

Reference: ZAFRB24B  
Crude: Zafiro Blend



## Crude Summary Report

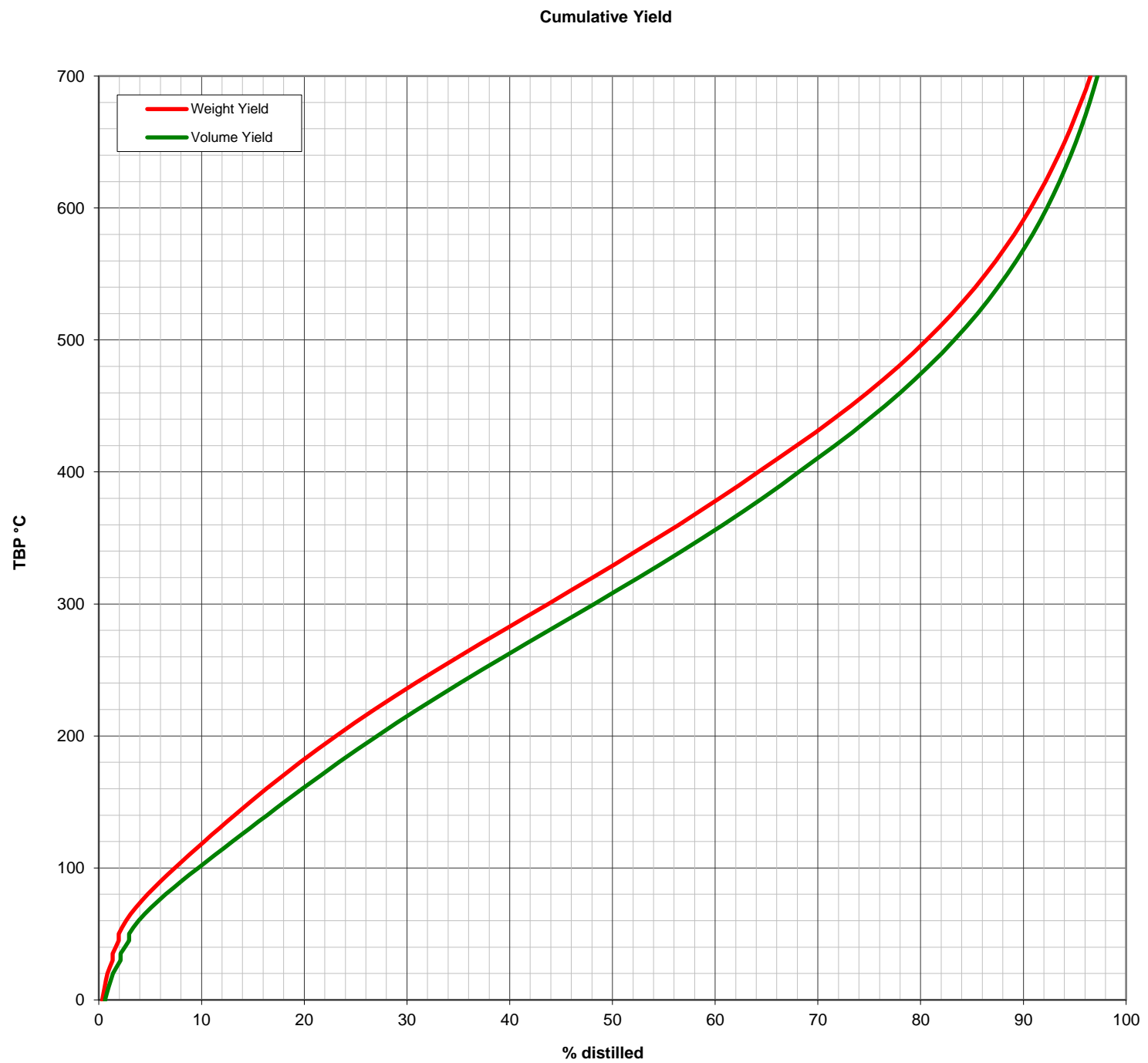
General Information		Molecules (%wt on crude)				Whole Crude Properties			
Reference:	ZAFRB24B	methane + ethane	0.01	Density @ 15°C (g/cc)	0.8744				
Name:	Zafiro Blend	propane	0.14	<b>API Gravity</b>	<b>30.2</b>				
Origin:	Equatorial Guinea	isobutane	0.13	Total Sulfur (% wt)	0.26				
Assay Date:	3/22/2024	n-butane	0.46	Pour Point (°C)	-52				
Comments:		isopentane	0.54	Viscosity @ 20°C (cSt)	12.9				
		n-pentane	0.56	Viscosity @ 40°C (cSt)	7.0				
		cyclopentane	0.13	Nickel (ppm)	15.2				
		C6 paraffins	1.32	Vanadium (ppm)	2.4				
		C6 naphthenes	1.16	Total Nitrogen (ppm)	2463				
		benzene	0.08	Total Acid Number (mgKOH/g)	0.60				
		C7 paraffins	1.28	Mercaptan Sulfur (ppm)	6.7				
		C7 naphthenes	2.32	Hydrogen Sulfide (ppm)	0.0				
		toluene	0.31	Reid Vapor Pressure (kPa)	33.6				

Cut Data	IBP	Atmospheric Cuts									Vacuum Cuts				
		C5	65	100	150	200	250	300	350	370	370	450	500	550	
Start (°C)															
End (°C)	FBP	65	100	150	200	250	300	350	370	FBP	450	500	550	FBP	
Yield (% wt)		2.4	4.3	7.3	8.3	9.8	10.8	10.7	4.1	41.5	14.7	7.4	5.8	13.7	
Yield (% vol)		3.3	5.2	8.4	9.0	10.2	10.9	10.6	3.9	37.3	13.8	6.8	5.2	11.5	
Cumulative Yield (% wt)		0.7	3.1	7.4	14.7	23.1	32.9	43.7	54.4	58.5	58.5	73.2	80.6	86.3	
Volume Average B.P. (°C)	324	43.4	83	125	175	225	275	325	360	510	409	474	524	646	
Density @ 15°C (g/cc)	0.8744	0.6363	0.7177	0.7627	0.8077	0.8397	0.8647	0.8794	0.9028	0.9713	0.9305	0.9542	0.9699	1.0307	
API Gravity	30.2	90.9	65.6	54.0	43.6	36.9	32.1	29.3	25.2	14.1	20.5	16.7	14.3	5.7	
UOPK	11.71			11.73	11.52	11.48	11.51	11.65	11.56	11.54	11.50	11.56	11.62	11.47	
Molecular Weight (g/mol)				110	136	168	204	249	281	473	330	421	528	927	
Total Sulfur (% wt)	0.26	0.002	0.005	0.016	0.042	0.083	0.165	0.243	0.294	0.465	0.325	0.362	0.438	0.68	
Mercaptan Sulfur (ppm)	6.7	7.7	36.8	58.0	26.2	9.0	3.2								
Total Nitrogen (ppm)	2463					22	82	297	651	5762	1336	2760	4748	12593	
Basic Nitrogen (ppm)	778					16	64	183	306	1775	586	1024	1298	3665	
Total Acid Number (mgKOH/g)	0.60	0.00	0.01	0.03	0.07	0.17	0.49	0.88	1.01	0.93	1.09	1.14	1.06	0.57	
Viscosity @ 20°C (cSt)	12.9				1.39										
Viscosity @ 40°C (cSt)	7.01				1.05	1.74	3.40	8.26	18.5						
Viscosity @ 50°C (cSt)	5.46					1.49	2.76	6.16	12.7	1959	42.8	322	2699		
Viscosity @ 60°C (cSt)										820	27.1	163	1086		
Viscosity @ 100°C (cSt)										70.2	7.28	24.1	83.6	45346	
Viscosity @ 130°C (cSt)														2944	
Viscosity @ 150°C (cSt)														767	
RON (Clear)		77.9	59.2	62.4	46.6										
MON (Clear)		76.7	67.7	60.1	42.7										
Paraffins (% wt)	19.4	93.7	44.0	24.1	28.9										
Naphthenes (%wt)	40.2	6.3	54.1	65.5	56.9										
Aromatics (% wt)	40.4	0.0	1.9	10.4	14.1										
Pour Point (°C)	-52						-55	-34	-9	5	43	23	39	47	76
Cloud Point (°C)							-53	-32	-8						
Freeze Point (°C)							-67	-49	-27						
Smoke Point (mm)							21	18	15						
Cetane Index (D4737A)							31	37	43	51	51				
Naphthalenes (% vol)							0.1	2.6	8.1	11.1					
Aniline Point (°C)				47.1	50.1	57.1	63.3	68.1	70.7		73.5	76.6	78.2		
Hydrogen (% wt)	12.9	16.5	15.0	14.2	14.0	13.3	13.2	12.9	12.6		12.2	11.9	12.0		
Total Wax (% wt)	5.1									3.5	7.8	3.9	0.3	0.0	
C7 Asphaltenes (% wt)	0.1									0.3	0.0	0.0	0.9		
Micro Carbon Residue (% wt)	2.7									6.5	0.0	1.0	19.2		
Vanadium (ppm)	2.4									5.7	0.0	0.0	17.4		
Nickel (ppm)	15.2									36.5	0.0	0.0	111.1		
Iron (ppm)	9.5									22.9	0.0	0.0	69.6		
Sodium (ppm)	3.7														
Mercury (ppb)	1.0														
Arsenic (ppb)	159														

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## Yield Distribution



**Cumulative Volume % Distilled at 10 Degree C (TBP) Intervals**

	0	10	20	30	40	50	60	70	80	90
0				2.1	2.5	3.0	3.9	5.1	6.5	8.1
100	9.7	11.3	13.0	14.7	16.4	18.1	19.8	21.6	23.4	25.2
200	27.1	29.0	31.0	33.1	35.2	37.3	39.4	41.6	43.8	46.0
300	48.2	50.4	52.5	54.7	56.7	58.8	60.8	62.7	64.6	66.4
400	68.2	69.9	71.6	73.3	75.0	76.5	78.0	79.4	80.8	82.1
500	83.3	84.4	85.5	86.6	87.5	88.5	89.3	90.1	90.9	91.6