



ISO/IEC 17025:2017

Jordan Petroleum Refinery CO. LTD
Laboratories & Quality Control Department



Test-116

Title: Specification for Jet A-1 ¹				QS-PL 109	
S.N	Property		Test Method (s)	Control limits	
APPEARANCE					
1	Visual appearance		ASTM D4176 Procedure 1	Clear and Bright ²	
2	Saybolt Colour		ASTM D156	Report	
3	Particulate Contamination	mg/L	ASTM D5452	Max. 1.0	
Or	Particulate, cumulative channel particle counts/ml		IP 565	(Channel Counts)	ISO4406 Classes
4	Individual channel counts & ISO Code				
4.1	≥ 4 μm			Report	Max. 19
4.2	≥ 6 μm			Report	Max. 17
4.3	≥ 14 μm			Report	Max. 14
4.4	≥ 21 μm			Report	Report
4.5	≥ 25 μm			Report	Report
4.6	≥ 30 μm			Report	Max. 13
COMPOSITION					
5	Total Acidity	mg KOH/g	ASTM D3242	Max. 0.015	
6	Aromatics	Volume %	ASTM D1319	Max. 25.0	
7	Sulfur, Total	Mass %	ASTM D4294	Max. 0.30	
8	Sulfur, Mercaptan	Mass %	ASTM D3227	Max. 0.0030	
Or	Doctor Test		ASTM D4952	Negative	
9	Refining Components at point of manufacture				
9.1	Non Hydroprocessed Components	Volume %		Report	
9.2	Severely Hydroprocessed Components	Volume %		Report	
9.3	Synthetic Components	Volume %		Report	
VOLATILITY					
10	Distillation: *		ASTM D86 - Automated		
10.1	Initial Boiling Point	°C		Report	
10.2	10% Recovery	°C		Max. 205.0	
10.3	50% Recovery	°C		Report	
10.4	90% Recovery	°C		Report	
10.5	End Point	°C		Max. 300.0	
10.6	Residue	Volume %		Max. 1.5	
10.7	Loss	Volume %		Max. 1.5	
11	Flash Point *	°C	ASTM D56	Min. 38.0	
12	Density at 15 °C *	Kg/m ³	ASTM D4052	775.0 – 840.0	
FLUIDITY					
13	Freezing Point *	°C	ASTM D7153	Max. – 47.0	
14	Viscosity at - 20 °C *	mm ² /s	ASTM D445	Max. 8.000	
COMBUSTION					
15	Specific Energy	MJ/Kg	ASTM D3338	Min. 42.80	
16	Smoke Point	mm	ASTM D1322	Min. 25.0	
Or	Smoke Point	mm	ASTM D1322	Min. 18.0	
17	And Naphthalene	Volume %	ASTM D1840	Max. 3.00	



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CORROSION					
18	Corrosion, Copper strip (2 h. at 100 °C)	Class.	ASTM D130	Max. 1	
STABILITY					
19	Thermal Stability, JFTOT		ASTM D3241		
19.1	Test Temperature Tube Rating	°C		min. 260	
19.2	Pressure Differential	mmHg		Max. 25	
19.3	Visual Tube Rating, VTR			< 3	
CONTAMINANTS					
20	Existent Gum	mg/100 ml	ASTM D381	Max. 7	
WATER SEPARATION CHARACTERISTICS					
21	Microseparator (MSEP)	Rating	ASTM D3948		
21.1	Fuel with Static Dissipator Additive			Min. 70	
21.2	Or Fuel without Static Dissipator Additive			Min. 85	
CONDUCTIVITY					
22	Electrical Conductivity at Fuel with SDA	°C	pS/m	ASTM D2624	50 - 600
Incidental Materials					
23	Fatty acid methyl ester (FAME)	mg/Kg	IP 599	Max. 50	

S.N	Additives		Qualification Reference	Control Limits
24	Antioxidants	mg/L	RDE/A/609	Max. 24
25	Static dissipater, First doping	mg/L	RDE/A/621	Max. 3.0
26	Other (MDA, FSII, LIA)	mg/L	-	-

¹ This Specification conforms with DEF STAN 91-091, issue 17, Dated 28th June, 2024 and AFQRJOS Checklist, issue 35, Dated 19th August, 2024.

² Clear, bright and visually free from solid matter and undissolved water at ambient fuel temperature.

* Accredited test by JAS-AU.