

Laboratory **Bharat Petroleum Corporation Ltd., Quality Assurance Laboratory,
Patna TOP, Village-Sipara, P.O. At Pakri (Via-Anisabad), Patna, Bihar**

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

Certificate Number **TC-6302**

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Validity **18.09.2017 to 17.09.2019**

Last Amended on --

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 AND PRODUCTS			
1.	MS/HSD/SKO/ Ethanol	Appearance	WI-02a (Issue No. I dated 01.04.2017)	Qualitative
2.	MS	Aromatics	IS 1448 (Part 23)	5% by vol. to 60% by vol.
		Olefins Content,	ASTM D: 1319	0.3% by vol. to 55% by vol.
3.	HSD	Cetane Index, (Calculated)	ASTM D-4737-10	0 to 65
4.	SKO/ATF	Colour Saybolt	IS 1448(Part 14) ASTM D:156-15	(-)16 to 30 units
5.	MS/HSD/SKO	Colour	WI-03 (Issue No. I dated 01.04.2017)	Qualitative (Visual)
		Cu Strip Corrosion	IS 1448(Part 15) ASTM D-130	1a unit to 4c unit (Qualitative)
		Density	IS 1448(Part 16) ASTM D1298-12b	0.660 g/ml to 1.00 g/ml
6.	MS/HSD/SKO/ATF	Distillation	IS 1448 (Part 18)	
		Temperature (IBP, FBP °C)	ASTM D-86	30°C to 400°C
		Recovery		5% by vol. to 99% by vol.
		Residue / Loss		0 to 5
7.	MS	Ethanol Content	IS 2796 (Annexure E)	0 to 10% by vol.
8.	Ethanol	Ethanol Content at 15.6/15.6°C	IS 15464 (Annexure B)	94% by vol. to 100% by vol.
9.	MS	Gum content	IS 1448 (Part 29) ASTM D-381-12	0 to 100 g/m ³
10.	HSD/SKO/ATF	Flash Point (Abel)	IS 1448 (Part 20) IP 170-14	(-)19°C to 70°C
11.	HFHSD	Flash Point (Pensky Marten)	IS 1448(Part 21) ASTM D93-16	40°C to 350°C
12.	HSD	Kinematic Viscosity at 40°C	IS 1448 (Part 25) ASTM D445	1.0 cSt to 200 cSt
		Kinematic Viscosity at 40°C	ASTM D 7042-14	1.0 cSt to 400 cSt

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13.	Ethanol	Miscibility with Water	IS 15464 (Annex-C)	Qualitative (Miscible / Immiscible)
14.	HSD	Pour Point	IS 1448 (Part 10) ASTM D 97-17a	(-)39°C to 50°C
15.	Ethanol	Relative Density at 15.6/15.6°C	IS 15464 (Annex-A)	0.60 to 0.85
16.	ATF/SKO	Smoke point	IS 1448 (Part 31) ISO 3014 ASTM D-1322-15e1	5 mm to 35 mm
17.	HSD/SKO/ATF	Sulphur, Total	ASTM D : 4294:16 IP336/03	0.0005% by mass to 0.05 % by mass (5 ppm to 500 ppm)
18.	MS	Sulphur, Total	ISO 20847 ASTM D 4294 P-153	0 to 500 ppm
II.	LUBRICANTS			
1.	Lubricants	Appearance	WI-02a (Issue No. I dated 01.04.2017)	Qualitative
		Colour ASTM	IS 1448(Part 12) ASTM D 1500-12	0 to 8.0 units
		Colour	WI-03 (Issue No. I dated 01.04.2017)	Qualitative (Visual)
		Crackle Test	WI-02A (Issue No. I dated 01.04.2017)	Qualitative (Positive / Negative)
		Cu Strip Corrosion	IS 1448(Part 15) ASTM D-130	1a unit to 4c unit (Qualitative)
		Density	IS 1448(Part 16) ASTM D1298-12b	0.660 g/ml to 1.00 g/ml
		Flash Point (COC)	IS 1448(Part 69) ASTM D : 92-16	80°C to 380°C
		Flash Point (Pensky Marten)	IS 1448(Part 21) ASTM D93-16	40°C to 350°C

Iti Saxena
Convenor

N. Venkateswaran
Program Director

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		Kinematic Viscosity at 40°C	IS 1448 (Part 25) ASTM D445	1.0 cSt to 200 cSt
		Kinematic Viscosity at 40°C	ASTM D 7042-14	1.0 cSt to 400 cSt
		Kinematic Viscosity at 100°C	IS 1448 (Part 25) ASTM D445	1.0 cSt to 25.0 cSt
		Kinematic Viscosity at 100°C	ASTM D 7042-16	1.0 cSt to 400 cSt
		Pour Point	IS 1448 (Part 10) ASTM D 97-17a	(-)39°C to 50°C
		Viscosity Index	IS 1448 (Part 56) ASTM D: 2270-10	85 to 150

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