



NATIONAL IRANIAN OIL COMPANY (NIOC)  
RESEARCH INSTITUTE OF PETROLEUM INDUSTRY (RIPI)  
CRUDE OIL AND PETROLEUM PRODUCTS EVALUATION DEPARTMENT

**IRANIAN LIGHT CRUDE OIL**

**TABLE 1: CRUDE OIL GENERAL PROPERTIES ANALYSIS**

CHARACTERISTICS	UNITS	RESULT	TEST METHOD
Specific Gravity @ 15.56 /15.56 °C	---	<b>0.8568</b>	ASTM D5002
API Gravity	°API	<b>33.6</b>	ASTM D5002
Sulfur Content (Total)	wt.%	<b>1.46</b>	ASTM D4294
H <sub>2</sub> S Content	ppm	<b>86</b>	IP 570
Mercaptan Content	ppm	<b>60</b>	UOP 163
Nitrogen Content (Total)	wt.%	<b>0.13</b>	ASTM D 5762
Water & Sediment	vol.%	<b>&lt; 0.05</b>	ASTM D4007
Water Content	vol.%	<b>&lt; 0.025</b>	ASTM D4006
Salt Content	PTB	<b>7</b>	ASTM D3230
Kinematic Viscosity @ 10 °C	mm <sup>2</sup> /s	<b>19.50</b>	ASTM D445
Kinematic Viscosity @ 20 °C	mm <sup>2</sup> /s	<b>10.88</b>	
Kinematic Viscosity @ 40 °C	mm <sup>2</sup> /s	<b>6.319</b>	
Pour Point (Upper)	°C	<b>-12</b>	ASTM D5853
Reid Vapor Pressure	psi	<b>8.95</b>	ASTM D323
Asphaltene Content	wt.%	<b>1.6</b>	IP 143
Wax Content	wt.%	<b>4.8</b>	BP 237
Drop Melting Point of Wax	°C	<b>57</b>	IP 133
Conradson Carbon Residue	wt.%	<b>4.50</b>	ASTM D189
Total Acid Number	mg KOH/g	<b>0.12</b>	UOP 565
Nickel Content	mg/kg	<b>11</b>	ASTM D5863
Vanadium Content	mg/kg	<b>40</b>	
Iron Content	mg/kg	<b>&lt;1</b>	
Lead Content	mg/kg	<b>&lt;1</b>	
Sodium Content	mg/kg	<b>8</b>	
Zinc Content	mg/kg	<b>&lt;1</b>	
Copper Content	mg/kg	<b>&lt;1</b>	

Sampling Date: from 08 Day 1395 (28 Dec. 2016) to 12 Day 1395 (1 Jan. 2017)

Report Date: 07 Esfand 1395 (25 Feb. 2017)



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**TABLE 2: TBP DISTILLATION ANALYSIS (ASTM D2892 & ASTM D5236)**

Frac. No.	Boiling Range, °C	Yield, wt.%	Cumulative Yield, wt.%	Sp.Gr. @ 15.56/15.56 °C	Yield, vol.%	Cumulative Yield, vol.%
1	IBP-15	1.56	1.56	0.5759	2.32	2.32
2	15-65	3.64	5.20	0.6472	4.82	7.14
3	65-100	4.12	9.32	0.7145	4.94	12.08
4	100-125	3.35	12.67	0.7430	3.86	15.94
5	125-150	4.07	16.74	0.7642	4.56	20.50
6	150-175	3.82	20.56	0.7796	4.20	24.70
7	175-200	4.03	24.59	0.7918	4.36	29.06
8	200-225	4.86	29.45	0.8093	5.15	34.21
9	225-250	4.49	33.94	0.8284	4.64	38.85
10	250-275	4.44	38.38	0.8438	4.51	43.36
11	275-300	4.56	42.94	0.8538	4.58	47.94
12	300-325	4.25	47.19	0.8747	4.16	52.10
13	325-350	4.40	51.59	0.8846	4.26	56.36
14	350-385	6.00	57.59	0.8927	5.76	62.12
15	385-425	6.25	63.84	0.9220	5.81	67.93
16	425-450	3.65	67.49	0.9290	3.37	71.30
17	450-475	3.40	70.89	0.9401	3.10	74.40
18	475-500	3.25	74.14	0.9508	2.93	77.33
19	500-530	3.75	77.89	0.9624	3.34	80.67
20	530-565	3.90	81.79	0.9729	3.43	84.10
21	565+	18.21	100.00	0.9813	15.90	100.00