

Table 3 – Dependence of density with temperature for automotive diesel fuel, pure biodiesel and the analyzed vegetable oils. SVO density values below 0.860 g cm⁻³ are in bold.

Temp. (°C)	Density (g cm ⁻³)							
	Diesel	BD100	Rapeseed	Sunflower	Soybean	Palm	Corn	Grapeseed
10	0.8376	0.8859	0.9210	0.9251	0.9254	–	0.9237	0.9259
20	0.8308	0.8798	0.9145	0.9169	0.9185	–	0.9167	0.9188
30	0.8242	0.8717	0.9080	0.9114	0.9127	–	0.9113	0.9126
40	0.8181	0.8641	0.9027	0.9043	0.9061	0.8996	0.9046	0.9060
50	0.8114	0.8583	0.8963	0.8994	0.8998	0.8922	0.8979	0.8998
60	0.8043	0.8513	0.8911	0.8926	0.8941	0.8845	0.8920	0.8941
70	0.7970	0.8433	0.8848	0.8877	0.8879	0.8789	0.8864	0.8874
80	0.7890	0.8372	0.8777	0.8798	0.8817	0.8721	0.8801	0.8813
90	0.7825	0.8287	0.8724	0.8743	0.8750	0.8664	0.8740	0.8754
100	0.7759	0.8229	0.8658	0.8670	0.8689	0.8595	0.8678	0.8695
110	0.7708	0.8150	0.8593	0.8602	0.8626	0.8536	0.8610	0.8626
120	0.7636	0.8075	0.8537	0.8536	0.8566	0.8457	0.8555	0.8570
130	0.7577	0.8002	0.8469	0.8472	0.8498	0.8407	0.8489	0.8505
140	0.7516	0.7912	0.8395	0.8408	0.8430	0.8325	0.8424	0.8440

Table 5 – Dependence of kinematic viscosity with temperature for automotive diesel fuel, pure biodiesel and the analyzed vegetable oils. SVO viscosity values below 6 mm² s⁻¹ are in bold.

Temp. (°C)	Kinematic viscosity (mm ² s ⁻¹)							
	Diesel	BD100	Rapeseed	Sunflower	Soybean	Palm	Corn	Grapeseed
10	5.39	9.00	119.48	118.72	107.62	–	113.39	100.63
20	4.15	6.78	74.19	73.45	67.12	–	70.29	64.32
30	3.30	5.30	48.88	48.46	44.69	–	46.54	42.94
40	2.70	4.26	34.06	33.78	31.42	45.34	32.53	30.19
50	2.26	3.51	24.68	24.48	23.00	28.19	23.74	22.29
60	1.92	2.94	18.62	18.52	17.47	20.84	17.96	17.04
70	1.64	2.51	14.48	14.44	13.67	15.60	14.01	13.34
80	1.43	2.16	11.58	11.53	11.17	12.35	11.39	10.88
90	1.27	1.90	9.45	9.44	9.13	9.94	9.34	8.96
100	1.14	1.69	7.89	7.78	7.71	8.21	7.83	7.53
110	1.03	1.51	6.70	6.50	6.58	6.88	6.65	6.42
120	0.93	1.36	5.86	5.62	5.68	5.85	5.70	5.49
130	0.85	1.23	5.09	4.91	4.99	5.02	4.93	4.77
140	0.78	1.13	4.47	4.37	4.45	4.38	4.34	4.21