

Laboratory	Nutech Surveyors & Analysts Private Limited, No.4, 3rd Floor, 5th Cross Street, Dr. Radhakrishnan Salai, Mylapore, Chennai, Tamil Nadu		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	18.09.2014
Certificate Number	T-3122	Valid Until	17.09.2016
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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I. COAL, COKE & OTHER SOLID FUEL

1. Coal	Moisture in analysis sample (MAS) Inherent Moisture (IM)		ASTM D 3173-11/ IS 1350 (Part-I) 1984 (RA 2001)	0.5% to 25%
	Volatile Matter (VM)		ASTM D 3175-11/ IS 1350 (Part-I) 1984 (RA 2001)	1.0% to 55%
	Ash		ASTM D 3174-12/ IS 1350 (Part-I) 1984 (RA 2001)	0.2% to 50%
	Fixed Carbon		ASTM D 3172-13 / IS 1350 (Part-I) 1984 (RA 2001)	25% to 90%
	Gross Calorific Value		ASTM D 5865-13/ IS 1350 (Part II)-1970 (RA 1994)	1500 to 8500 K.Cal / KG
	Carbon		ASTM D 5373-14	10% to 80 %
	Hydrogen		ASTM D 5373-14	2.5% to 15 %
	Nitrogen		ASTM D 5373-14	0.1% to 10 %
	Oxygen		ASTM S 3176-09	5% to 40%
	Sulphur		ASTM D4239-14 Method A / IS 1350 (Part III) 1969 (RA 2000)	0.01% to 5%
	Hard Groove Grindability Index (HGI)		ASTMD409/D409M-12/ IS 4433-1979) (RA 2000)	35 to 85

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2.	Coke	Moistue in analysis sample (MAS) Inherent Moisture (IM)	ASTM D 3173-11/ IS 1350(Part-I) 1984 (RA 2001)	0.2% to 5%
		Volatile Matter (VM)	ASTM D 3175-11/ IS 1350 (Part-I) 1984 (RA 2001)	1.0% to 15%
		Ash	ASTM D 3174-12/ IS 1350 (Part-I) 1984 (RA 2001)	0.2% to 20%
		Fixed Carbon	ASTM D 3172-13 / IS 1350 (Part-I) 1984 (RA 2001)	25% to 98%
		Gross Calorific Value	ASTM D 5865-13/ IS 1350 (Part II)-1970 (RA 1994)	1500 to 8500 K.Cal/KG
		Carbon	ASTM D 5373-14	10% to 80 %
			ASTM D 5373-14	2.5% to 15 %
		Hydrogen Nitrogen	ASTM D 5373-14	0.1% to 10 %
		Oxygen	ASTM S 3176-09	5% to 40%
		Sulphur	ASTM D4239-14 Method A IS 1350 (Part III) 1969 (RA 2000)	0.01% to 5%
3.	Charcoal	Moistue in analysis sample (MAS) Inherent Moisture(IM)	ASTM D 3173-11/ IS 1350 (Part-I) 1984 (RA 2001)	0.1% to 20%
		Volatile Matter (VM)	ASTM D 3175-11/ IS 1350 (Part-I) 1984(RA 2001)	2% to 40%
		Ash	ASTM D 3174-12/ IS 1350 (Part-I) 1984 (RA 2001)	1% to 20%

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	Charcoal	Fixed Carbon	ASTM D 3172-13 / IS 1350 (Part-I) 1984 (RA 2001)	25% to 80%
		Gross Calorific Value	ASTM D 5865-13/ IS 1350 (Part II)-1970 (RA 1994)	1000 to 8500 K.Cal/KG
		Sulphur	ASTM D4239-14 Method A / IS 1350 (Part III)1969 (RA 2000)	0.01% to 5%
4.	Briquetted Solid Fuels	Moistue in analysis sample (MAS) Inherent Moisture (IM)	ASTM D 3173-11/ IS 1350 (Part-I) 1984 (RA 2001)	0.1% to 25%
		Volatile Matter (VM)	ASTM D 3175-11/ IS 1350 (Part-I) 1984 (RA 2001)	0.5% to 50%
		Ash	ASTM D 3174-12/ IS 1350 (Part-I) 1984 (RA 2001)	1% to 25%
		Fixed Carbon	ASTM D 3172-13 / IS 1350 (Part-I) 1984 (RA 2001)	25% to 85%
		Gross Calorific Value	ASTM D 5865-13/ IS 1350 (Part II)-1970 (RA 1994)	500 to 8000 K.Cal/KG
		Sulphur	ASTM D4239-14 Method A / IS 1350 (Part III) 1969 (RA 2000)	0.01% to 5%

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