

Laboratory Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7587 (in lieu of T-2202)

Page 1 of 11

Validity 25.07.2018 to 24.07.2020

Last Amended on --

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

**CHEMICAL TESTING**

I.	WATER			
1.	Surface Water, Ground Water & Drinking	Temperature	APHA, 23 <sup>rd</sup> Ed. 2017, 2550 A+B	10 °C to 80 °C
		Conductivity	APHA, 23 <sup>rd</sup> Ed. 2017, 2510-A + B	1 µS/cm to 2000 µS/cm
		pH	APHA, 23 <sup>rd</sup> Ed. 2017, 4500H+ A+B	2.0 to12
		Turbidity	APHA, 23 <sup>rd</sup> Ed. 2017, 2130-A+B	1 NTU to 100 NTU
		Total Dissolved Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540-C	5 mg/l to 5000 mg/l
		Total Suspended Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540-D	5 mg/l to 5000 mg/l
		Total Solids	APHA 23 <sup>rd</sup> Ed. 2017 2540-B	5 mg/l to 5000 mg/l
		Sulphate	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-SO <sub>4</sub> <sup>2-</sup> E	1.0 mg/l to 250 mg/l
		Nitrate Nitrogen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-NO <sub>3</sub> <sup>-</sup> B	5.0 mg/l to 100 mg/l
		Alkalinity	APHA, 23 <sup>rd</sup> Ed. 2017, 2320 A+ B	5 mg/l to 1500 mg/l
		Acidity	APHA, 23 <sup>rd</sup> Ed. 2017, 2310 A+B	5 mg/l to 500 mg/l
		Chloride	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 Cl A+B	5 mg/l to 1000 mg/l
		Fluoride	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-C	0.05 mg/l to 10 mg/l
	Phosphate	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-PD	0.1 mg/l to 50 mg/l	

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

Page 2 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Dissolved Oxygen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 A+C	1 mg/l to 10 mg/l
		Free Residual Chlorine	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-CI B	0.5 mg/l to 10 mg/l
		Calcium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Ca A+B	5 mg/l to 1000 mg/l
		Magnesium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Mg A+B	5 mg/l to 1000 mg/l
		Total Hardness	APHA, 23 <sup>rd</sup> Ed. 2017, 2340 A+C	5 mg/l to 1500 mg/l
		Sodium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Na, A+B	1 mg/l to 100 mg/l
		Potassium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 K, A+B	1 mg/l to 100 mg/l
		Sulphide	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 S <sup>2-</sup> F	0.1 mg/l to 10 mg/l
		Phenolic Compound	APHA, 23 <sup>rd</sup> Ed. 2017, 5530 A+C	0.05 mg/l to 10 mg/l
		Total Kjeldahl Nitrogen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 Norg A+C	5 mg/l to 100 mg/l
		Boron	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 B A+C	0.2 mg/l to 10 mg/l
		Iron	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Fe B	0.02 mg/l to 50 mg/l
		Colour	APHA, 23 <sup>rd</sup> Ed. 2017, 2120 B	5 H to 100 H. unit or CU
		Odour	APHA, 23 <sup>rd</sup> Ed. 2017, 2150 B	Qualitative
		Fixed Volatile Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540 Solids E	2.5 mg/l to 200 mg/l
		Arsenic	APHA, 23 <sup>rd</sup> Ed. 2017, 3114 C	0.01 mg/l to 2 mg/l
		Cadmium	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.002 mg/l to 2 mg/l

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

**Page 3 of 11**

**Validity** 25.07.2018 to 24.07.2020

**Last Amended on --**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Total Chromium	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.05 mg/l to 10 mg/l
		Copper	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.05 mg/l to 5 mg/l
		Lead	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.01 mg/l to 2 mg/l
		Mercury	APHA, 23 <sup>rd</sup> Ed. 2017, 3112 A+B	0.001 mg/l to 1 mg/l
		Nickel	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.02 mg/l to 5 mg/l
		Zinc	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.02 mg/l to 50 mg/l
		Manganese	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.1 mg/l to 5 mg/l
<b>II.</b>	<b>POLLUTION &amp; ENVIRONMENT</b>			
<b>1.</b>	<b>Liquid Effluent/ Waste Water</b>	Temperature	APHA, 23 <sup>rd</sup> Ed. 2017, 2550 A+B	10 °C to 80 °C
		Conductivity	APHA, 23 <sup>rd</sup> Ed. 2017, 2510-A + B,	10 µS/cm to 2000 µS/cm
		pH	APHA, 23 <sup>rd</sup> Ed. 2017, 4500H+ A+B	2.0 to 12
		Turbidity	APHA, 23 <sup>rd</sup> Ed. 2017, 2130-A+B	0.5 NTU to 100 NTU
		Total Dissolved Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540-C	5 mg/l to 10000 mg/l
		Total Suspended Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540-D	5 mg/l to 1000 mg/l
		Total Solids	APHA, 23 <sup>rd</sup> Ed. 2017 2540-B	5 mg/l to 10000 mg/l
		Phosphate	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-PD	0.5 mg/l to 100 mg/l

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V,  
Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

Page 4 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Dissolved Oxygen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 A+C	1.0 mg/l to 10 mg/l
		Sulphate	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-SO <sub>4</sub> <sup>2-</sup> E	5 mg/l to 500 mg/l
		Nitrate Nitrogen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-NO <sub>3</sub> <sup>-</sup> B	5 mg/l to 200 mg/l
		Alkalinity	APHA, 23 <sup>rd</sup> Ed. 2017, 2320 A+ B	5 mg/l to 2000 mg/l
		Acidity	APHA, 23 <sup>rd</sup> Ed. 2017, 2310 A+B	5 mg/l to 500 mg/l
		Chloride	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 Cl A+B	5 mg/l to 1500 mg/l
		Fluoride	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-C	0.5 mg/l to 10 mg/l
		Free Residual Chlorine	APHA, 23 <sup>rd</sup> Ed. 2017, 4500-Cl B	1.0 mg/l to 5 mg/l
		Calcium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Ca A+B	5 mg/l to 1500 mg/l
		Magnesium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Mg A+B	5 mg/l to 1500 mg/l
		Total Hardness	APHA, 23 <sup>rd</sup> Ed. 2017, 2340 A+C	5 mg/l to 2000 mg/l
		Sodium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Na, A+B	2 mg/l to 100 mg/l
		Potassium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 K, A+B	2 mg/l to 100 mg/l
		Sulphide	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 S <sup>2-</sup> F	0.05 mg/l to 10 mg/l
		Phenolic Compound	APHA, 23 <sup>rd</sup> Ed. 2017, 5530 A+C	1 mg/l to 10 mg/l
		Ammonical Nitrogen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 NH <sub>3</sub> A+F	1.0 mg/l to 100 mg/l
		Boron	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 B A+C	0.2 mg/l to 10 mg/l

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

Page 5 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron	APHA, 23 <sup>rd</sup> Ed. 2017, 3500 Fe B	0.02 mg/l to 100 mg/l
		Chemical Oxygen Demand	APHA, 23 <sup>rd</sup> Ed. 2017, 5220 A+C	5 mg/l to 50000 mg/l
		Biochemical Oxygen Demand (3 & 5 days)	APHA, 23 <sup>rd</sup> Ed. 2017, 5210 A+B	5 mg/l to 10000 mg/l
		Oil & Grease	APHA, 23 <sup>rd</sup> Ed. 2017, 5520 A+B+D	5 mg/l to 600 mg/l
		Total Kjeldahl Nitrogen	APHA, 23 <sup>rd</sup> Ed. 2017, 4500 Norg A+C	2.5 mg/l to 100 mg/l
		Arsenic	APHA, 23 <sup>rd</sup> Ed. 2017, 3114 C	0.01 mg/l to 2 mg/l
		Cadmium	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.02 mg/l to 5 mg/l
		Total Chromium	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.05 mg/l to 50 mg/l
		Copper	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.05 mg/l to 5 mg/l
		Lead	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.01 mg/l to 5 mg/l
		Mercury	APHA, 23 <sup>rd</sup> Ed. 2017, 3112 A+B	0.001 mg/l to 2 mg/l
		Nickel	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.02 mg/l to 5 mg/l
		Chromium (Hexavalent)	APHA, 23 <sup>rd</sup> Ed. 2017, 3111A+B	0.05 mg/l to 20 mg/l
		Zinc	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B	0.02 mg/l to 20 mg/l
		Aluminium	APHA, 23 <sup>rd</sup> Ed. 2017, 3500Al A+B	1 mg/l to 100 mg/l
		Manganese	APHA, 23 <sup>rd</sup> Ed. 2017, 3111 A+B, 3-16	0.01 mg/l to 20 mg/l
		Fixed Volatile Solids	APHA, 23 <sup>rd</sup> Ed. 2017, 2540 Solids E	5 mg/l to 500 mg/l

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

**Page 6 of 11**

**Validity** 25.07.2018 to 24.07.2020

**Last Amended on --**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	Soil	pH	IS 2720 (Part 26): 1987 (RA 2001)	2to12
		Electrical Conductivity	IS 14267:2000 (RA 2006) FAO:2002	5 mS/cm to 200 mS/cm
		Sodium (Na)	Lab SOP No. S-11 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	10 mg/kg to 100 mg/kg
		Ava. Potassium (K <sub>2</sub> O)	Lab SOP No. S-19 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg
		Available Phosphate	Lab SOP No. S-07 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	2.5 mg/l to 50 mg/l
		Bulk Density	Lab SOP No. S-09 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	0.5 g/cc to 3.5 g/cc
		Moisture Content	IS 2720 (Part 2): 2002	5 % to 90 %
		Organic Carbon	IS 2720 (Part 22): 1972	5 % to 85 %
		Ash Content	Lab SOP No. S-21 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 % to 90 %
		Acid Insoluble Ash Content	Lab SOP No. S-22 issue no. 01 date 26.07.2016 based on Standard Book	2.5 % to 90 %

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

Page 7 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
			(Soil Chemical Analysis, M.L. Jackson)	
		Chloride	IS 2720 (Part 27): 1972 FAO:2007	5 mg/kg to 1000 mg/kg
		Sulphate	Lab SOP No. S-13 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg
		Boron	Lab SOP No. S-25 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	0.5 mg/kg to 100 mg/kg
		Calcium	Lab SOP No. S-26 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg
		Magnesium	Lab SOP No. S-27 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg
		Copper	Lab SOP No. S-31 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	4 mg/kg to 100 mg/kg
		Zinc	Lab SOP No. S-32 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg

Laboratory Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V,  
Sector-H, Aliganj, Lucknow, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7587 (in lieu of T-2202)

Page 8 of 11

Validity 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Iron	Lab SOP No. S-33 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	2.5 mg/kg to 10000 mg/kg
		Nickel	Lab SOP No. S-34 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	5 mg/kg to 100 mg/kg
		Cadmium	Lab SOP No. S-35 issue no. 01 date 26.07.2016 based on Standard Book (Soil Chemical Analysis, M.L. Jackson)	1 mg/kg to 100 mg/kg
<b>III.</b>	<b>ATMOSPHERIC POLLUTION</b>			
<b>1.</b>	<b>Ambient Air</b>	Particulate Matter (PM <sub>2.5</sub> )	Lab SOP (SOP No: A-15) Issue No.1, Issue Date 26/7/2016	12.5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Particulate Matter (PM <sub>10</sub> )	IS 5182 (Part 23): 2006	12.5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Suspended Particulate Matter (SPM)	IS 5182 (Part 4): 1999 (RA 2005)	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2): 2001 (RA 2012)	9 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Oxides of Nitrogen (NO <sub>x</sub> )	IS 5182 (Part 6): 2006 (RA:2017)	6 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Ozone	IS 5182 (Part 9): 1974	2 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Ammonia	APHA Air 3 <sup>rd</sup> edition method no.401 (Indophenol method)	2 µg/m <sup>3</sup> to 700 µg/m <sup>3</sup>



**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

Page 9 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Lead	IS:5182 (Part-22):2004/ AAS method	1 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		Nickel	Lab SOP (SOP No. 21) based on NAAQS Guidelines Manual Vol. I), 2011	1 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
		Arsenic	Lab SOP (SOP NO. 22) based on NAAQS Guidelines Manual Vol. I), 2011	1 ng/m <sup>3</sup> to 100 ng/m <sup>3</sup>
		Chlorine	IS 5182 (Part 19): 1982 (RA 2003)	1.45 µg/m <sup>3</sup> to 1500 µg/m <sup>3</sup>
		Total Fluoride	IS 5182 (Part 13): 1991 (RA 2009)	9 mg/m <sup>3</sup> to 95 mg/m <sup>3</sup>
		Asbestos	IS 11450:2006	0.05 fiber/cc to 15 fiber/cc
<b>2.</b>	<b>Stack Emission</b>	Particulate Matter	IS 11255 (Part 1): 1985 (RA 2003)	10 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>
		Oxide of Sulphur (SO <sub>x</sub> )	IS 11255 (Part 2): 1985 (RA 2003)	5 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>
		Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part 7): 2005	5 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>
		Carbon Dioxide (CO <sub>2</sub> )	IS 13270:1992 (RA 2009)	0.2 % to 90 %
		Oxygen (O <sub>2</sub> )	IS 13270:1992 (RA 2009)	0.2 % to 90 %
		Carbon Monoxide (CO)	IS 13270:1992 (RA 2009)	0.2 % to 90 %
<b>IV.</b>	<b>ORES &amp; MINERALS</b>			
<b>1.</b>	<b>Lime Stone</b>	Loss on Ignition	IS 1760 (Part 3): 1992 (RA 2017)	40 to 50.0
		Aluminum oxide	IS 1760 (Part 3): 1992 (RA 2017)	0.2 to 2.0
		Calcium oxide	IS 1760 (Part 3): 1992 (RA 2017)	0.5 to 55.0

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V, Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (in lieu of T-2202)

**Page 10 of 11**

**Validity** 25.07.2018 to 24.07.2020

**Last Amended on --**

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Magnesium oxide	IS 1760 (Part 3): 1992 (RA 2017)	0.2 to 5.20
		Iron	IS 1760 (Part 3): 1992 (RA 2017)	0.2 to 2.0
		Silica	IS 1760 (Part 3): 1992 (RA 2017)	0.2 to 5.0
<b>2.</b>	<b>Iron Ore</b>	Moisture	IS 1493 (Part 1): 1981 (RA 2016)	0.5 to 5
		Iron as Fe	IS 1493 (Part 1): 1981 (RA 2016)	0.2 to 70
		Alumina as Al <sub>2</sub> O <sub>3</sub>	IS 1493 (Part 1): 1981 (RA 2016)	0.2 to 5
		Manganese as Mn	IS 1493:1959 (RA 2001)	0.1 to 5
		Acid Insoluble matter	IS 1493 (Part 1): 1981 (RA 2016)	0.1 to 20
		Calcium Oxide as CaO	IS 1493 (Part 1): 1981 (RA 2016)	0.01 to 5
		Magnesium Oxide as MgO	IS 1493 (Part 1): 1981 (RA 2016)	0.01 to 5
		Silica as SiO <sub>2</sub>	IS 1493 (Part 1): 1981 (RA 2016)	0.20 to 5.0
		Phosphorous as P	IS 1493 (Part 1): 1981 (RA 2016)	0.05 to 2.0
		Sulphur as S	IS 1493 (Part 1): 1981 (RA 2016)	0.05 to 2.0
<b>V.</b>	<b>SOLID FUELS</b>			
<b>1.</b>	<b>Coke &amp; Coal</b>	Moisture	IS 1350 (Part 1): 1984 (RA 2013)	2 % to 36 %
		Total Ash	IS 1350 (Part 1): 1984 (RA 2013)	5 % to 55 %
		Fixed Carbon	IS 1350 (Part 1): 1984 (RA 2013)	0.05 % to 50 %

**Laboratory** Ecomen Laboratories Pvt. Ltd., Flat 5-8, IInd Floor, Arif Chamber V,  
Sector-H, Aliganj, Lucknow, Uttar Pradesh

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

**Certificate Number** TC-7587 (*in lieu of T-2202*)

Page 11 of 11

**Validity** 25.07.2018 to 24.07.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Volatile Matter	IS 1350 (Part 1): 1984 (RA 2013)	0.05 % to 20 %
		Gross Calorific Value	IS 1350 (Part 2): 1970 (RA 2015)	1500 kcal/kg to 6800 kcal/kg