

Laboratory Quality Control Laboratory, Hindustan Petroleum Corporation Ltd.,
Kandla Terminal, Khari Rohar Road, Gandhidham-Kutch, Gujarat

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 07.03.2015

Certificate Number T-2472 **Valid Until** 06.03.2017

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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				
1.	MS, HSD, HFHSD, SKO, FO, LDO,	Appearance	Visual	Qualitative
		Colour	Visual	Qualitative
		Density @ 15°C/20°C	IS 1448 (Part 1): 1990 (RA 2013) IS 1448 (Part 32): 1992 (RA 2008) ASTM D 1298-2012B ISO 3675-98 D 4052-2011	(650 to 1000) kg/m ³ 0 to 3000
		Sulphur	ISO 20847-2004 ISO 8754-03 ASTM D 4294-10	(15 to 100) mg/kg (101 to 1000) mg/kg (0.01 to 0.5) % (0.5 to 5.0) %
		Copper Strip Corrosion 3 hours at 50°C/100 °C	IS 1448 (Part 15): 2004 (RA 2011) ISO 2160 -1998 ASTM D 130-2012	ASTM 1a to 4b units
2.	SKO	Saybolt Colour	IS 1448 (Part 14): 1960 (RA 2013) ASTM D 156-2012	(-) 16.0 to 30.0
		Smoke point	IS:1448 (Part 31): 1968 (RA 2013) ASTM D 1322-2008/ ISO 3014 -1993	(10 to 45) mm

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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
3.	FO, LDO	Relative Density@ 15 °C	IS 1448 (Part 32): 1992 (RA 2008)	0.700 to 1.000
4.	MS, HSD/HFHSD, SKO	Distillation Recovery @ 70 °C Recovery @ 100 °C Recovery @ 150 °C Recovery@200 °C Recovery @350 °C /360 °C /370 °C	IS 1448 (Part 18): 1991 (RA 2011) ASTM D 86-2012 ISO 3405-2011	0 to 100 % by vol. 0 to 100 % by vol. 0 to 100 % by vol. 0 to 100 % by vol. 0 to 100 % by vol.
		IBP/Final Boiling Point/ End Point/Dry Point	IS 1448 (Part 18): 1991 (RA 2011) ASTM D 86-2012 ISO 3405-2011	30 °C to 380 °C
		Residue	IS 1448 (Part 18): 1991 (RA 2011) ASTM D 86-2012 ISO 3405-2011	0 to 50% by Vol.
5.	MS	Existent Gum	IS 1448 (Part 29): 2004 (RA 2011) ISO 6246 -1995 ASTM D 381-12	(0 to 500) g /m ³ or mg/100 ml
		RON	IS 1448 (Part 27): 2013 ASTM D 2699-2013B ISO 5164-2005	40 to 110
6.	HSD, SKO	Flash Point (Abel)	IS 1448 (Part 20): 1998 (RA 2013) IP 170-1999 ISO 13736 -2008	(10 to70) °C

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7.	HSD/HFHSD, SKO, FO, LDO	Flash Point (PMCC)	IS1448 (Part 21): 2012 ASTM D 93-2011 / ISO 2719-02	(30 to 380) °C
		Pour Point	IS 1448 (Part 10/ Sec 1): 2012 IS 1448 (Part 10/Sec 2): 2013 ASTM D 97-2011 ISO 3016-1994	(-) 27 °C to 51 °C
8.	HSD/HFHSD, LDO	Kinematic Viscosity @40°C	IS 1448 (Part 25): 1976 (RA 2013) ASTM D 445-2010 ISO 3104-94	(0.1 to 500) cSt
		Calculated Cetane Index (CCI)	ASTM D 4737-10 ISO 4264 -2007 IP 380-1998 IS 1448 (Part 9): 2013	Upto 90
9.	FO	Kinematic Viscosity 50°C	IS1448 (Part 25): 1976 (RA 2013) ASTM D 445-2010 ISO 3104-1994	(1 to 500) cSt
		Calculated Carbon Aromaticity Index (CCAI)	ISO 8217: 2012 Annex F	750 to 950
		Gross Calorific value	IS 1448 (Part 7): 2004 (RA 2011)	(0 to 15000) Cal / g
10.	FO, LDO	Water content	IS 1448 (Part 40): 1987 (RA 2011) ASTM D95-13e1 ISO 3733 -99	(0 to 25) % by Vol.

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	FO, LDO	Total sediments	IS 1448 (Part 30): 2013 ASTM D 473-07 (RA 2012) ISO 3735 -1999 ISO 10307-1: 2009 ISO 10307-2: 2009	(0 to 1) % by mass
		Ash Content	IS 1448 (Part 4): 2008 (RA 2013) ASTM D 482-2013 ISO 6245 -2001	(0.001 to 0.200) % by mass
		Relative Density @ 15 °C	IS 1448 (Part 32): 1992 (RA 2008)	0.700 to 1.000

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