

**Laboratory** Regional Laboratory, Indian Oil Corporation Limited, Korukkupet Terminal, Kathivakkam High Road, Korukkupet, Chennai, Tamil Nadu

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

**Certificate Number** TC-6676 (in lieu of T-0312) **Page 1 of 5**

**Validity** 21.12.2017 to 20.12.2019 **Last Amended on** 26.12.2017

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.	<b>PETROLEUM AND PRODUCTS</b>			
1.	<b>ATF Jet A-1, ATF High Flash Point</b>	Acidity, Total	IS 1448 P-113-2006, IP 354-2009 ASTM D3242 -2017	0 to 0.1 mg of KOH/g
		Doctor Test	IS 1448 P19-07 (RA 2013) IP 30-2014	Qualitative (Presence or Absence)
		Existent Gum with Air	IS 1448 P-29 2004 (RA 2011) IP 540-1999	1 to 10 mg/100 ml
		Kinematic Viscosity @ - 20°C	IS 1448 P-25 1976 (RA 2013), IP 71-1997 (RA 2004), ISO 3104-1997, ASTM D445-2017a	1 cSt to 10 cSt
		Silver Corrosion Test	IP 227-1999	Qualitative (0 to 4 Rating)
		Sulphur Mercaptans	IS 1448 P-109 2004 (RA 2011) IP 342-2014, ISO 3012-1999, ASTM D3227-2016	0.0003 to 0.01% by mass
		Naphthalene Content	IS 1448 P-118 1993/ (RA 2013) ASTM D1840-07 (RA 2013)	0.1 to 5 % by vol
2.	<b>Aviation Gasoline</b>	API Gravity and Aniline Point	IS 1448 P 3-2007 (RA 2013), ISO 2977- 1997, IP-2:2014 ASTM D611-2016 IS 1604-2012	7000 to 9000

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3.	ATF Jet A-1, ATF High Flash Point , Motor Gasoline	Aromatics/ Olefins	IS 1448 P-23 2004 (RA 2011), IP 156-2008, ISO 3837-1996, ASTM D1319-2015	A: 5 to 99% vol O : 0.3 to 55%vol
4.	Automotive Diesel Fuel, Light Diesel Oil, Fuel Oil	Ash Content	IS 1448 P-4 2008 (RA 2013), IP 4-2012, ISO 6245-2001, ASTM D482-2013	0.001 to 0.18% by mass
5.	Automotive Diesel Fuel, Light Diesel Oil	Carbon Residue (Rams Bottom)	IS 1448 P-8: 2012 IP-14:2004 ISO 4262:1993 ASTM D 524: 2015	0.01 to 15% by wt.
6.	Automotive Diesel Fuel	Cetane Index	IP 380-2004, ISO 4264-2013, ASTM D4737-2016	40 to 60
7.	ATF Jet A-1, ATF High Flash Point , Aviation Gasoline, Motor Gasoline, Kerosene, Automotive Diesel Fuel, Light Diesel Oil.	Copper Strip Corrosion Test	IS 1448 P-15 2004 (RA 2011), IP 154-2013, ISO 2160-1998, ASTM D130-2012	Qualitative (Rating 1 to 4)
8.	Kerosene, ATF Jet A-1, ATF High Flash Point	Colour (Saybolt)	IS 1448 P-14 2003 (RA 2013), ASTM D156-2015	(-)16 to (+) 30 colour units
9.	Automotive Diesel Fuel	Colour (ASTM)	IS 1448 P-12 2013, IP 196-2014, ASTM D1500-2012, ISO 2049:1996	0.5 to 8.0 colour units
10.	Fuel Oil, Naphtha	Calorific Value	IS 1448 P-7 2004 (RA 2011)	9000 to 12000 cal/g

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11.	ATF Jet A-1, ATF High Flash Point, Aviation Gasoline, Naphtha, Motor Gasoline, Diesel, Kerosene, Fuel Oil, Light Diesel Oil.	Density	IS 1448 P16-2014, IP 160-1999, ISO 3675-1998, ASTM D1298-2012b	0.6 to 1 g/ml
12.	ATF Jet A-1, ATF High Flash Point, Aviation Gasoline, Motor Gasoline, Automotive Diesel Fuel, Kerosene, Naphtha	Distillation	IS 1448 P-18 2006 (RA 2011), IP 123-2011 (RA 2014), ISO 3405-2011, ASTM D86-2017	30°C to 370 °C
13.	Aviation Gasoline, Motor Gasoline, Naphtha	Existent Gum	IS 1448 P-29 2004 (RA 2011) IP 131-1999 ISO 6246-1998 ASTM D 381-2017	1 to 40 gm/m <sup>3</sup>
14.	ATF Jet A-1	Electrical Conductivity	IS 1448 P148-2002 (RA 2013) IP 274-2009 ISO 6297-2002 ASTM D2624-2015	15 pS/m to 1500 pS/m
15.	ATF Jet A-1, ATF High Flash Point, Aviation Gasoline	Freezing Point	IS 1448 P-11 2004 (RA 2011), IP 16-2014, ISO 3013-1997, ASTM D2386-06(RA 2015)	(+) 20 to (-) 70°C
		Water Reaction	IS 1448 P-42 2006 (RA 2011), IP 289-2006 ASTM D1094-07 : 2013	Qualitative (1 to 4 Rating)

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16.	ATF Jet A-1, Automotive Diesel Fuel, Kerosene	Flash Point (Abel)	IS 1448 P-20 2004 (RA 2013), IP 170-2014, ISO 13736-2013	19°C to 70°C
17.	ATF High Flash Point, Automotive Diesel Fuel, Light Diesel Oil, Fuel Oil	Flash Point(PMCC)	IS 1448 P-21 2012, IP 34-2003, ISO 2719-2002, ASTM D93 -2016A	40°C to 360°C
18.	Automotive Diesel Fuel, Light Diesel Oil, Fuel Oil	Kinematic Viscosity at 40 & 50 C	IS 1448 P-25 1976 (RA 2013), IP 71-1997 (RA 2004), ISO 3104-1997, ASTM D445-2017a	1 cSt to 107 cSt
19.	Naphtha	Non Volatile Matter	IS 1448 P-64: 2004	0.5 to 30 mg/100ml
20.	Motor Gasoline	Research Octane Number	IS 1448 P-27: 2013, ASTM D2699: 2012	60 to 100
21.	Automotive Diesel Fuel, Light Diesel Oil, Fuel Oil	Pour Point	IS 1448 P-10 2013, IP 15- 2014, ISO 3016-1994, ASTM D97-2017A	(-) 15 to (+) 51°C
		Sediments by Extraction	IS 1448 P-30 2013, IP 53-2014, ISO 3735-1999, ASTM D473-2017	0.01 to 0.4, %by wt
22.	ATF Jet A-1, ATF High Flash Point, Kerosene	Smoke Point	IS 1448 P-31 - 2007 (RA 2013), IP 57-1995 : 2013, ISO 3014- 1993, ASTM D1322 – 2015	10 mm to 30 mm
23.	Automotive Diesel Fuel, Motor Gasoline, Naphtha	Sulphur	IS 1448 P153-2012 IP 336-2004, ISO 20847-2004, ISO 8754-2003, ASTM D4294-2016 (ED XRF)	3 ppm to 1000 ppm

