 1993 (RA 1999)	10 to 50°C
		Acidity of aqueous extract	IS 5487 : 1992 (RA 2003) (A-4)	Qualitative
		Residue on 75µ IS Sieve	IS 5487 : 1992 (RA 2003) (A-7)	Qualitative
		Cyanide	IS 5487 : 1992 (RA 2003) (A-8)	Qualitative
		Total solids	IS 5487 : 1992 (RA 2003)	10 to 50 %
		Total ammonia	IS 5487 : 1992 (RA2003)	0.1 to 1.0 %
		Flash point	IS 1448 (Part 20) : 1998 (RA 2004)	10 to 50 °C
		Oleic acid	IS 5487 : 1992 (RA 2003)	0.1 to 10.0 %
XVII.	INKS			
1.	Ink	Total Solid	IS 220 : 1988 IS 13209: 1991	0.5 to 10 gm/100ml
	(Writing Inks			
	Fountain pen ink			
	Ferro gallo	Iron Content	IS 220 : 1988 (RA2003)	0.1 to 10%
	TAnnexate			
	Stamp Pad Ink	Ratio of ethyl acetate extract to iron	IS 220 : 1988 (RA2003)	1 to 5.0
	Indelible Ink)	Sedimentation	IS 220 : 1988 (RA2003)	1.0 to 5.0g/ml
		Corrosion	IS 220 : 1988 IS 1221 : 1991 (RA2003)	1 to 10%

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	264 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Freedom from clogging	IS 220 : 1988 IS 1221 : 1991 (RA 2003)	Qualitative
		Stability	IS 220 : 1988 IS 1221 : 1991 (RA 2003)	Qualitative
		Glycerol (Glycerin Content)	IS 393 : 1985 (RA 2003)	5 to 65%
		Performance Development Acidity	IS 13209 1991 IS 13209 1991 (RA 2003) IS 13209 1991 (RA 2003)	Qualitative Qualitative Qualitative
XVIII. PACKAGING MATERIALS				
1.	Packaging Materials / Glass Plastic Containers	Physio –Chemical Tests	IP. 2014/BP. 2014/USP-37.2014	
		Non Volatile Residue		1mg to 1000 mg
		Residue on Ignition		0.1 to 50%
		Heavy Metals		1 to 20 mg/kg
		Buffering Capacity		0 to 100 ml
		Light Transmission		0 to 10%
		Multi Internal Reflectance (IR)		Qualitative (Identification)
		WVTR/MVTR		0 to 100 mg/day/l
		TGA		50 to 400 °C
		DSC		50 to 1000 °C
		Colour Extraction		Qualitative
		ESCR Test		Qualitative

Laboratory Shriram Institute for Industrial Research, 19, University Road, Delhi
Accreditation Standard ISO/IEC 17025: 2005
Discipline Chemical Testing **Issue Date** 15.10.2014
Certificate Number T-0045 **Valid Until** 14.10.2016
Last Amended on - **Page** 265 of 275

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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List of Drugs & Pharmaceuticals

1	2	3	4	5	7	8	9	10	11	12	13
Tablet	Cap-sule	Parenteral Preparations (Injection/ Infusions)	Ointments/ Creams/ Gels	Syrups/ Liquids/ Oral Preparations	Oral Powder	Eye drop	Eye capsule	Eye Oint ment	Inhaler	Aerosole	Raw Materials (API)
Aciclovir	Aciclovir	Aciclovir	Aciclovir	Aciclovir	x	x	x	x	x	x	Aciclovir
Aml- odipine besylate	x	x	x	x	x	x	x	x	x	x	Amlodipine besylate
x	x	x	x	x	x	x	x	x	x	x	N-acetyl-l- cysteine
x	x	x	x	x	x	x	x	x	x	x	7 adca 7 aminodesaceto cy cephalosporan ic acid
x	x	x	x	x	x	x	x	x	x	x	Allantoin
x	x	Atracurium	x	x	x	x	x	x	x	x	Atracurium
x	x	x	x	x	x	x	x	x	x	x	4-amino-6- chloro-1,3- benzenedisulf onamide
L-(+)- ascorbic acid	X	L-(+)- ascorbic acid	X	X	X	X	X	X	X	X	L-(+)-ascorbic acid
X	X	X	X	X	X	X	X	X	Bec lom etha son e dipr opio nate	Beclome thasone dipropio nate	Beclomethaso ne dipropionate

Laboratory **Shriram Institute for Industrial Research, 19, University Road, Delhi**

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

Discipline **Chemical Testing** **Issue Date** **15.10.2014**

Certificate Number **T-0045** **Valid Until** **14.10.2016**

Last Amended on **-** **Page** **266 of 275**

S.No.	Product / Material of Test			Specific Test Performed			Test Method Specification against which tests are performed				Range of Testing / Limits of Detection	
	Bromhexime hydrochloride	X	X	X	Bromhexime hydrochloride	X	X	X	X	X	X	Bromhexime hydrochloride
X	X	X	X	X	X	X	X	X	X	X	X	Benzethonium chloride
Ciprofloxacin hydrochloride	X	Ciprofloxacin hydrochloride	X	X	X	Ciprofloxacin hydrochloride	X	X	X	X	X	Ciprofloxacin hydrochloride
X	X	Capreomycin sulphate	X	X	X	X	X	X	X	X	X	X
Cefpodoxime proxetil	X	X	X	X	Cefpodoxime proxetil	X	X	X	X	X	X	Cefpodoxime proxetil
X	X	X	X	X	X	X	X	X	X	X	X	2-chlorotritanol
X	X	X	X	X	X	X	X	X	X	X	X	Cilastatin sodium
X	X	X	X	X	X	X	X	X	X	X	X	Clonazepam related compound a
Cephalexin	Cephalexin	Cephalexin	Cephalexin	Cephalexin	Cephalexin	X	X	X	X	X	X	Cephalexin
Cefadroxil	Cefadroxil	X	X	X	Cefadroxil	X	X	X	X	X	X	Cefadroxil
Calcitriol	X	x	X	X	Calcitriol	X	X	X	X	X	X	Calcitriol
Chlorpheniramine maleate	X	Chlorpheniramine maleate	X	X	X	X	X	X	X	X	X	Chlorpheniramine maleate
X	X	X	X	X	X	X	X	X	X	X	X	Y-Cyclodextrin
Dexamethasone sodium Phosphate	X	Dexamethasone sodium Phosphate	x	x	x	x	x	x	x	x	x	Dexamethasone sodium Phosphate

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	267 of 275

S.No.	Product / Material of Test	Specific Test Performed			Test Method Specification against which tests are performed				Range of Testing / Limits of Detection		
X	X	Daunorubici none	x	x	x	x	x	x	x	x	Daunorubicin one
deflazac ort	x	x	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	6- Epidoxyclyne hydrochloride
Ethynyl estradiol	x	x	x	x	x	x	x	x	x	x	Ethynyl estradiol
Efaviren z	Efavirenz	x	x	x	x	x	x	x	x	x	Efavirenz
		x	x	x	x	x	x	x	x	x	Fmoc chloride
Fexofena dine hydrochl oride	Fexofenadi ne hydrochlori de	x	x	x	x	x	x	x	x	x	Fexofenadine hydrochloride
Flurbipro fen crs	X	x	x	x	x	x	x	x	x	x	Flurbiprofen crs
febuxost ate	X	x	x	x	x	x	x	x	x	x	febuxostate
x	x	x	Framycetin sulphate	x	x	x	x	x	x	x	Framycetin sulphate
Glycopyr rolate	X	Glycopyrrola te	x	x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x	x	x	x	Glycerol dibehenate crs
x	x	x	x	x	x	x	x	x	x	x	Glufosinate- ammonium
Glyceryl Trinitrate usp	x	x	x	x	x	x	x	x	x	x	Glyceryl Trinitrate usp
x	Hydrocortis one	Hydrocortiso ne	Hydrocortis one	X	X	X	X	Hydroc ortisone	X	X	Hydrocortison e

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	268 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
x	X	Hydrocortisone hemisuccinate /cortisol-21-hemisuccinate	X	X
x	X	Ivermectin	X	X
x	X	Imipenem	X	X
x	X	Ioexol	X	X
x	x	Kanamycin sulphate	x	x
Lamivudine	x	x	Lamivudine	x
Labetadol hcl	x	Labetadol hcl	x	x
Lopinavir	Lopinavir	x	x	x
Misoprostol	x	x	x	x
x	x	x	x	x
x	x	x	x	x
x	x	x	x	x

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	269 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
x	x	x	x	x
L-methionine	x	L-methionine	x	x
Methylnicotinate	Methylnicotinate	x	x	x
Moxifloxacin hcl	Moxifloxacin hcl	x	x	x
Nifedipine	Nifedipine	x	x	x
Norethisterone	x	x	x	x
x	x	x	Neomycin sulphate	x
Nicorandil	x	x	x	x
Nevirapine	x	x	Nevirapine	x
x	x	Netilmicin sulphate	x	x
Olmesartan medoxomil	x	x	x	x
x	x	x	x	x
x	x	x	x	x
x	x	x	x	x
Prednisone	x	Prednisone	x	x
Pyrazinamide	Pyrazinamide	x	x	x

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	270 of 275

S.No.	Product / Material of Test	Specific Test Performed			Test Method Specification against which tests are performed				Range of Testing / Limits of Detection		
x	x	Piperacillin	x	x	x	x	x	x	x	x	Piperacillin
Ritonavir	Ritonavir	x	x	x	x	x	x	x	x	x	Ritonavir
Roxithro mycin	x	x	x	x	x	x	x	x	x	x	Roxithromyci n
Riboflavi n	Riboflavin	Riboflavin	x	x	x	x	x	x	x	x	Riboflavin
x	x	x	x	x	x	x	x	x	x	x	Rifampicin quinone
Rifampic in	Rifampicin	x	x	Rifampicin	x	x	x	x	x	x	Rifampicin
Rabepraz ole sodium	x	x	x	x	x	x	x	x	x	x	Rabeprazole sodium Rabeprazole sodium
x	x	x	x	x	x	x	x	x	x	x	Stearic acid crs
Sulfadox ine	x	x	x	x	x	x	x	x	x	x	Sulfadoxine
x	x	x	x	x	x	x	x	x	x	x	Salbutamol ketone impurity
Sennosid es	x	x	x	x	x	x	x	x	x	x	Sennosides
Salbutam ol impurity 'b'	x	x	x	x	x	x	x	x	Salb uta mol imp urit y 'b'	Salbuta mol impurity 'b'	Salbutamol impurity 'b'
Sulfchlor pyridazin e	x	x	x	x	x	x	x	x	x	x	Sulfchlorpyrid azine
Sucralfat e	x	x	x	Sucralfate	x	x	x	x	x	x	Sucralfate
Tenofovi r disoproxi l	x	x	x	x	x	x	x	x	x	x	Tenofovir disoproxil

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	271 of 275

S.No.	Product / Material of Test		Specific Test Performed		Test Method Specification against which tests are performed					Range of Testing / Limits of Detection	
Terazosine hydrochloride	x	x	x	x	x	x	x	x	x	x	Terazosine hydrochloride
Tinidazole	x	x	x	x	x	x	x	x	x	x	Tinidazole
Tretionin	Tretionin	x	Tretionin	x	x	x	x	x	x	x	Tretionin
L-tyrosine	L-tyrosine	x	L-tyrosine	x	x	x	x	x	x	x	L-tyrosine
Terbutaline sulphate	x	Terbutaline sulphate	x	Terbutaline sulphate	x	x	x	x	Terbutaline sulphate	x	Terbutaline sulphate
Torsemide	x	x	x	x	x	x	x	x	x	x	Torsemide
x	x	Tazobactam	x	x	x	x	x	x	x	x	Tazobactam
X	Tramadol hcl	x	x	x	x	x	x	x	x	x	Tramadol hcl
x	x	x	Thymol	Thymol	x	x	x	x	x	x	Thymol
x	x	Vecuronium bromide	x	x	x	x	x	x	x	x	Vecuronium bromide
Zidovudine	x	Zidovudine	x	Zidovudine	x	x	x	x	x	x	Zidovudine
Albendazole	x	x	x	Albendazole	x	x	x	x	x	x	Albendazole
x	x	x	x	x	x	x	x	x	x	x	Albendazole sulfone
x	x	x	x	x	x	x	x	x	x	x	Amino albendazole sulfone
Amoxycillin trihydrate	Amoxycillin trihydrate	Amoxycillin trihydrate	x	Amoxycillin trihydrate	Amoxycillin trihydrate	x	x	x	x	x	Amoxycillin trihydrate
Ampicillin trihydrate	Ampicillin trihydrate	Ampicillin trihydrate	x	Ampicillin trihydrate	x	x	x	x	x	x	Ampicillin trihydrate

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	272 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
x	x	x	x	x
x	x	x	x	x
x	x	x	x	x
x	x	Chlorotetracycline	x	x
x	x	x	Colistin sulfate	x
x	x	x	x	x
x	x	x	x	x
x	Chloramphenicol	Chloramphenicol	x	x
Chlorpromazine hydrochloride	x	Chlorpromazine hydrochloride	x	x
x	x	x	x	x
x	x	x	Dimetridazole	x
x	Doxycycline hyclate	x	x	x
x	Difloxacin hcl	x	x	x
x	Dihydrostreptomycin sesquisulphate	x	x	x
x	x	x	x	x
Estradiol	x	x	x	x
x	4-epioxytetracycline	x	x	x
x	x	x	x	x
x	X	Enrofloxacin	x	x

Laboratory Shriram Institute for Industrial Research, 19, University Road, Delhi
Accreditation Standard ISO/IEC 17025: 2005
Discipline Chemical Testing **Issue Date** 15.10.2014
Certificate Number T-0045 **Valid Until** 14.10.2016
Last Amended on - **Page** 273 of 275

S.No.	Product / Material of Test	Specific Test Performed				Test Method Specification against which tests are performed				Range of Testing / Limits of Detection	
	Erythro mycin a-dihydrate	x	Erythromycin a-dihydrate	x	x	x	x	x	x	x	Erythromycin a-dihydrate
x	Fenbendazole	x	x	x	x	Fenbendazole	x	x	x	x	Fenbendazole Fenbendazole
x	x	x	x	x	x	x	x	x	x	x	Gentamicin c1a
x	x	Gentamycin sulfate	x	x	x	Gentamycin sulfate	x	x	x	x	Gentamycin sulfate
x	x	Gentamycin c1 sulfate(-20°C)	x	x	x	Gentamycin c1 sulfate(-20°C)	x	x	x	x	Gentamycin c1 sulfate(-20°C)
x	x	Gentamycin c2a sulfate(-20°C)	x	x	x	Gentamycin c2a sulfate(-20°C)	x	x	x	x	Gentamycin c2a sulfate(-20°C)
x	x	Gentamycin c2 sulfate(-20°C)	x	x	x	Gentamycin c2 sulfate(-20°C)	x	x	x	x	Gentamycin c2 sulfate(-20°C)
x	x	x	x	x	x	x	x	x	x	x	Glyceryl tridecanoate
x	x	x	x	x	x	x	x	x	x	x	Hypericin(-20°C)
x	x	x	x	x	x	x	x	x	x	x	Kanamycin-a-disulfate
x	x	x	x	x	x	x	x	x	x	x	Lasalocid a sod salt
x	x	Lincomycin hydrochloride hydrate	Lincomycin hydrochloride hydrate	x	x	x	x	x	x	x	Lincomycin hydrochloride hydrate
Metronidazol	x	Metronidazol	x	x	x	x	x	x	x	x	Metronidazol
x	x	Morantel tartarate	x	x	x	x	x	x	x	x	Morantel tartarate

Laboratory **Shriram Institute for Industrial Research, 19, University Road, Delhi**
Accreditation Standard **ISO/IEC 17025: 2005**
Discipline **Chemical Testing** **Issue Date** **15.10.2014**
Certificate Number **T-0045** **Valid Until** **14.10.2016**
Last Amended on **-** **Page** **274 of 275**

S.No.	Product / Material of Test		Specific Test Performed		Test Method Specification against which tests are performed				Range of Testing / Limits of Detection		
x	x	x	x	x	x	x	x	x	x	x	Mabuterol hcl
x	x	Neomycin	Neomycin	x	x	Neomycin	x	x	x	x	Neomycin
19-nortestosterone	x	x	x	x	x	x	x	x	x	x	19-nortestosterone
x	x	x	x	x	x	x	x	x	x	x	Neospiromycin
x	Oxytetracycline hcl	Oxytetracycline hcl	x	x	x	x	x	Oxytetracycline hcl	x	x	Oxytetracycline hcl
x	x	x	x	x	x	x	x	x	x	x	1-oleoyl-rac-glycerol
x	x	x	x	x	x	x	x	x	x	x	Oxociprofloxacin
Phenylbutazone	x	Phenylbutazone	x	x	x	x	x	x	x	x	Phenylbutazone
Pyrrhtrum extract	x	x	x	x	x	x	x	x	x	x	Pyrrhtrum extract
Ronidazole	x	x	x	x	x	x	x	x	x	x	Ronidazole
Sulfadimethoxin	x	x	x	x	x	x	x	x	x	x	Sulfadimethoxin
Sulfamerazin	x	x	x	x	x	x	x	x	x	x	Sulfamerazin
Sulfathiazole	x	x	x	Sulfathiazole	x	x	x	x	x	x	Sulfathiazole
Streptomycin sesquisulfate hydrate	x	Streptomycin sesquisulfate hydrate	x	x	x	x	x	x	x	x	Streptomycin sesquisulfate hydrate
Sulfadiazine	x	x	x	x	x	x	x	x	x	x	Sulfadiazine
Sulfamethoxy pyridazine	x	Sulfamethoxy pyridazine	x	x	x	x	x	x	x	x	Sulfamethoxy pyridazine
x	x	x	x	x	x	x	x	x	x	x	Spectinomycin dihydrochloride pentahydrate
											Sulfanilamide

Laboratory	Shriram Institute for Industrial Research, 19, University Road, Delhi		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	15.10.2014
Certificate Number	T-0045	Valid Until	14.10.2016
Last Amended on	-	Page	275 of 275

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection		
x	x	Spectinomycin dihydrochloride	x	x	Spectinomycin dihydrochloride	
Salbutamol hemisulfate	x	Salbutamol hemisulfate	x	x	Salbutamol hemisulfate	
x	x	x	x	x	Sulfamethizole	
Sulphadimidine	x	Sulphadimidine	x	x	Sulphadimidine	
Sulphadoxine	x	x	x	x	Sulphadoxine	
x	Tetracycline hcl	x	Tetracycline hcl	x	x	Tetracycline hcl
x	x	x	x	x	x	Tylosin tartarate
x	x	x	x	x	x	Thiamphenicol
Trimethoprim	x	Trimethoprim	x	x	x	Trimethoprim
x	x	Testosterone	x	x	x	Testosterone
x	x	Tilmicosin	x	x	x	Tilmicosin
x	x	Validamycin a(-20° c)	x	x	x	Validamycin a(-20° c)

-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**.