

Laboratory Indian Oil Corporation Ltd., Ratlam Laboratory, Ratlam Terminal,
Village : Bangrod, Ratlam, Madhya Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Discipline Chemical Testing **Issue Date** 14.10.2013

Certificate Number T-2017 **Valid Until** 13.10.2015

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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	JET A-1 (ATF)	Acidity Total	P-113: 2006	0 to 0.1000 mg KOH/g
2	JET A-1 (ATF)	Aromatics, Olefins	P-23:2004 (RA 2010)	5 to 99 %
3	HSD	Cetane Index (by Cal)	ASTM D-4737:2010	32.5 to 56.5
4	MS/SKO/ HSD/JET A-1 (ATF)	Copper Strip Corrosion test	P-15:2004 (Rev3March2011)	Rating: 1 to 4
5	SKO/JET A-1(ATF)	Colour (Saybolt)	P-14:2003 (RA Sep-2008)	+ 10 Min. to +30 max.
6	MS/SKO/ HSD/ JET A-1(ATF)	Density by Hydrometer	P-16:2007	MS: 700 to 800 SKO: 750 to 850 HSD: 800 to 900 JET A-1: 750 to 850
7	MS/SKO/ HSD/ JET A-1(ATF)	Distillation	P-18:2006 (Rev3March2011)	MS: 30°C to 210°C SKO: 30°C to 300°C HSD: Upto 360°C JetA-1: 30°C to 300°C
8	JET A-1 (ATF)	Doctor Test	P-19:2007	+ ve / - ve
9	MS/JET A-1(ATF)	Existent Gum	P-29:2004 (Rev3March2011)	MS: Upto 40 mg/100 ml JetA-1: 0.5 to 300 mg/100 ml
10	JET A-1 (ATF)	Electrical Conductivity	ASTM D-2624:1995	15 to 1500 pS/m
11	JET A-1 (ATF)	Freezing Point	P-11:2004 (Rev4March2010)	- 80 to 20°C

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12	SKO/HSD/JET A-1(ATF)	Flash Point(Able)	P-20:2004 (Rev1Jan2008)	19 to 70°C
13	HSD/JET A-1(ATF)	Kinematic Viscosity @40°C (-20°C)	P-25:2007	2 to 4.5 cSt 2.0 to 5.0 cSt
14	JET A-1 (ATF)	Mercaptan Sulphur	P-109:2004	0.003 to 0.01%
15	JET A-1 (ATF)	Naphthalene	P-118:2007	0 to 5%
16	HSD	Pour Point	P-10:2003	- 6 to 15 °C
17	JET A-1(ATF)	Silver Strip corrosion	IP-227:1993	Rating 0 to 4
18	SKO/JET A-1(ATF)	Smoke Point	P-31:2003	10 to 50 mm
19	MS/HSD/JET A-1(ATF)	Sulphur content by XRF	ISO-20847:2004	MS: 0 to 150 mg/kg HSD: 0 to 350 mg/kg JetA-1: 0.01 to 0.30%
20	JET A-1(ATF)	Specific Energy	P-148:2007	35 to 50 Net MJ/kg
21	JET A-1(ATF)	Water Reaction	P-42:2006	1 to 4

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