SPECIFICATION FOR AVIATION TURBINE FUEL (Jet A1)
Also Meets Def Stan 91-91 Issue 7 Amendment 2 and JIG (AFQRJOS) issue 27, February 2013 (EXPORT)

Sl.No.	TESTS	REQUIREMENT	TEST METHOD (Alternate methods)	TYPICAL ANALYSIS
1	APPEARANCE			
1.1	Visual Appearance	Clear & Bright, free from Solid matter & undissolved water at ambient temperature.		Clear & Bright
1.2	Colour	Report	ASTM D 156-07a Or ASTM D 6045	+25
1.3	Particulate Contamination , mg/l	1.0 Max	IP 423 / ASTM D 5452-08	0.80
1.4	Particulate, cumulative channel particle counts ISO Code as per Table 1 of ISO 4406:1999		IP 565-08	
1.4.1	≥ 4 µm(c)	Report		2500
1.4.2	≥ 6 µm(c)	Report		950
1.4.3	≥ 14 µm(c)	Report		99
1.4.4	≥ 21 µm(c)	Report		22
1.4.5	≥ 25 µm(c)	Report		15
1.4.6	≥ 30 µm(c)	Report		10
2	**COMPOSITION**	-	-	
2.1	Total Acidity, mg KOH/ g, Max.	0.015	ASTM D 3242-08	0.009
2.2	Aromatics % v/v, Max.	25	IP 156 / ASTM D 1319-08	18.5
2.3	Sulphur, Total % m/m, Max.	0.3	ASTM D 4294-03	0.25
2.4	Sulphur Mercaptan % m/m, Max.	0.003	ASTM D 3227-04a	0.0020
2.5	Or Doctor Test	Doctor Negative	ASTM D 4952-02(2007)	
2.6.1	1. Non hydro processed component, in batch ,% v/v	Report		52
2.6.2	2. Hydro processed componentin batch , % v/v	Report		-
2.6.3	2. Severely Hydro processed component in batch, % v/v	Report		48
2.6.4	Synthetic components, %v/v	Report		-

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3	**VOLATILITY**	-	-	
3.1	Distillation - IBP deg. C,	-	ASTM D 86-07b	155
	Fuel recovered 10% by volume at °C, Max	205.	-	171
	Fuel recovered 50% by volume at °C	Report		195
	Fuel recovered 90% by volume at °C	Report		233
	Final Boiling Point °C, Max.	300	-	254
	Residue % volume , Max.	1.5	-	1.0
	Loss% volume, Max.	1.5	-	1.0
3.2	Flash Point ° C, Min.	38	IP 170-99	42
3.3	Density @ 15°C kg/m3	775.0 -840.0	ASTM D 4052-96(2002)	799
4	**FLUIDITY**	-	-	-
4.1	Freezing point, °C, 47 Max.	Minus	ASTM D 2386-06	Minus 52
4.2	Kin. Viscosity at minus 20°C, mm^2/s Max.	8.00	ASTM D 445-06	4.10
5	**COMBUSTION**			
5.1	Smoke point, mm , Min. OR	25	ASTM D 1322-97(2002)	
	Smoke Point , Min	19	ASTM D 1322-97(2002)	24
-	And Naphthalene, % vol. Max.	3	ASTM D 1840-07	2.3
5.2	Specific energy MJ/kg, Min	42.8	ASTM D3338-08	43.27
6	**CORROSION**			
6.1	Cu strip for 2 hrs @ 100°C,Max	1	ASTM D 130-04	No.1
7	**THERMAL STABILITY, JFTOT**			
	at control temperature of 260°C		ASTM D 3241-08a	
7.1	Pressure Differential, mmHg, Max	25.		
7.2	Tube Rating, visual	Less than 3 [No peacock) or Abnormal Color Deposit		Zero, No peacock

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8	**CONTAMINANTS**	-		
8.1	Existent gum, mg/100ml, Max.	7	ASTM D 381-04	2.1
9	**WATER SEPARATION CHARACTERISTICS**			
9.1	Micro Separator(MSEP) rating fuel		ASTM D 3948-07	95
9.1.1	MSEP without SDA, min **OR**	85		
9.1.2	MSEP with SDA, min	70		90
10	**CONDUCTIVITY**:			
10.1	Electrical Conductivity pS/m	50 - 600	IP 274-06	75 @ 30°C
11	**LUBRICITY** Wear Scar Diameter, mm, max	0.85 (Report-Defence)	ASTM D 5001-08	0.63