

Laboratory **Quality Control Laboratory, Chennai Petroleum Corporation Limited,
Manali, Chennai, Tamil Nadu**

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

Discipline **Chemical Testing** **Issue Date** **05.08.2014**

Certificate Number **T-1794** **Valid Until** **04.08.2016**

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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
			BIS 1448	IP	ISO	ASTM D	
I.	PETROLEUM						
1	JetA1/JP5/NapMS	Aromatics	P-23 2004 RA 2010	156/08	---	1319-13	5 to 55 % vol
	JetA1/JP5/NapMS	Olefins	P-23 2004 RA 2010	156/08	---	1319-13	0.3 to 40 % vol
2	HSD	Carbons residue (Micro method)		398/96 (2004)	10370 1993	4530-11	0.10 to 30 %
3	HSD	Cetane Index (Cal)	-	380/08	4264 2007	4737-10	32.5 to 65
4	Jet A1,JP5 MS,SKO, HSD (all grades)	Copper Corrosion Test	P-15 2004 RA 2010	154/13	2160 1998	130-12	Rating 1 to 4
5	SKO/JetA1/ JP-5	Colour (Saybolt)	P-14 1960 RA 2003	--	--	156-12	(-) 16 to (+) 30 color units

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			BIS 1448	IP	ISO	ASTM D	
6	HSD, LOBS	Colour (ASTM)	P-12 1967 RA 2008	196/97 (2011)	--	1500-12	0.5 to 8.0 color units
7	Naphtha, Jet A1, Kerosene, LOBS	Colour (Tristimulus method)				6045-12	ASTM 0.0 to 8.0 Saybolt 0 to +30
8	HSD	Cold Filter Plugging Point		309/99		6371-10	-30 to +30°C
9	FO, Naphtha	Calorific Value (cal)	P-7 2004 RA 2010	--	--		10,000 to 12,000 Cal/g
10	Jet A1,JP5, MS,HSD,SKO, Hexane, Naphtha	Density	--	365/97 (2004)	12185 1996	4052-11	680.0 to 970.0 g/ml
11	Jet A1, JP5 , HSD, SKO,	Distillation	P-18- 1991 RA 2010	123/11	3405 2000	86-12	30 to 370°C
12	Jet A1,JP5 , MS, HSD, SKO, Hexane, Naphtha	Distillation	--	--	--	7345-10	20 to 400 °C

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			BIS 1448	IP	ISO	ASTM D	
13	Jet A1	Electrical Conductivity	148- 2002 RA 2007	274/09	--	2624-09	15 to 1500 pS/m
14	Jet A1,JP5	Freezing Point (Automatic laser method)		529/12	--	7153-10	+20 to – 70°C
15	Jet A1 HSD,SKO	Flash Point (Abel)	P-20 1998 RA 2007	170/09	13736 1997	-	(-) 5 to (+) 66.5°C
16	JP5, HSD,FO, LOBS	Flash Point (PMCC)	P-21 1992 RA 2008	34/03	2719 2002	93-13	60 to 200°C
17	LOBS	Flash Point (COC)	P-69 2013	36/02	2592- 2000	92-12	79 to 350°C
18	Jet A1,JP-5	Kinematic Viscosity @-20 °C	P-25 1976 RA 2002	71/97	3104 1994	445-12	2 to 10 cSt
19	HSD	Kinematic Viscosity @40°C	P-25 :1976 RA 2002	71/97	3104 1994	445-12	2 to 20 cSt

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			BIS 1448	IP	ISO	ASTM D	
20	LOBS	Kinematic Viscosity @40°C	P- 25:19 76 RA 2002	71/97	3104 1994	445-12	5 to 600 cSt
21	FO(all grades)	Kinematic viscosity @ 50°C	P- 25:19 76 RA 2002	71/97	3104 1994	445-12	10 to 400 cSt
22	LOBS	Kinematic Viscosity @ 100°C	P- 25:19 76 RA 2002	71/97	3104 1994	445-12	2 to 50 cSt
23	HSD, LOBS	Kinematic Viscosity @40°C	--	--	--	7042-12	0.8 to 31.6 cSt
24	LOBS	Kinematic Viscosity @40°C	--	--	--	7042-12	5 to 600 cSt
25	Jet A1	Lubricity (BOCLE)	---	---	---	5001-10	0.400 to 0.900
26	HSD	Lubricity (HFRR)	---	450/00	12156	---	200 to 1000 μ

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			BIS 1448	IP	ISO	ASTM D	
27	HSD, LOBS	Pour Point				5949-10	(-) 57 to (+) 15°C
28	SKO/ HSD /JetA1/ JP-5/FO	Sulphur by ED XRF	--	336/04	8754 2003	4294-10	0.0017 to 4.6 % mass
29	MS. Naphtha HSD	Sulphur-EDXRF	---	496/13	20847 2004	---	30 to 500 mg/kg
30	BS IV HSD BS IV MS Hexane	Sulphur (UV fluorescence)	-	390/11	20846 2004	5453-12	1 to 500 ppm
31	Jet A1, JP5	Specific Energy	--	--	---	3338-09	40 to 48 MJ/kg
32	Jet A-1	Thermal oxidation stability (JFTOT)	--	323/13		3241-13	Qualitative
33	JetA-1	Water separation Characteristics (MSEP)	--	--	--	3948-13	50 to 100
34	MS	Research Octane Number	P-27 2013	--	--	2699-13	40 to 100
35	Jet A1, JP5	Existent Gum	P-29: 2004 RA 2010	131/99	6246	381-12	1-50 mg/100ml

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			BIS 1448	IP	ISO	ASTM D	
36	Jet A1, JP5	Naphthalene	P- 118: 1985 RA 2007	--	--	1840-07 RA 2013	0.01 to 5.00%
37	Jet A1, JP5	Particulate contamination		423/10		5452-08	0.05-1.0 mg/L
38	Jet A1, JP5	Mercaptan Sulphur	P- 109: 2004 RA 2010	342 2000	3012	3227-04 Re approved 2010	0.0003 to 0.01%
39	Jet A1, JP5	Total Acidity	P- 113: 1983 RA 2010	354/09	--	3242-11	0.001 to 0.1000 mg KOH/g
40	Jet A1, JP5	Smoke point	P- 31:19 68 RA 2008	57/95 (2013)	3014: 93	1322-12	Qualitative

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			BIS 1448	IP	ISO	ASTM D	
41	Jet A1, JP5	Water Reaction	P- 42:19 77 RA 2010	289/06	---	1094-07	Interface condition 1-4
42	Jet A1	Level of Cleanliness in ATF (Automatic Particle counter method)	--	564/11	--	--	4µm to 30 µm

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