



ISO/IEC 17025:2017

Jordan Petroleum Refinery CO. LTD  
Laboratories & Quality Control Department



Test-116

Title: Specification for Jet A-1 <sup>1</sup>				QS-PL 109	
S.N	Property		Test Method (s)	Control limits	
<b>APPEARANCE</b>					
1	Visual appearance		ASTM D4176 Procedure 1	Clear and Bright <sup>2</sup>	
2	Saybolt Colour		ASTM D156	Report	
3	Particulate Contamination	mg / L	ASTM D5452	Max. 1.0	
Or 4	Particulate, cumulative channel particle counts/ml Individual channel counts & ISO Code		IP 565	(Channel Counts)	ISO4406 Classes
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
<b>COMPOSITION</b>					
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	
<b>VOLATILITY</b>					
10	Distillation: *		ASTM D-86		
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 <sup>3</sup>	ASTM D4052	775.0 – 840.0	
<b>FLUIDITY</b>					
13	Freezing Point *	°C	ASTM D7153	Max. – 47.0	
14	Viscosity at - 20 °C *	cSt	ASTM D445	Max. 8.000	
<b>COMBUSTION</b>					
15	Specific Energy	MJ / Kg	ASTM D3338	Min. 42.80	
16	Smoke Point	mm	ASTM D1322	Min. 25.0	
Or 17	Smoke Point And Naphthalene	mm Volume %	ASTM D1322 ASTM D1840	Min. 18.0 Max. 3.00	



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<b>CORROSION</b>					
18	Corrosion, Copper strip ( 2 h. at 100 °C)	Class.	ASTM D130	Max. 1	
<b>STABILITY</b>					
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	
<b>CONTAMINANTS</b>					
20	Existent Gum	mg / 100 ml	ASTM D381	Max. 7	
<b>WATER SEPARATION CHARACTERISTICS</b>					
21	Microseparometer (MSEP)	Rating	ASTM D3948		
21.1	Fuel with Static Dissipator Additive			Min. 70	
21.2	Or Fuel without Static Dissipator Additive			Min. 85	
<b>CONDUCTIVITY</b>					
22	Electrical Conductivity at Fuel with SDA	°C	pS / m	ASTM D2624	50 - 600
<b>Incidental Materials</b>					
23	Fatty acid methyl ester (FAME)	mg/Kg	IP 599	Max. 50	
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	-	-	

<sup>1</sup> This Specification is based on DEF STAN 91-091, issue 14, Dated 07<sup>th</sup> March, 2022 and AFQRJOS Checklist, issue 33, April 2022.

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

\* Accredited test by JAS-AU.