

Laboratory	Mangalore Laboratory, Indian Oil Corporation Limited, Panambur, Mangalore, Karnataka		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	06.10.2015
Certificate Number	T-1319	Valid Until	05.10.2017
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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
I.	PETROLEUM PRODUCTS			
1.	Naphtha	Aromatics/Olefins, Vol %	IS 1448 (Part 23): 2004 IP 156: 2008 ISO 3837: 1993 ASTM D 1319: 2013	Aro: 5 to 99 Ole: 0.3 to 55
2.	HSD, LDO, FO	Ash Content, Wt. %	IS 1448 (Part 4): 2008 IP 4: 2005 ISO 6245: 2001 ASTM D 482: 2013	0.001 to 0.18
3.	Lubes	Ash Content (Sulphated), Wt. %	IS 1448 (Part 4): 2002 IP 163: 1996 ISO 3987: 2010 ASTM D 874: 2007	0.005 to 2.0
4.	HSD	Cetane Index (Calculated)	IP 380: 2008 ISO 4264: 2007 ASTM D 4737: 2010	32.5 to 65
5.	MS, LDO, SKO, HSD	Copper Strip Corrosion Test, Rating	IS 1448 (Part 15): 2010 IP 154: 2000 ISO 2160: 1998 ASTM D 130: 2012	1 to 4
6.	SKO, Naphtha.	Colour (Saybolt), colour units	IS 1448 (Part 14): 2003 ASTM D 156: 2012	(-)16 to (+)30
7.	HSD, Lubes	Colour (ASTM), colour units	IS 1448 (Part 12): 2003 IP 196: 2011 ISO 2049: 1996 ASTM D 1500: 2012	0.5 to 8.0

Anuja Anand
Convenor

N. Venkateswaran
Program Manager

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8.	FO, Naphtha	Calorific Value, Cal/g	IS 1448 (Part 7): 2004	10,000 to 12,000
9.	MS, HSD, SKO, FO, LDO, Naphtha	Density by Hydrometer, kg/m ³	IS 1448 (Part 16): 2007 IP 160: 1999 ISO 3675: 1998 ASTM D 1298: 2014	0650 to 1000
10.	MS, HSD, SKO, Naphtha	Distillation, deg C	IS 1448 (Part 18): 2010 IP 123: 2011 ISO 3405: 2010 ASTM D 86: 2012	30°C to 400°C
11.	MS	Existent Gum, mg/100mL	IS 1448 (Part 29): 2010 IP 131: 1999 ISO 6246: 1995 ASTM D 381: 2012	1 to 10
12.	HSD, SKO	Flash Point (Abel), °C	IS 1448 (Part 20): 2008 IP 170: 2009 ISO 13736: 1997	19 to 70
13.	HSD, LDO, FO, Lubes	Flash Point (P&M), °C	IS 1448 (Part 21): 2012 IP 34: 2003 ISO 2719: 2002 ASTM D 93: 2013	40 to 360
14.	HSD, LDO, Lubes	KV @40 °C, cSt	IS 1448 (Part 25): 2007 IP 71: 1997 ISO 3104: 1994 ASTM D 445: 2014	1.5 to 80

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15.	FO	KV@ 50 °C, cSt	IS 1448 (Part 25): 2007 IP 71: 1997 ISO 3104: 1994 ASTM D 445: 2014	10 to 380
16.	Naphtha	Non volatile matter, mg/100 ml	IS 1448 (Part 64): 1998	0.5 to 30
17.	HSD, LDO, FO	Pour Point, °C	IS 1448 (Part 10): 2013 IP 15: 2004 ISO 3016: 1994 ASTM D 97: 2012	(-) 15 to (+) 51
18.	HSD, LDO, FO	Sediments by Extraction, Wt. %	IS 1448 (Part 30): 2008 IP 53: 2000 ISO 3735: 1999 ASTM D 473: 2012	0.01 to 0.4
19.	SKO	Smoke Point, mm	IS 1448 (Part 31): 2008 IP 57: 2003 ISO 3014: 1993 ASTM D 1322: 2012	5 to 30
20.	HSD	Sulphur by ED XRF, mg/kg	IP 336: 2004 ISO 8754: 2003 ASTM D 4294: 2010	0.0017 to 4.6
21.	SKO, LDO, FO	Sulphur by ED XRF, Wt %	IP 336: 2004 ISO 8754: 2003 ASTM D 4294: 2010	0.0017 to 4.6
22.	MS	Sulphur by ED XRF, mg/kg	IP 336: 2004 ISO 20847: 2004	30 to 500

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23.	MS, Naphtha	Vapour Pressure – Reid, kPa	IS 1448 (Part 39): 2003 IP 69: 2008 ISO 3007: 1999 ASTM D 323: 2014	< 180
24.	HSD, LDO, FO	Water Content by Dean & Stark, Vol %	IS 1448 (Part 40): 2006 IP 74: 2000 ISO 3733: 1999 ASTM D 95: 2013e1	0.0 to 25

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