

Laboratory Haldia Laboratory, Indian Oil Corporation Ltd. (M.D.), Haldia
Installation, PO: Haldia Oil Refinery, Dist: Midnapore (East), Haldia,
West Bengal

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6970 *(in lieu of T-1277)* **Page 1 of 3**

Validity 01.03.2018 to 28.02.2020 **Last Amended on** 05.03.2018

Sl.	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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CHEMICAL TESTING

I.	PETROLEUM			
1.	MS, NAPHTHA, SKO, JET A-1, HSD, HFHSD, LDO,FO	Appearance	IOCM MGS-1/2016; Edition:01; 15.06.2016	Qualitative
2.	MS, NAPHTHA, SKO, JET A-1, HSD, HFHSD	Colour, Visual	IOCM MGS-1/2016; Edition:01; 15.06.2016	Qualitative
3.	NAPHTHA,SKO, JET A-1,	Colour, Saybolt	IS 1448 : (P 14):1960 (RA 2008) ASTM D156 – 2015	(-)16 Color Units to +30 Color Units
4.	HSD,HFHSD	Colour, ASTM	ASTM D1500 :2012	0.5 Color Units to 8.0 Color Units
5.	MS, NAPHTHA, SKO, JET A-1, HSD, HFHSD, LDO,FO	Density	IS 1448 : (P 16) : 2014 ASTM D1298 – 12b (2017)	600 kg/m ³ to 1050 kg/m ³
6.	MS, NAPHTHA, SKO, JET A-1, HSD, HFHSD	Distillation: IBP, Recovery at 200°C , FBP , Residue , Loss	IS 1448 : (P 18) :1991 (RA 2010) ASTM D86 - 2017	0 to 400 °C 0 to 100 %v/v 0 to 400 °C 0 to 5 % v/v
7.	MS, NAPHTHA,SKO, JET A-1, HSD, HFHSD	Copper Strip Corrosion Test, Rating	IS 1448 : (P 15) :2004 (RA 2010) ASTM D130 - 2012	1 to 4 Rating
8.	SKO,JET A-1	Silver Strip Corrosion Test, Rating	IP 227:1999	0 to 4 Rating

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9.	MS, NAPHTHA, SKO, JET A-1, HSD, HFHSD, LDO,FO	Sulphur content	ASTM D4294-16e1/ ISO 20847-2004	0.0017%w/w to 4600%w/w
10.	MS JET A-1	Existent Gum	IS 1448 : (P 29) :2004 (RA 2010) ASTM D381 – 12(2017)	0 to 50 gm/m ³ 0 to 10 mg/100 ml
11.	SKO , JET A-1	Smoke Point	IS 1448 : (P 31) :1991 (RA 2010) ASTM D1322 - 15e1	1 mm to 40 mm
12.	SKO, JET A-1, HSD, HFHSD	Flash Point, Abel Closed Cup	IS 1448 : (P 20) :1998 (RA 2008) IP 170 – 2014	19 °C to 66.5 °C
13.	HSD,HFHSD,LDO, FO	Flash Point, PMCC	IS 1448 : (P 21) : 2012 ASTM D93 - 13e1	40°C to 110 °C
14.	HSD, HFHSD,LDO	Kinematic Viscosity at 40° C	IS 1448 : (P 25) :1976 (RA 2007) ASTM D445 – 17a	0.5 cSt to 20 cSt
15.	HF HSD,FO,LDO	Water Content	IS 1448 : (P 40) :1987 (RA 2011)	0.05% v/v to 25 % v/v
16.	HSD , HFHSD, LDO,FO	Pour Point	IS 1448 : (P 10) :2013 ASTM D97 – 17	(-)24°C to +30°C
17.	JETA-1	Freezing Point	IS 1448 : (P 11) :2004 (RA 2010) ASTM D2386 – 15e1	(-)30°C to 60°C
18.	JETA-1	Doctors Test	IS 1448 (P 19) : 1989 (RA 2002)	+ve/-ve
19.	JETA-1	Water Reaction (Interface Condition)	IS 1448 (P 42) : 1977 (RA 2006)	1 Rating to 4 Rating
20.	JETA-1	Electrical Conductivity	IP 274:2017	0 to 2000 pS/m

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21.	LDO,FO	Sediment Content	IS 1448 : (P 30) :1970 (RA 2003)	0.01% w/w to 10 % w/w
22.	FO	Kinematic viscosity at 50°C	IS 1448 : (P 25) :1976 (RA 2007) ASTM D445 – 17a	50 cSt to 450 cSt