

Petroleum Chemical & Gas Laboratory Testing Capabilities (Test Wise)

Sr .No.	Testing Parameter	ASTM	IP	ISO & Other
1	Acid Number	D664 D 974 D 3242	IP 139 IP 177 DIN 51558 Part 1	EN ISO 6618 EN ISO 6619
2	Acidity of Aviation Turbine Fuel, Colour-Indicator Titration			EN ISO 6618
3	Acid Number Fat and Oil derivatives, Titration			EN ISO 14104
4	Acid Wash Colour	D 848		
5	Acidity	D 1613 D 2989		
6	Acidity, Aromatics	D 847		
7	Acidity in Aviation Turbine Fuel	D 3242	IP 354	
8	Alcohol Content (Free)	IS323		
9	Alkalinity	D 1614 D2106 D 2989		
10	Analysis of Natural Gas by GC	D 1945		
11	Aniline Gravity Product (excl. Density and Aniline Point)			Calculated
12	Aniline Point (Transparent Liquids)	D611A	IP2A	EN ISO 2977
13	API Gravity	D4052 D 5002	IP 365	EN ISO 12185
14	Density & Relative Density for engine coolant	D 5931		
15	API Gravity	D 1298	IP 160	
16	API Gravity - from Composition			Calculated
17	API Gravity (Elevated temperature)	D4052		
18	API Gravity at 15 °C	D4052		EN ISO 12185
19	API Gravity of LPG (Calculation only)	ASTM D2598		
20	Appearance	D 3741 D4176 E2680		Visual / EN ISO 15769
21	Aromatics	D 6379	IP 391	
22	Aromatics			UV SpecIMPCA 004-08
23	Aromatics (FIA)	D 1319		
24	Aromatics (HPLC)		IP 391	UOP495
25	Aromatics and Olefins	D6730		EN ISO 14517

26	Aromatics in Gasoline	D6730		SMS 2728
27	Aromatics, Olefins and Benzene	D6730		EN ISO 14517
28	Arsenic (Cold Vapour)			ICP/OES
29	Arsenic in Naphtha			ICP/OES
30	Ash Content (Residue on ignition)	D482	IP4 EN ISO 6884	EN ISO 6245
31	Ash, Sulphated Residue	D 874		
32	Asphaltenes	D6560	IP 143	Total 642
33	Base Number	D 2896	IP 276	
34	Basic Nitrogen	D4629		
35	Benzene	D6730 D4815		EN ISO 14517
36	Bromine Number	D 1159	IP 130	EN ISO 3839
	Testing Parameter	ASTM	IP	ISO & Other
37	Bromine Number on fraction upto 360°C	D 1159		
38	Burning Quality of Kerosene	D 187	IP 10	
39	C4 and Lighter	D2163 D6839		
40	Calorific Value (Gross)			Calculated
41	Carbon Residue (CCR)	D 189	IP 13	EN ISO 6615
42	Carbon Residue on 10% distillation (CCR)	D 189	IP 13	EN ISO 6615
43	Carbon Residue (Micro Method)	D4530	IP 398	EN ISO 10370
44	Carbon Residue (Micro Method) on 10% Distillation	D4530	IP 398	EN ISO 10370
	Carbonyl Number			UOP 624
45	CCAI - Aromaticity Index of Residual Fuel Oil			Calculated by EN ISO 8217
46	Cetane Index - excl. Distillation and Density	D976 D4737	IP 380	EN ISO 4264
47	Cetane Index - incl. Distillation and Density	D976 D4737		EN ISO 4264
48	Char Value	D 187	IP 10	
49	Chloride, Inorganic	D3634 D5194		Titri metric
50	Chlorine (Organic)	D4929		
51	Chloride (Inorganic)		IP 77	
52	Chloride (Inorganic) - Potentiometric			Potentiometric
53	Chlorine (Organic)	D5808		UOP 779
54	Cloud Point	D2500	IP 219 USPXXII	DIN EN 3015
55	Cold Filter Plugging Point	D6371	IP 309	EN ISO 116
56	Colour, APHA, Hazen, PtCo	D 1209		

57	Colour			Visual
58	Colour	D 1500 D2108	IP 196 IP 569	EN ISO 6271-2 EN ISO 2049
59	Colour, Automatic, Tristimulus	D 6045		
60	"Color of Liquids "	D5386		
61	Gardner and APHA Color	D4890		
62	Colour, Saybolt	D 156		DIN 51411
63	Compatibility	D4740		
64	Composition of LPG	D2163	IP 264	
65	Composition of mixed Xylene (incl Non-aromatics)	By GC		none
66	Composition of mixed Xylene (incl Non-aromatics, Benzene, Toluene and Styrene)	By GC		none
67	Composition of Natural Gas (C1-C6+) by GC	D1945	IP 345	
68	Conductivity	D2624	IP 274 ISO 6297	DIN 51412-2 EN ISO 15938
69	Copper			ICP
70	Copper Content Copper Content		IP 225	EN ISO 15837
71	Copper Corrosion	D 130	IP 154	EN ISO 2160
72	Copper Corrosion of Aromatics	D 849		
73	Copper Corrosion of LPG	D 1838	IP 411	EN ISO 6251
74	Crystallisation point / Solidification Point	D 1493		
75	Detailed Hydrocarbon Analysis (PIONA)	D6730		
76	Diene Number			UOP 326
77	Diesel index (calculation)		IP 21	
78	Dimer in Acrylic Acid	D4415		
	Testing Parameter	ASTM	IP	ISO & Other
79	Dioxane 1,4- / Purity of Benzene	D4492		
80	Distillation	D86 D850	IP 123	EN ISO 3405
81	Distillation of Aromatics	D850		
82	Distillation of Chemicals	D 1078		
83	Distillation curve	D86 D 1078		
84	Doctor Test in Gasses			Modified
85	Doctor Test	D4952	IP 30	EN ISO 5275
86	Driveability Index	D4814		
87	Density (LPG)-Calculation method			

	for Density & vapour pressure		IP 432	ISO 8973
88	DSEP on Gas Oil	D 7261		
89	Dynamic Viscosity (at 60 degrees Celcius)			EN ISO 12596
90	Ester Content	D 1617		
91	Ester Content			EN ISO 14103
92	Ethanol and Ether Content in Gasoline	D4815		EN ISO 13132 EN ISO 14517
93	Ethanol Purity	IS 323+GC		IS 323
94	Evaporation Residue	D381		
95	Existent Gum (unwashed)	D381	IP 131 IP 540	EN ISO 6246
96	Existent Gum (solvent washed)	D381	IP 131	EN ISO 6246
97	Fatty Acid Methyl Ester (FAME) in Diesel/Fuel Oil	D7371		
98	FIA (aromatics, olefins, saturates)	D 1319	IP 156	
99	Flash Point	D92 D93	IP 36 IP 170	EN ISO 3679 EN ISO 13736
100	Formic Acid	D3546		
101	Free Water Content			Visual
102	Freezing Point	D2386 D 1177	IP 16	
103	Group I Metals (Na + K) + Group II Metals (Ca + Mg)			EN ISO 14108 EN ISO 14109 EN ISO 14538
104	Gum - Potential 16 hours	D873	IP 138	
105	Gum - Potential 7 hours	D873	IP 138	
106	Haze Rating	D4176		
107	Heat of Combustion (calculated)	D4868		Calculated
108	Heat of Combustion (gross)	D240		
109	Heat of Combustion (incl. Ash, Density, Sulphur, Water)	D4868		EN ISO 8217
110	Heat of Combustion (incl Density, Aniline and Sulphur)	D4529		
111	Heat of Combustion (net) of Aviation Turbine fuel	D4529	IP 381	
112	Hydrogen Sulphide			UOP 163
113	Hydrogen Sulphide in Vapour Phase	D5705		
114	Hydrogen Sulphide and Sulphur Dioxide Conte	ntD853		
115	"Hydrogen content of Aviation Fuels"	D3343		
116	Induction Period (Oxidation	D 525		EN ISO 7536

	Stability)			
117	Infrared Scan			FTIR
118	Inhibitor in Styrene Momomer (TBC)	D4590		
119	Inhibitor in VAM (Hydroquinone)	D2193		
120	Inhibitor, Topanol A	D3125		
	Testing Parameter	ASTM	IP	ISO & Other
121	Insolubles in n-Heptane	D 3279		
122	Insolubles in Pentane	D893		
123	Insolubles in Pentane (mod)	D 893		
124	Insolubles in Toluene	D893		
125	Iron	E202 E 394		
127	Kinematic Viscosity	D445	IP 71	DIN 51562-1 EN ISO 3104
128	Kinematic Viscosity @ -20°C	D445	IP 71	
129	Lead	D 3341		EN ISO 3830
130	LPG Full Composition, basis one single columr	D2163		GC
131	MEG			GC In house
132	Mercaptan Sulphur	D 3227	IP 342	UOP 163
133	Mercury	ICP-Hydridegenerator		JLPGA -S-07
134	Metals (first metal)	D 5185		
135	Metals (each additional metal)	D 5185		
136	Metals (first metal)	D 7111		
137	Metals (each additional metal)	D 7111		
138	Metals (Ashing and Fusion) - AAS/AES (first metal)		IP 501	
139	Metals (Ashing and Fusion) - AAS/AES (each additional metal)		IP 501	
140	Metals by ICP MS in ppb (first metal)			ICP MS
141	Metals by ICP MS in ppb (each additional meta)			ICP MS
142	Metals - Aluminum/Silicon/Vanadium/Iron/ Sodium (Ashing and Fusion) AAS/AES (each)		IP 377 EN ISO 13131 EN ISO 13131	
143	Metals - Nickel/Vanadium/Iron (Solvent Dilution) - ICPEs (each)	D 5708A		
145	Metals - Nickel/Vanadium/Iron (Acid Digestion) - ICPEs (each)	D 5708B		

146	Methanol Content	D 5441		EN 15721
147	Methanol Content			EN ISO 14110
148	Micro Biological Contamination		IP 385	
149	MTBE or MTAE in Gasoline	D4815		EN ISO 13132
150	MTBE Purity	D 5441		
151	Naphthalenes	D 1840		
152	Nitrogen	D4629	IP 379	
153	Nitrogen Content by Kjeldahl	D 3228		NEN 5663
154	Nitrogen in HC Oxidative Combustion and Chemiluminescence	D4629		
155	Non Volatile Matter Content	D 1353 D2109		
156	Odour	D 1296 E 1075		Organoleptic
157	Olefins	D 1319	IP 156	
158	Oxidation Stability	D2274 D 525	EN ISO 15751 IP 388 IP 40	EN ISO 14112 EN ISO 12205 EN ISO 7536
159	Oxidation Stability + Potential Gum	D873		
160	Oxygen Content (calculated) (excludes cost of Oxygenates)	D4815		EN ISO 13132
161	Oxygenates and Oxygen Content in Gasoline by GC (% level) - full run	D4815		
162	Permanganate Time Test	D 1363		USPXXII
163	Peroxides	D2340		
164	Phosphorous	D3231	EN ISO 14107	EN ISO 15487
165	pH value	D 1287		pH indication paper
166	pH-value by pH meter	D6423 E70		NEN 6411
167	pH-value of Chlorinated Hydrocarbons	D2110		
168	PIONA - PONA - Composition	D6730		EN ISO 14517
169	Poly Aromatics	D6591		EN ISO 12916
170	Polycyclic Aromatic Content		IP 346	
171	Polycyclic Aromatic Hydrocarbons (PAH)		IP 391	EN ISO 12916
172	Polymer content in Styrene Monomer	D2121		
173	Polypropylene			BP Method SAM 1001
174	Pour Point	D97	IP 15	ISO 3016
175	Pour Point in Crude Oils	D 5853A or B	IP 441	

176	Purity Acetic Anhydride	E435 E 1616		
177	Acetone (>99.5%)	D329		
178	Purity of Methanol	GC		IMPCA 001-11
179	Purity of MIBK	GC		
180	Ramsbottom Carbon Residue	D524	IP 14	EN ISO 4262
181	Ramsbottom Carbon Residue on 10% Residue	D524	IP 14	
182	Reid Vapour Pressure (DVPE)	D 323	IP 69	EN ISO 3007
183	Relative Density of LPG (Calculation only)	D2598		
184	Residues in Liquefied Petroleum Gases	D2158	IP 317	
185	Rolling Thin Film Oven Test	D2872		
186	Salt	D3230	IP 265	
187	Salt	D6470	IP 77	
188	Saybolt Universal Viscosity (SUS) / Saybolt Furol Viscosity	D2161		
189	Sediment by Extraction	D473	IP 53	EN ISO 3735
190	Sediment in Crude Oil by Membrane Filtration	D4807		
191	Silver Corrosion	D4814		
192	Silver Corrosion		IP 227	
193	Smoke Point of Kerosene	D 1322 IP 598	IP 57	EN ISO 3014
194	Solidification Point	D852 D 5565		
195	Specific Energy - excl Distillation, Aromatics, Density and Sulphur	D3338		
196	Specific Energy - incl Distillation, Aromatics, Density and Sulphur	D3338 D 1298	IP 160	EN ISO 3675
197	Specific Gravity	D4052 D5002	IP 365	EN ISO 12185
198	Specific Gravity - from Composition			Calculated
199	Specific Gravity (Elevated Temperature)	D4052		
200	Specific Gravity of LPG (Calculation only)	D2598		EN ISO 8973
201	Stability	D4740		
202	Strong Acid Number	D974 IP 182	IP 177	EN ISO 6618
203	Base Number	D4739		
204	Sulfur Compounds in Natural Gas and Gaseous Fuels by GC and Chemiluminescence (Sulfur Speciation)	D 5504		

205	Sulphated Ash	D 874	IP 163	EN ISO 3987
206	Sulphur	D4294 D 5453	IP 336 IP 490	EN ISO 8754 EN ISO 15485
207	Sulphur compounds	D 853		
208	Suspended Sediments	D6217		NEN 6621
209	Thermal & Chemical Ageing of Residual Fuel Oils	D4870	IP 390 Part 2	EN ISO 10307-2
210	Thiophene	D 1685 D4735		
211	Toluene	D6730 D6839		
212	Total Acid / Base Number - TAN / TBN	D664 D 974	IP 177	
213	Total and Polycyclic Aromatic Hydrocarbons Content	D 6591/D6379		EN ISO 12916
214	Total Base Number	D4739		
215	Total Sediment - Existent - TSE	D4870	IP 375	EN ISO 10307-1
216	Total Sediment - Existent - TSE (in Slops)	D4870		
217	Total Sediment - Potential - TSP	D4870	IP 390A	EN ISO 10307-2
218	UV Absorbance / Transmittance	E2193		
219	Vapour Liquid Index (incl. RVP+Dist.)	D2533 D4814		
220	Vapour Lock Index (excl. RVP+Distillation) - (Calculation)	D4814		EN ISO 228
221	Vapour Pressure (Calculation)	D 2598		
222	Vapour Pressure of LPG	D 2598		
223	Vapour Testing by Draeger Tube			Draeger Tube
224	Viscosity at 135 °C			EN ISO 12595
225	Viscosity at minus 20 C	D445	IP 71	
226	Viscosity Index, incl. Viscosity Determination	D2270	IP 226	EN ISO 2909
227	Volatility of LPG	D 1837		
228	Water	D4377 D 6304		
229	Water - Coulometric	D4928 E 1064	IP 438	EN ISO 10337 EN ISO 12937
230	Water (Karl Fischer)	D 1364 E203	IP 438	EN ISO 12937
231	Water and Sediments (BS&W)	D 1796 D4007	IP 359	EN ISO 51793
232	Water and Sediments in Distillates (Centrifuge)	D 2709 D95	IP 74	EN ISO 3733
233	Water by Distillation	D4006	IP 358	EN ISO 9029
234	Water Content	D 95 D 1631		

235	Water Content			EN ISO 1428
236	Water Content (Karl Fischer) in Crude Oils		IP 386	
237	Water Reaction	D 1094		
238	Water Separation Index Modified (WSIM) / Microseparometer (MSEP)	D 3948 D 7224		
239	Water Solubility / Hydrocarbons	D 1722		
240	Xylene	GC		

Aviation Turbine Fuel (ATF)		
Sr. No.	Test Parameters	Method - ASTM
1	Acidity	ASTM-D- 974
2	Acidity	ASTM-D 664
3	Acidity	ASTM D - 3242
4	Appearance.	Visual
5	Colour Saybolt	ASTM -D -156
6	Density @ 15 °C	ASTM -D -1298/4052
7	Flash Point (Abel)	IP-170
8	Sulphur	ASTM D 5453/4294
9	Distillation (FULL)	ATSM-D- 86
10	Distillation Residue	ATSM-D- 86
11	Distillation Loss	ATSM-D- 86
12	Distillation Recovery @ 200°C	ATSM-D- 86
13	Copper Strip Corrosion @ 50°C	ASTM-D-130
14	Copper Strip Corrosion @ 100°C	ASTM-D-130
15	Doctor Test	ASTM D-4952
16	Particulate matter/Total contamination.	ASTM D-5452
17	Mercaptan sulphur	ASTM D-3227
18	Existent Gum	ASTM D381
19	Haze Test	ASTM D4176
20	Freezing Point	ASTM D 2386
21	Naphthalene content.	ASTM D 1840
22	Specific energy.	ASTM D 3338
23	Viscosity at minus 20 deg c.	ASTM D 445
24	MSEP with SDA	ASTM D 3948
25	MSEP without SDA	ASTM D 3948
26	Smoke Point Apparatus	ASTM D 1322
27	Electrical Conductivity	ASTM- D 2624
28	Smoke Point	ASTM D 1322

29	Hydrocarbon Type	ASTM D1319
30	Hydrogen sulphide.	UOP163

Naphtha		
Sr. No.	Test Parameters	Method - ASTM
10	Distillation (FULL)	ATSM-D- 86
11	Distillation Residue	ATSM-D- 86
12	Distillation Loss	ATSM-D- 86
13	Calorific Value	ASTM -D-4868
14	Copper Strip Corrosion @ 50°C	ASTM-D-130
15	C/H Ratio=74+15d/26+15d	Calculated
16	Doctor Test	ASTM D-4952
17	Bromine Number	D-1159
18	Bromine Index	D-2710
19	Mercaptan sulphur	D-3227
20	Hydrogen sulphide gasious.	ASTM D 5705
21	FIA analysis.	ASTM D 1319
22	FVI calculation.	Calculation.
23	VLI	IS 2796

Gasoline		
Sr. No.	Test Parameters	Method - ASTM
1	Colour	Visual
2	Density@ 15°C	ASTM -D-1298
3	Sp.Gravity @ 15.56°C	ASTM -D-1298
4	Doctor Test	ASTM D-4952
5	Sulphur	ASTM D5453/D4294
6	Copper Strip Corrosion @ 50°C	ASTM-D-130
7	Rvp @ 37.8°C	ATSM-D-323
8	Distillation (FULL)	ATSM-D- 86
9	Distillation Residue	ATSM-D- 86
10	Distillation Loss	ATSM-D- 86
11	Distillation Recovery @ 70°C	ATSM-D- 86
12	Distillation recovery @ 100°C	ATSM-D- 86
13	Distillation Recovery @ 150°C	ATSM-D- 86
14	distillation Recovery @180°C	ATSM-D- 86
15	Mercaptan sulphur	D-3227
16	Existant Gum with-washed/unwashed.	ASTM D -381

17	Potential Gum (4/6/8 Hrs. ageing)	ASTM D -873
18	Calorific Value	ASTM -D-4868
19	Water tolerance of gasoline-alcohol blends tempa for phase transference.	In house.
20	Olefins content.	ASTM D 1319
21	Aromatic content.	ASTM D 1319
22	Saturated content.	ASTM D 1319
23	Flexible Volatility Index (FVI)/VLI=10RVP+7*E70	Calculation (BY ASTM D 86 & 323
24	ODOUR	ORGANOLEPTIC
25	Oxidation Stability(induction periods).	ASTM D 525
26	Total nitrogen	ASTM D-4629

High Speed Diesel (HSD)		
Sr. No.	Test Parameters	Method - ASTM
1	Total Acid Number	ASTM-D- 974
2	Acidity inorganic.	IP 182
3	Flash Point (PMCC)	ASTM -D -93
4	Density@ 15°C	ASTM -D -1298 /4052
5	Sp.Gravity @ 15.56°C	ASTM -D -1298/4052
6	Pour Point	ASTM -D -97
7	Cloud Point	ATSM-D-2500
8	Sulphur	ASTM D 5453/4294
9	Distillation (FULL)	ATSM-D- 86
10	Distillation Residue	ATSM-D- 86
11	Distillation Loss	ATSM-D- 86
12	Distillation Recovery @ 250°C	ATSM-D- 86
13	Distillation Recovery @ 350°C	ATSM-D- 86
14	Distillation Recovery @ 370°C	ATSM-D- 86
15	Recovery @ 85 %	ATSM-D- 86
16	Cetane Index	ATSM-D- 976
17	Cetane Index	ASTM D 4737
18	Ash	ATSM-D- 482
19	Water	ASTM - D- 95
20	Copper Strip Corrosion @ 50°C	ASTM-D-130
21	Copper Strip Corrosion @ 100°C	ASTM-D-130
22	Doctor Test	ASTM D-4952
23	Appearance	Visual
24	K.V. @ 40 °C	ATSM-D- 445
25	K.V. @ 37.8 °C	ATSM-D- 445
26	VISCOSITY -SAYBOLT UNIVERSAL / FUROL	ATSM-D-445 & ASTM D2161
27	Sediments by Extraction	ASTM - D- 473

28	CCR	ASTM - D- 189
29	CCR on 10% Distillation Residue	ASTM - D- 189
30	RCR	ASTM-D-524
31	RCR on 10% Distillation Residue	ASTM-D-524
32	Water	ASTM D-6304
33	Water	ASTM D-1364
34	Calorific Value	ASTM -D-4868
35	Total Acid Number	ASTM-D 664 /974
36	CFPP	ASTM D-6371/IP309
37	Oxidation Stability	ASTM D-2274
38	BROMINE NO.	ASTM D 1159
39	DIESEL INDEX	Calculated
40	ANILINE POINT	ASTM D 611
41	Asphaltenes (Heptane Insolubles)	ASTM D 6560
42	Total sediment and water	ASTM D 2709/1796
43	ASTM COLOUR	ASTM D 1500
44	FAME content.	By FTIR
45	FTIR adulteration analysis.	By FTIR

Fuel Oil		
Sr. No.	Test Parameters	Method - ASTM
1	Pour Point	ASTM -D -97
2	Flash Point (PMCC)	ASTM -D -93
3	Density at 15 deg c.	ASTM -D-1298
4	Total sediment potential	ASTM D 4870
5	Sulphur	ASTM D 5453/4294
6	Ash	ATSM-D- 482
7	Water	ASTM - D- 95
8	Appearance	Visual
9	K.V. @ 100 °C	ATSM-D- 445
10	K.V. @ 50°C	ATSM-D- 445
11	Sediments by Extraction	ASTM - D- 473
12	Water	BY KARL FISCHER
13	Water	ASTM D-1364
14	Calorific Value	ASTM -D-4868
15	H2S in vapour phase above residual fuel oils	ASTM D 5705
16	Asphaltenes (Heptane Insolubles)	ASTM D 6560
17	CCR	ASTM D189

18	RCR	ASTM D 524
19	MCR	ASTM D4530
20	Acidity(TAN)	ASTM-D 664
21	Acidity(strong-SAN)	ASTM-D 664
22	CCAI	Calculated.
23	BMCI	Calculated.
24	UOPK	Calculated.
25	Nitrogen content.	ASTM D-4629

Vacuum Gas Oil		
Sr. No.	Test Parameters	Method - ASTM
1	Pour Point	ASTM -D -97
2	Flash Point (PMCC)	ASTM -D -93
3	Density at 15 deg c.	ASTM -D-1298
4	Total sediment potential	ASTM D 4870
5	Sulphur	ASTM D 5453/4294
6	Ash	ATSM-D- 482
7	Water	ASTM - D- 95
8	Appearance	Visual
9	K.V. @ 100 °C	ATSM-D- 445
10	K.V. @ 50°C	ATSM-D- 445
11	Sediments by Extraction	ASTM - D- 473
12	Water	BY KARL FISCHER
13	Water	ASTM D-1364
14	Calorific Value	ASTM -D-4868
15	H2S in vapour phase above residual fuel oils	ASTMD 5705
16	Asphaltenes (Heptane Insolubles)	ASTM D 6560
17	CCR	ASTM D189
18	RCR	ASTM D 524
19	Acidity(TAN)	ASTM-D 664
20	Acidity (SAN)	ASTM-D 664
21	Nitrogen content.	ASTM D-4629

Lube Oil		
Sr. No.	Test Parameters	Method - ASTM
1	APPEARANCE	VISUAL
2	COLOUR (VISUAL)	VISUAL
3	ASTM COLOUR	ASTM D 1500
4	TAN	ASTM-D 664
5	TBN	ASTM D -2896/4739
6	FLASH POINT (COC)	ASTM D- 92
7	WATER Content	ASTM - D- 95
8	KV. @40°C	ATSM-D- 445
9	KV. @100 °C	ATSM-D- 445
10	V.I.	ATSM-D- 2270
11	WATER	ASTM D-6304
12	Asphaltenes (Heptane Insolubles)	ASTM D 6560
13	Heptane/Toluene insoluble	ASTM D-893
14	Glycol content.	By FTIR
15	Oxidation.	By FTIR
16	Nitration.	By FTIR
17	Sulphation.	By FTIR
18	Antiwear components.	By FTIR

Carbon Black Feed Stock (CBFS)		
Sr. No.	Test Parameters	Method - ASTM
1	Density @ 15°C	ASTM -D-1298
2	Flash Point	ASTM -D -93
3	Kinematic Viscosity @ 50°C AND 100°C	ATSM-D- 445
4	Water By Distillation	ATSM-D- 445
5	Sediment By Extraction	ASTM - D- 95
6	Ash Content	ASTM - D- 473
7	Pour Point	ATSM-D- 482
8	CCAI	ASTM -D -97
9	Asphaltenes	ASTM D 6560
10	TAN	ASTM D664
11	TBN	ASTM-D 2896
12	Sulphur	ASTM D -4294

Alkylate		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	ROE	ASTM D -381
3	Colour Saybolt	ASTM -D-156
4	Density@ 15°C	ASTM -D -1298
5	Sp.Gravity @ 15.56°C	ASTM -D -1298
6	Organic Chloride	ASTM-D- 4929 (B)
7	Sulphur Content	ASTM D 5453
8	Distillation (FULL)	ATSM-D- 86
9	Distillation Residue	ATSM-D- 86
10	Distillation Loss	ATSM-D- 86
11	Calorific Value	ASTM -D-4868
12	Copper Strip Corrosion @ 50°C	ASTM-D-130
13	Doctor Test	ASTM D-4952
14	Bromine Number	D-1159
15	Bromine Index	D-2710
16	Mercaptan sulphur	D-3227
17	RVP @ 37.8°C	ATSM-D-323

Condensate / Crude Oil		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Acidity mg KOH/gm	ASTM-D- 974
3	Acidity mg KOH/gm	ASTM-D 664
4	API Gravity @ 60°F	ASTM -D -1298/4052
5	Ash Content % Wt.	ATSM-D- 482
6	Asphaltine Content % Wt.	ASTM D 6560
7	B.S. & Water % Vol.	ASTM D4007, 1796 & 2709
8	Carbon Residue % Wt.	ASTM - D- 189
9	Carbon Residue on 10 % Residue	ASTM - D- 189
10	Chloride ppm	UOP 588 D 4929
11	Cloud Point °C	ATSM-D-2500
12	Colour (ASTM)	ASTM D1500
13	Colour (Saybolt)	ASTM -D -156
14	Copper Corrosion Test	ASTM-D-130
15	Density kg/L	ASTM D 1298
16	Density kg/L	ASTM D 4052

17	Distillation °C	ATSM-D- 86
18	Flash Point °C	IP 170
19	Hydrogen Sulphide Content ppm	UOP 163
20	Mercaptan Sulphur Content ppm	ASTM D-3227
21	Nitrogen Content % Wt.	ASTM D 4629
22	Pour Point °C	ASTM D 97
23	R.V.P. Psig @ 100°F	ASTM D 323
24	Sediment by Extraction % Wt.	ASTM D 473
25	Sediment by Mem. Filtration % Wt.	ASTM D 4807
26	Sulphur Content % Wt.	ASTM D4294 /ASTM D 5453
27	Viscosity, Kinematic cSt	ASTM D 445
28	Water Content % Vol.	ASTM D 4006
29	Water Content %	ASTM D4928

Bunker Fuel		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Acidity mg KOH/gm	ASTM D 664
3	Ash Content % Wt.	ASTM D 482
4	Asphaltine Content % Wt.	ASTM D 6560
5	Cetane Index	ASTM D 976, D 4737
6	C.C.A.I.	CALCULATED
7	Colour (ASTM)	ASTM D 1500
8	Carbon Residue % Wt.	ASTM D189
9	Carbon Residue 10% Residue	ASTM D189
10	Ramsbottom Carbon Residue % Wt.	ASTM D524
11	Micro Carbon Residue % Wt.	ASTM D4530
10	Copper Corrosion Test Rating	ASTM D130
11	Cold Filter plugging point	ASTM D-6371
12	Density kg/L (For F.O. - Bunkers)	ASTM D 1298
13	Density kg/L (All)	ASTM D 4052
14	Distillation °C	ASTM D 86
15	Flash Point °C	ASTM D 93
16	Oxidation Stability Mins	ASTM D 2274
17	Particulate Matter mg/ltr	ASTM D 2276,IP 216/97,
18	Pour Point °C	ASTM D 97
19	Sediment by Extraction % Wt.	ASTM D 473
20	Specific Gravity @ 60/60°F	ASTM D 1298, ASTM D 4052.
21	Sulphur Content % Wt.	ASTM D 5453/4294
22	Viscosity, Kinematic mm ² /s	ASTM D 445
23	Water Content % Vol.	ASTM D 95

24	Water & Sediment	ASTM D 1796/ASTM D4007
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Ashpalth & Bitumin		
Sr. No.	Test Parameters	Method - ASTM
1	Density	ASTM D 70
2	Flash Point °C	ASTM D 92
3	Solubilty in CS2	ASTM D 2042
4	Water Content % Vol.	ASTM D 95

Lubricants		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Ash Content % Wt.	ASTM D 482
3	Ash - Sulphated % Wt.	ASTM D 874
4	Acid Number mg KOH/gm	ASTM D 664.
5	Base Number mg KOH/gm	ASTM D 2896
6	Cloud Point °C	ASTM D 2500
7	Colour (ASTM)	ASTM D1500
8	Conradson Carbon Residue % Wt.	ASTM D189
9	Density @ 15°C Kg/Ltr	ASTM D 1298
10	Density kg/L (All)	ASTM D 4052
11	Flash Point °C	ASTM D 92
12	Flash Point °C	ASTM D 93
13	Insoluble	ASTM D 893
14	Nitrogen Content % Wt.	ASTM D 4629
15	Phosphorous Content % Wt.	ASTM D5185
16	Pour Point °C	ASTM D 97
17	Sulphur Content % Wt.	ASTM D 5453/4294
18	Viscosity, Kinematic cSt	ASTM D 445
19	Water Content % mass.	ASTM D1364
20	Water content %vol.	ASTM D 95
21	FTIR adultration anlysis.	By FTIR
22	Water content.	By FTIR
23	Soot content,	By FTIR
24	Fuel diluaton gasoline.	By FTIR
25	Fuel diluaton Diesel oil.	By FTIR
26	Glycol content.	By FTIR
27	Oxidation.	By FTIR

28	Nitration.	By FTIR
29	Sulphation.	By FTIR
30	Antiwear components.	By FTIR
31	Metals test-additive and wear metals	ASTM D 5185

Hydraulic & Gear Oils		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Acid Number mg KOH/gm	ASTM D 664
3	Ash Content % Wt.	ASTM D 482
4	Ash - Sulphates % Wt.	ASTM D 874
5	Cloud Point °C	ASTM D 2500
6	Colour (ASTM)	ASTM D 1500
7	Carbon Residue % Wt.	ASTM D189
8	Density @ 15°C Kg/Ltr	ASTM D 1298
9	Density kg/L (All)	ASTM D 4052
10	Flash Point °C	ASTM D 92
11	Flash Point °C	ASTM D 93
12	Insoluble	ASTM D 893
13	Particulate Matter mg/100 ml	ASTM D 5452 Mod.
14	Pour Point °C	ASTM D 97
15	Sulphur Content % Wt.	ASTM D 5453/4294
16	Viscosity, Kinematic cSt	ASTM D 445
17	Water Content wt ppm	ASTM D6304
18	Water Content % Vol.	ASTM D 95

Turbine Oil		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Acid Number mg KOH/gm	ASTM D 974.
3	Colour (ASTM)	ASTM D 1500
4	Density @ 15°C Kg/Ltr	ASTM D 1298
5	Density kg/L (All)	ASTM D 4052
6	Flash Point °C	ASTM D 92
7	Flash Point °C	ASTM D 93
8	Viscosity, Kinematic cSt	ASTM D 445
9	Water Content % mass.	ASTM D6304
10	Water Content % Vol.	ASTM D 95

Petrochemicals, Solvents & Aromatics		
Sr. No.	Test Parameters	Method - ASTM
1	Acid Acceptance Test	ASTM D2106.
2	Acidity as Acetic Acid % Wt.	ASTM D 1613.
3	Acid Wash Colour	ASTM D 848.
4	Aldehyde Content % Wt.	BS 506 , D 2119, D 2192.
5	Alkalinity asNH ₃ %Wt.	ASTM D 1614.
6	Ash Content % Wt.	ASTM D 482
7	Bromine Number	ASTM D 1159
8	Bromine Index	ASTM D2710
9	Chloride Content ppm	ASTM D 4929 B
10	Chloride Content ppm	Turbidimetry
11	Colour (Hazen)	ASTM D 1209
12	Colour (Saybolt)	ASTM D156
13	Copper Corrosion Test	ASTM D130
14	Density Kg/Ltr	ASTM D 4052
15	Distillation °C	ASTM D 850, D 1078.
16	Doctor Test	IP 30
17	Ester Value	ASTM D 1617.
18	Flash Point °C	IP-170
19	Flash Point °C	ASTM D 92, D 93.
20	Heptane Miscibility Test	ASTM D 1476.
21	Non Volatile Matter mg/100mls	ASTM D 1353
22	Odour	ASTM D1296
23	Oxidation Stability Mins	ASTM D 525
24	Permanganate Time Mins	ASTM D 1363
25	Peroxide Content ppm	ASTM D 2340
26	Polymer Content	ASTM D 2121
27	pH Value	Meter
28	Residue on Evaporation % Wt.	ASTM D 1353
29	Saponification Value mg KOH/gm	ASTM D 94
30	Solubility	ASTM D 1722
31	Specific Gravity @ 60/60°F	ASTM D 4052
32	UV Transmittance Test	UV Spectroscopy
33	Viscosity, Kinematic cSt	ASTM D 445
34	Water Content % Wt.	ASTM D 1364 ,E 1064

Acetic Acid		
Sr. No.	Test Parameters	Method - ASTM
1	Freezing Point	ASTM D 1493
2	Water content	ASTM D 1364
3	Acetaldehyde	ASTM D2191
4	Formic Acid	ASTM D 3546
5	APHA Color	ASTM D 1209
6	Appearance	Visual
7	Density @ 20°C	ASTM D 4052
8	Chloride	Microcoulometer
9	IBP	ASTM D 1078(Mod)
10	Sulphate	Gravimetric

Benzene		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Colour (Pt/CO Scale)	ASTM D1209
3	Density / Specific Gravity @ 15.56°C/15.56 °C	ASTM D 4052
4	Solidification Point	ASTM D 852
5	Distillation Range @ 760 mm Hg	ASTM D 850
6	Acidity	ASTM D 847
7	Acid Wash Colour	ASTM D 848
8	Copper Corrosion	ASTM D 849
9	Total Sulphur	ASTM D 5453
10	Sulfur Compounds	ASTM D 853
11	Total Chlorides	ASTM D 5808
12	PURITY wt% NA/TOL/	ASTM D4492
13	Bromine Index	ASTM D 5776

Cyclopentane		
Sr. No.	Test Parameters	Method -ASTM
1	Colour	Visual
2	Density @ 15° C gm/ml	ASTM D 4052
3	"Distillation Range: IBP °C FBP °C"	ASTM D 86

4	Bromine Index (Olefins contents) Mg/100gm	ASTM D2710
5	Total Sulphur Wt. ppm	ASTM D 5453
6	Non Volatile Matter Mg/100 ml	ASTM D 1353

Ethanol		
Sr. No.	Test Parameters	Method - ASTM
1	Purity /Impurity	ASTM D5501 /By GC (IN HOUSE)
2	Appearance	Visual
3	Colour	Visual
4	Total Acidity (as acdtic acid)	ASTM D 1613
5	Chlorides Content	Microcoulometer
6	Density @ 20°	ASTM D 4052
7	Ethanol & Methanol Content	By GC
8	Moisture	ASTM D 1064
9	Hydrocarbons	ASTM D 1722
10	Denatured Content	By GC
11	PH	PH meter

Methanol		
Sr. No.	Test Parameters	Method - ASTM
1	Acetone wt%	ASTM E 346
2	Acidity as Acetic Acid wt%	ASTM D1613
3	Appearance	Visual
4	Colour Pt-Co Scale	ASTM D 1209
5	Distillation Range °C	ASTM D 1078
6	Ethanol Content wt%	ASTM E 346 /ASTM D5501
7	Water Miscibility	ASTM D 1722
8	Nonvolatile Content wt.%	ASTM D 1353
9	Odour	ASTM D 1296
10	Permanganate Test, Minute	ASTM D 1363
11	Specific Gravity @ 20/20°C	ASTM D 4052
12	Purity wt%	By GC
13	Sulphur	In house.
14	Chloride	Microcoulometer
15	Water Content	ASTM D 1064
16	Aromatics	By GC

Bio Diesel		
Sr. No.	Test Parameters	Method - ASTM
1	Flash Point °C	ASTM D 93
2	Copper Strip Corrosion	ASTM D130
3	Conradson Carbon Residue	ASTM D189
4	Kinematic Viscosity	ASTM D 445
5	Rambottom Carbon Residue	ASTM D 524
6	Acid Number	ASTM D 664
7	Sulphated Ash Wt%	ASTM D 874
8	Acid Number / Base Number	ASTM D 974
9	Calculated Cetane Index	ASTM D 976
10	Sulphur Content Wt. %	ASTM D 5453
11	Water & Sediment Content Vol %	ASTM D1796

Water		
Sr. No.	Test Parameters	Method - ASTM
1	Appearance	Visual
2	Acidity	IS 3025/API 45R
3	Albuminoid Nitrogen	IS 3025/API 45R
4	Alkalinity	IS 3025/API 45R
5	Ammonia	IS 3025/API 45R
6	Bi Carbonate	IS 3025/API 45R
7	Carbonate	IS 3025/API 45R
8	Chromium VI (Total)	By UV
9	Chloride	IS 3025
10	Colour	APHA
11	Hardness	IS3025/API 45R
12	Total Solids	IS 3025/API 45R
13	Total Suspended Solid	IS 3025/API 45R
14	Total Dissolved Solid	IS 3025/API 45R
15	Conductivity	IS 3025/API 45R
16	Iodine	IS 3025/API 45R
17	Nitrate	IS 3025
18	Nitrite	IS 3025
19	Nitrogen (Ammonia)	IS 3025
20	Odour	Sensory Evaluation
21	Organic Matter	IS 3025
22	pH	IS 3025/API 45R
23	Sulfide	IS 3025/API 45R

24	Sulphite	IS 3025/API 45R
25	Sulphate	IS 3025/API 45R

Caustic Lye		
Sr. No.	Test Parameters	Method - ASTM
1	Sodium Hydroxide (NaOH)	IS 252
2	Chlorides (NaCl)	IS 252
3	Sulphates (Na ₂ SO ₄)	IS 252
4	Na ₂ CO ₃	IS 252

LPG /Propane/Butane		
Sr. No.	Test Parameters	Method - ASTM
1	Hydrocarbon Composition In LPG	ASTM D2163
2	weathring in LPG (VOLATILITY)	ASTM D1837
3	Residue in LPG	ASTM D2158
4	Vapour Prassure @ 37.8/40/50/70 Deg.C	IP 432

Natural Gas		
Sr. No.	Test Parameters	Method - ASTM
1	Hydrocarbon Composition In Natural Gas	ASTM D1945
2	Carbon Dioxide	ASTM D 1945
3	Oxygen	ASTM D 1945