SUPPORTING INFORMATION

Viscosity and Density of Narrow Distillation Cuts from Refined Petroleum- and Synthetic-derived Distillates in -60 to +60 °C Range

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1. Analysis of Petroleum-based Kerosene

The petroleum-based kerosene was analyzed via gas chromatography to ensure comparability of the material with jet fuel. Analyses were carried out using an Agilent D7890 chromatograph equipped with a HP-PONA column of 50 m length and an FID detector using He as carrier gas. The sample was diluted to 1 % in *n*-pentane (99% Fisher) before injection. The temperature program was as follows: (i) 8 min isothermal at 40 °C, (ii) 3 °C/min to 150 °C, (iii) 5 °C/min to 320 °C. Prior to the analysis, the retention times of *n*-alkanes were determined using a boiling point calibration standard (Agilent 5080-8716).

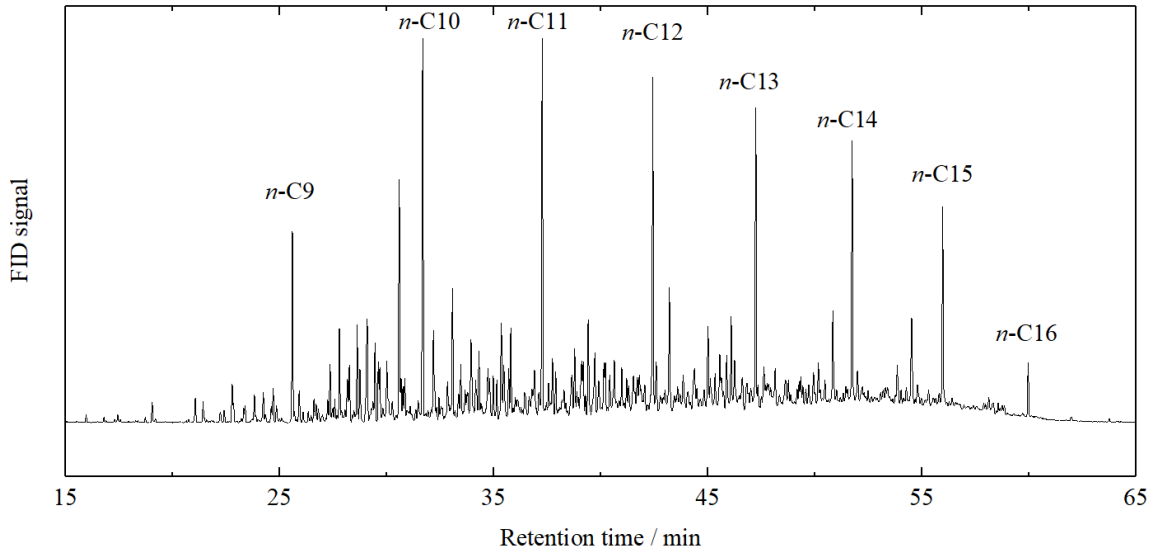

Figure S1 – Relevant portion of the gas chromatogram of the petroleum based kerosene.

Table S1 – Additional information on composition of petroleum kerosene.

	Method	Mass fraction / wt.-%
C	CHNS analysis	86.3
H	CHNS analysis	13.8
N	CHNS analysis	< 0.2
S	CHNS analysis	< 0.2
Paraffins	GCMS*	40
Monocycloparaffins	GCMS*	27
Dicycloparaffins	GCMS*	10
Tricycloparaffins	GCMS*	3
Total aromatics	ASTM D6379	19

* analysis of the non-aromatic material separated via HPLC using a group method approach for MS analysis (see ASTM D2425 A2/A3). The boiling range of the sample was outside of the range recommended for ASTM D2425 and therefore the uncertainty of the results may be increased.

2. Composition of paraffin wax

The paraffin wax is the parent material of the synthetic distillate. The synthetic distillate is obtained from the paraffin wax via hydrocracking. The composition of the paraffin wax is discussed in detail in Ref. [1]. The composition obtained from high temperature GC analysis (see [1]) is repeated here for convenience.

Table S2 – Mass fraction of material as a function of the alkane chain length for the synthetic distillate. Data are based on Ref [1].

Alkane carbon number C_n	Mass fraction / wt.%
20	0.1
21	0.4
22	1.2
23	3.8
24	8.7
25	13.8
26	13.5
27	14.6
28	12.4
29	11.5
30	7.4
31	4.6
32	2.6
33	1.8
34	0.9
35	0.7
36	0.6
37	0.4
38	0.3
39	0.3
40	0.2

3. Distilation

Table S3 - Mass recovered during the distillation of the petroleum-based kerosene. The mass added to the still was 563.2 g and hence losses amount to 8.2 g.

Initial boiling point / °C	Final boiling point / °C	Mass recovered / g	Mass fraction / wt.-%
>140	140	33.1	6.0
140	145	12.0	2.2
145	150	10.2	1.8
150	155	20.6	3.7
155	160	23.8	4.3
160	165	19.3	3.5
165	170	20.6	3.7
170	175	24.0	4.3
175	180	23.8	4.3
180	185	22.0	4.0
185	190	17.1	3.1
190	195	23.1	4.2
195	200	24.2	4.4
200	205	19.9	3.6
205	210	25.3	4.6
210	215	22.3	4.0
215	220	24.2	4.4
220	225	19.7	3.5
225	230	23.1	4.2
230	235	19.3	3.5
235	240	21.4	3.9
240	245	18.4	3.3
245	250	23.7	4.3
250	255	18.7	3.4
>255		45.2	8.1
Sum		555.0	100.0

Table S4 – Mass fraction of distillation cuts obtained from distillation of the hydrocracking product with boiling point ≤ 260 °C (synthetic distillate). Hydrocracking conditions and further details are given in [1]. It is pointed out here that the boiling point distribution below is the hydrocracking product. The blending of a jet fuel would be carried out using only the heavy naphtha/kerosene fraction of the material. The table is reprinted from [1].

Initial boiling point / °C	Final boiling point / °C	Mass fraction /wt.-%
>140	140	2.0
140	145	0.3
145	150	0.3
150	155	0.3
155	160	0.3
160	165	0.3
165	170	0.3
170	175	0.4
175	180	0.4
180	185	0.4
185	190	0.4
190	195	0.4
195	200	0.5
200	205	0.4
205	210	0.5
210	215	0.5
215	220	0.5
220	225	0.5
225	230	0.5
230	235	0.5
235	240	0.5
240	245	0.6
245	250	0.6
250	255	0.7
255	260	0.8
260	-	87.0

4. Refractive Index of Distillation Fractions

In addition to the analyzed refractive indices presented in Tables S2-S3, the molar refractivity and average molar mass were calculated and are presented along with the refractive indices.

The molar refractivity for all distillation cuts was calculated according to Lorentz–Lorenz, Equation S1, to facilitate direct comparison with the more extensive data in literature [2][3]. The average molar mass was estimated from density and boiling point according to Equation S2 [4].

$$R_M = \frac{n^2 - 1}{n^2 + 2} \cdot \frac{M}{\rho} \tag{S1}$$

$$M = 42.965 \cdot \exp(2.097 \cdot 10^{-4} \cdot T_b - 7.78712 \cdot SG + 2.08476 \cdot 10^{-3} \cdot T_b \cdot SG) \cdot T_b^{1.26007} \cdot SG^{4.98308} \tag{S2}$$

R_M ... molar refractivity ($cm^3\ mol^{-1}$)

M ... average molar mass ($g\ mol^{-1}$)

ρ ... density at temperature T ($g\ cm^{-3}$)

n ... refractive index at temperature T

T_b … normal boiling point (K), estimated as average between initial and final boiling point.

SG … specific gravity (density relative to the density of water at 15.6 °C).

The selection and use of these correlations were to obtain derived data on the same basis for comparison and there is no implicit claim that these correlations are superior to others.

Table S5 - Refractive index for distillation cuts of petroleum-based kerosene. The final boiling point is 5 °C above the initial boiling point.

Initial boiling point / °C	Refractive index at 20 °C (n_D^{20})	Refractive index at 25 °C (n_D^{25})	Refractive index at 40 °C (n_D^{40})	Refractive index at 60 °C (n_D^{60})	Slope of refractive index vs. temperature / (10^{-4} °C^{-1})	Estimated average molar mass / (g mol^{-1})	Molar refractivity (Lorentz-Lorenz)/ (cm^3 mol^{-1})
140	1.4311	1.4286	1.4215	1.4118	-4.803	123	41.4
145	1.4323	1.4299	1.4227	1.4132	-4.770	126	42.3
150	1.4341	1.4317	1.4248	1.4153	-4.689	129	43.2
155	1.4375	1.4351	1.4281	1.4187	-4.686	131	44.1
160	1.4407	1.4383	1.4313	1.4219	-4.686	134	45.0
165	1.4427	1.4404	1.4334	1.4243	-4.597	137	45.9
170	1.4437	1.4414	1.4345	1.4253	-4.600	140	46.8
175	1.4444	1.4421	1.4353	1.4262	-4.543	143	47.8
180	1.4461	1.4438	1.4370	1.4281	-4.484	146	48.8
185	1.4480	1.4457	1.4389	1.4299	-4.514	149	49.8
190	1.4498	1.4476	1.4409	1.4321	-4.427	152	50.7
195	1.4518	1.4496	1.4429	1.4341	-4.427	155	51.7
200	1.4538	1.4516	1.4449	1.4362	-4.397	159	52.7
205	1.4557	1.4535	1.4470	1.4383	-4.343	162	53.5
210	1.4564	1.4542	1.4477	1.4390	-4.343	165	54.6
215	1.4561	1.4539	1.4474	1.4388	-4.314	169	55.9
220	1.4566	1.4544	1.4479	1.4393	-4.314	173	57.1
225	1.4581	1.4559	1.4495	1.4410	-4.257	176	58.2
230	1.4594	1.4572	1.4509	1.4424	-4.230	180	59.4
235	1.4600	1.4579	1.4515	1.4431	-4.227	184	60.6
240	1.4613	1.4592	1.4529	1.4445	-4.200	187	61.8
245	1.4625	1.4604	1.4541	1.4458	-4.170	191	63.2
250	1.4628	1.4608	1.4545	1.4465	-4.081	195	64.4

Table S6 - Refractive index for distillation cuts of synthetic distillate. The final boiling point is 5 °C above the initial boiling point.

Initial boiling point / °C	Refractive index at 20 °C (n_D^{20})	Refractive index at 25 °C (n_D^{25})	Refractive index at 40 °C (n_D^{40})	Refractive index at 60 °C (n_D^{60})	Slope of refractive index vs. temperature / (10^{-4} °C^{-1})	Estimated average molar mass / (g mol^{-1})	Molar refractivity (Lorentz-Lorenz)/ (cm^3 mol^{-1})
140	1.4122	1.4099	1.4028	1.3933	-4.743	124	42.1
145	1.4129	1.4106	1.4035	1.3941	-4.714	127	43.2
150	1.4141	1.4118	1.4048	1.3954	-4.686	130	44.2
155	1.2482	1.4138	1.4068	1.3975	-4.657	133	45.2
160	1.4176	1.4154	1.4084	1.3992	-4.627	136	46.2
165	1.4187	1.4165	1.4095	1.4003	-4.627	140	47.2
170	1.4203	1.4181	1.4112	1.4021	-4.570	143	48.2
175	1.4228	1.4206	1.4139	1.4048	-4.516	146	49.2
180	1.4240	1.4218	1.4151	1.4061	-4.486	149	50.3
185	1.4254	1.4232	1.4165	1.4075	-4.486	152	51.4
190	1.4267	1.4245	1.4178	1.4089	-4.457	156	52.5
195	1.4279	1.4257	1.4191	1.4102	-4.430	159	53.6
200	1.4292	1.4271	1.4205	1.4118	-4.370	163	54.8
205	1.4309	1.4288	1.4222	1.4135	-4.370	166	55.8
210	1.4315	1.4294	1.4228	1.4141	-4.370	170	57.1
215	1.4321	1.4300	1.4234	1.4147	-4.370	174	58.4
220	1.4328	1.4307	1.4242	1.4156	-4.314	177	59.6
225	1.4335	1.4314	1.4249	1.4163	-4.314	181	60.9
230	1.4340	1.4319	1.4255	1.4169	-4.286	185	62.3
235	1.4344	1.4323	1.4259	1.4173	-4.286	189	63.6
240	1.4348	1.4328	1.4264	1.4180	-4.227	193	64.9
245	1.4354	1.4334	1.4270	1.4186	-4.227	197	66.3
250	1.4360	1.4340	1.4277	1.4194	-4.170	201	67.7
255	1.4368	1.4348	1.4285	1.4202	-4.170	206	69.0
260	1.4375	1.4355	1.4293	1.4210	-4.143	210	70.5
265	1.4384	1.4364	1.4302	1.4219	-4.143	214	71.9
270	1.4393	1.4373	1.4311	1.4229	-4.114	219	73.3
275	1.4403	1.4383	1.4321	1.4238	-4.143	223	74.8
280	1.4413	1.4393	1.4331	1.4249	-4.114	228	76.3
285	1.4422	1.4402	1.4339	1.4257	-4.141	232	77.8
290	1.4431	1.4411	1.4350	1.4269	-4.057	237	79.4
295	1.4440	1.4420	1.4358	1.4277	-4.084	242	81.0
300	1.4445	1.4426	1.4365	1.4285	-4.027	247	82.6
305	1.4451	1.4431	1.4370	1.4289	-4.057	252	84.2
310	1.4456	1.4437	1.4376	1.4296	-4.027	257	85.9
315	1.4464	1.4444	1.4384	1.4304	-4.000	262	87.6
320	1.4470	1.4451	1.4391	1.4312	-3.970	267	89.2

3. Density and Viscosity of Distillation Fractions

The results of density and viscosity analysis of the distillation cuts from the petroleum-derived kerosene are summarized in Table S7. Similar data for the synthetic distillate cuts is shown in Table *S8*.

Abbreviations:

IBP-initial boiling point

FBP: final boiling point

Table S7 – Viscosity, density, shear rate and shear stress determined at different temperatures for narrow boiling range distillation cuts of petroleum kerosene. The data is the raw data collected from the instrument and not rounded.

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
140	145	39.999	0.5587	0.7464	1030	0.563	0.74852
140	145	30.000	0.6450	0.8520	1023	0.660	0.75706
140	145	24.999	0.6871	0.9031	1020	0.701	0.76089
140	145	19.999	0.7368	0.9637	1017	0.749	0.76460
140	145	14.999	0.7909	1.0289	1014	0.802	0.76869
140	145	9.999	0.8501	1.1003	1010	0.859	0.77262
140	145	-0.002	0.9964	1.2770	1001	0.997	0.78023
140	145	-5.001	1.1214	1.4301	996.0	1.117	0.78417
140	145	-10.001	1.2351	1.5674	990.0	1.223	0.78802
140	145	-15.001	1.3630	1.7211	983.3	1.340	0.79191
140	145	-20.001	1.5029	1.8885	976.5	1.468	0.79581
140	145	-25.000	1.6774	2.0977	967.7	1.623	0.79964
140	145	-30.001	1.8882	2.3500	957.3	1.808	0.80351
140	145	-35.000	2.1170	2.6219	946.6	2.004	0.80742
140	145	-40.001	2.4038	2.9632	933.2	2.243	0.81119
140	145	-45.001	2.7575	3.3830	917.2	2.529	0.81508
140	145	-50.001	3.1912	3.8962	898.2	2.866	0.81907
140	145	-55.000	3.7326	4.5357	875.7	3.269	0.82295
140	145	-59.157	4.4537	5.3867	847.2	3.773	0.82679
145	150	40.000	0.5566	0.7362	1029	0.573	0.75596
145	150	30.000	0.6368	0.8333	1024	0.652	0.76422
145	150	24.999	0.6824	0.8884	1021	0.696	0.76813
145	150	20.000	0.7336	0.9502	1017	0.746	0.77205
145	150	15.000	0.7884	1.0160	1014	0.799	0.77600
145	150	9.999	0.8521	1.0925	1010	0.860	0.77993
145	150	-0.001	0.9969	1.2654	1001	0.997	0.78776
145	150	-5.001	1.1014	1.3914	997.4	1.099	0.79156
145	150	-10.002	1.2101	1.5212	991.6	1.200	0.79550
145	150	-15.000	1.3403	1.6768	984.8	1.320	0.79934
145	150	-20.001	1.4913	1.8567	977.1	1.457	0.80322
145	150	-25.001	1.6672	2.0656	968.3	1.614	0.80711
145	150	-29.999	1.8732	2.3098	958.1	1.795	0.81101
145	150	-35.001	2.1199	2.6014	946.3	2.006	0.81490
145	150	-40.000	2.4173	2.9522	932.3	2.254	0.81879
145	150	-45.001	2.7815	3.3810	915.8	2.547	0.82268
145	150	-50.000	3.2341	3.9127	896.0	2.898	0.82657

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2\ s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g\ cm^{-3}$
145	150	-55.001	3.8027	4.5795	872.3	3.317	0.83038
145	150	-59.999	4.5302	5.4300	843.8	3.823	0.83429
150	155	40.003	0.5821	0.7660	1026	0.597	0.75991
150	155	30.000	0.6589	0.8577	1021	0.673	0.76823
150	155	25.000	0.7062	0.9147	1018	0.719	0.77208
150	155	20.001	0.7563	0.9746	1015	0.768	0.77600
150	155	15.000	0.8139	1.0436	1011	0.823	0.77992
150	155	9.999	0.8820	1.1253	1007	0.888	0.78377
150	155	-0.002	1.0354	1.3080	997.4	1.033	0.79162
150	155	-5.000	1.1722	1.4736	991.6	1.162	0.79547
150	155	-10.001	1.2938	1.6186	985.2	1.275	0.79933
150	155	-15.000	1.4349	1.7865	977.8	1.403	0.80316
150	155	-20.001	1.5974	1.9795	969.6	1.549	0.80698
150	155	-25.001	1.7889	2.2062	960.0	1.717	0.81083
150	155	-30.001	2.0173	2.4762	948.8	1.914	0.81470
150	155	-35.001	2.2912	2.7990	935.7	2.144	0.81860
150	155	-40.001	2.6243	3.1907	920.3	2.415	0.82246
150	155	-45.002	3.0372	3.6755	901.8	2.739	0.82633
150	155	-50.002	3.5546	4.2816	879.6	3.127	0.83021
150	155	-55.001	4.2124	5.0509	853.0	3.593	0.83400
150	155	-60.004	5.0647	6.0445	820.8	4.157	0.83789
155	160	40.001	0.6357	0.8296	1021	0.649	0.76622
155	160	30.000	0.7220	0.9323	1015	0.733	0.77446
155	160	24.999	0.7697	0.9890	1012	0.779	0.77826
155	160	20.000	0.8248	1.0546	1009	0.832	0.78214
155	160	14.999	0.8878	1.1294	1005	0.892	0.78603
155	160	9.999	0.9586	1.2136	1000	0.959	0.78992
155	160	-0.002	1.1294	1.4158	989.7	1.118	0.79766
155	160	-5.001	1.2761	1.5922	983.5	1.255	0.80148
155	160	-10.002	1.4101	1.7510	976.4	1.377	0.80532
155	160	-15.001	1.5660	1.9354	968.3	1.516	0.80912
155	160	-20.002	1.7487	2.1511	959.1	1.677	0.81293
155	160	-25.001	1.9830	2.4282	947.1	1.878	0.81666
155	160	-30.001	2.2440	2.7349	934.5	2.097	0.82051
155	160	-35.001	2.5591	3.1044	919.7	2.354	0.82436
155	160	-40.000	2.9580	3.5716	902.4	2.669	0.82821
155	160	-45.001	3.4199	4.1102	881.6	3.015	0.83206
155	160	-50.002	4.0239	4.8138	856.6	3.447	0.83591
155	160	-55.001	4.8053	5.7223	826.4	3.971	0.83975
155	160	-60.000	5.8363	6.9187	789.7	4.609	0.84355
160	165	40.000	0.6351	0.8234	1021	0.648	0.77137
160	165	29.998	0.7271	0.9328	1014	0.738	0.77953
160	165	25.000	0.7838	1.0006	1011	0.792	0.78331
160	165	19.999	0.8462	1.0750	1006	0.852	0.78716
160	165	14.998	0.9161	1.1582	1002	0.918	0.79102
160	165	10.000	0.9939	1.2504	997.0	0.991	0.79488
160	165	-0.001	1.1720	1.4604	986.2	1.156	0.80254

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
160	165	-5.001	1.3327	1.6527	979.0	1.305	0.80638
160	165	-10.001	1.4821	1.8293	971.1	1.439	0.81021
160	165	-15.002	1.6702	2.0519	960.9	1.605	0.81400
160	165	-20.000	1.8697	2.2863	950.9	1.778	0.81779
160	165	-25.001	2.1082	2.5660	939.0	1.980	0.82160
160	165	-30.001	2.3972	2.9042	925.1	2.218	0.82543
160	165	-35.000	2.7509	3.3173	908.6	2.500	0.82926
160	165	-40.001	3.2066	3.8491	888.9	2.850	0.83310
160	165	-45.001	3.7416	4.4706	865.3	3.238	0.83694
160	165	-50.001	4.4482	5.2906	836.9	3.723	0.84078
160	165	-55.001	5.3706	6.3587	802.6	4.310	0.84462
160	165	-60.000	6.6153	7.7973	760.6	5.032	0.84841
165	170	40.001	0.6676	0.8611	1017	0.679	0.77532
165	170	30.000	0.7666	0.9784	1011	0.775	0.78352
165	170	25.000	0.8273	1.0509	1007	0.833	0.78729
165	170	19.999	0.8922	1.1277	1002	0.894	0.79113
165	170	15.000	0.9588	1.2061	998.1	0.957	0.79497
165	170	10.000	1.0447	1.3078	992.5	1.037	0.79882
165	170	-0.002	1.2569	1.5584	979.5	1.231	0.80652
165	170	-5.001	1.4231	1.7563	972.3	1.384	0.81029
165	170	-10.001	1.5814	1.9425	963.7	1.524	0.81409
165	170	-15.001	1.7696	2.1635	954.0	1.688	0.81791
165	170	-20.002	1.9960	2.4292	942.5	1.881	0.82166
165	170	-25.000	2.2643	2.7431	929.2	2.104	0.82546
165	170	-30.001	2.5860	3.1184	913.8	2.363	0.82927
165	170	-35.000	2.9781	3.5748	895.8	2.668	0.83309
165	170	-40.001	3.4852	4.1643	874.3	3.047	0.83691
165	170	-45.001	4.0867	4.8608	848.5	3.467	0.84074
165	170	-50.002	4.8941	5.7947	817.1	3.999	0.84457
165	170	-55.000	5.9533	7.0171	779.4	4.640	0.84839
165	170	-60.000	7.4128	8.6987	733.0	5.433	0.85218
170	175	40.003	0.7483	0.9615	1009	0.755	0.77828
170	175	30.001	0.8534	1.0852	1002	0.855	0.78637
170	175	24.999	0.9172	1.1608	998.2	0.916	0.79015
170	175	20.000	0.9896	1.2464	993.5	0.983	0.79400
170	175	15.000	1.0713	1.3427	988.4	1.059	0.79786
170	175	9.999	1.1643	1.4523	982.6	1.144	0.80171
170	175	-0.004	1.3936	1.7218	968.9	1.350	0.80937
170	175	-5.002	1.5800	1.9431	960.5	1.518	0.81314
170	175	-10.002	1.7606	2.1551	951.0	1.674	0.81692
170	175	-15.001	1.9743	2.4058	940.0	1.856	0.82067
170	175	-20.001	2.2295	2.7043	927.4	2.068	0.82443
170	175	-25.001	2.5362	3.0623	912.5	2.314	0.82820
170	175	-30.001	2.9098	3.4976	895.0	2.604	0.83193
170	175	-35.002	3.3720	4.0352	874.4	2.948	0.83565
170	175	-40.002	3.9704	4.7300	849.9	3.375	0.83942
170	175	-45.001	4.7029	5.5785	820.0	3.856	0.84304

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2 s^{-1}$	s^{-1}	Pa	$g cm^{-3}$
170	175	-50.001	5.6747	6.6997	784.5	4.452	0.84702
170	175	-55.000	6.9896	8.2157	741.3	5.181	0.85076
170	175	-60.000	8.8348	10.338	688.3	6.081	0.85456
175	180	40.001	0.7919	1.0146	1005	0.796	0.78048
175	180	29.999	0.9098	1.1538	997.1	0.907	0.78856
175	180	24.999	0.9792	1.2360	992.6	0.972	0.79226
175	180	19.999	1.0593	1.3308	987.5	1.046	0.79602
175	180	14.999	1.1505	1.4385	981.7	1.130	0.79981
175	180	9.998	1.2549	1.5616	975.2	1.224	0.80360
175	180	-0.001	1.5116	1.8635	960.0	1.451	0.81117
175	180	-5.001	1.7166	2.1065	950.6	1.632	0.81490
175	180	-10.001	1.9213	2.3469	939.9	1.806	0.81865
175	180	-15.000	2.1652	2.6330	927.5	2.008	0.82235
175	180	-20.000	2.4583	2.9759	913.0	2.245	0.82608
175	180	-25.002	2.8114	3.3879	896.1	2.520	0.82984
175	180	-30.001	3.2471	3.8953	876.3	2.845	0.83360
175	180	-35.001	3.7898	4.5258	852.8	3.232	0.83738
175	180	-40.001	4.5051	5.3559	824.6	3.715	0.84115
175	180	-45.002	5.3802	6.3676	790.8	4.255	0.84493
175	180	-50.002	6.5777	7.7501	750.0	4.933	0.84872
175	180	-55.001	8.2210	9.6434	700.6	5.760	0.85250
175	180	-60.000	10.556	12.328	641.1	6.767	0.85621
180	185	60.001	0.6455	0.8393	1014	0.654	0.76902
180	185	39.998	0.8337	1.0624	1001	0.834	0.78476
180	185	30.000	0.9621	1.2141	992.2	0.955	0.79239
180	185	24.999	1.0405	1.3071	987.1	1.027	0.79603
180	185	20.001	1.1287	1.4113	981.4	1.108	0.79976
180	185	14.999	1.2289	1.5294	975.1	1.198	0.80352
180	185	9.999	1.3437	1.6645	968.1	1.301	0.80729
180	185	-0.002	1.6295	1.9998	951.2	1.550	0.81482
180	185	-5.001	1.8523	2.2629	940.9	1.743	0.81854
180	185	-10.001	2.0801	2.5297	929.1	1.933	0.82227
180	185	-14.999	2.3516	2.8469	915.4	2.153	0.82602
180	185	-20.001	2.6808	3.2311	899.5	2.411	0.82969
180	185	-25.002	3.0805	3.6962	880.7	2.713	0.83342
180	185	-30.000	3.5769	4.2726	858.6	3.071	0.83717
180	185	-35.001	4.2020	4.9969	832.4	3.498	0.84093
180	185	-40.000	5.0321	5.9573	801.1	4.031	0.84469
180	185	-45.000	6.0613	7.1439	763.4	4.627	0.84846
180	185	-50.001	7.4860	8.7840	718.1	5.376	0.85223
180	185	-55.000	9.4730	11.067	663.5	6.286	0.85599
180	185	-60.000	12.334	14.347	598.5	7.382	0.85970
185	190	60.000	0.6801	0.8800	1010	0.687	0.77280
185	190	39.999	0.8818	1.1183	996.0	0.878	0.78855
185	190	29.998	1.0216	1.2831	986.7	1.008	0.79624
185	190	24.999	1.1067	1.3836	981.2	1.086	0.79985
185	190	19.999	1.2024	1.4963	975.1	1.173	0.80359

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
185	190	14.999	1.3114	1.6244	968.3	1.270	0.80735
185	190	9.999	1.4368	1.7714	960.6	1.380	0.81109
185	190	-0.002	1.7507	2.1386	942.3	1.650	0.81861
185	190	-5.001	1.9945	2.4255	931.0	1.857	0.82229
185	190	-10.001	2.2469	2.7202	918.1	2.063	0.82600
185	190	-15.001	2.5501	3.0736	903.0	2.303	0.82968
185	190	-20.001	2.9189	3.5025	885.4	2.584	0.83337
185	190	-25.002	3.3703	4.0263	864.7	2.914	0.83708
185	190	-30.001	3.9349	4.6799	840.3	3.306	0.84080
185	190	-35.001	4.6525	5.5089	811.3	3.775	0.84454
185	190	-40.002	5.6142	6.6182	776.6	4.360	0.84829
185	190	-45.001	6.8242	8.0093	734.9	5.015	0.85204
185	190	-50.002	8.5175	9.9528	685.1	5.835	0.85579
185	190	-55.000	10.911	12.694	625.5	6.825	0.85954
185	190	-60.000	14.417	16.701	555.4	8.007	0.86325
190	195	39.999	1.0229	1.2896	982.5	1.005	0.79320
190	195	29.998	1.1799	1.4734	972.5	1.147	0.80077
190	195	25.000	1.2777	1.5884	966.4	1.235	0.80438
190	195	20.000	1.3895	1.7195	959.5	1.333	0.80808
190	195	14.999	1.5181	1.8700	951.7	1.445	0.81181
190	195	9.999	1.6667	2.0436	942.9	1.572	0.81554
190	195	-0.003	2.0433	2.4829	921.7	1.883	0.82297
190	195	-5.000	2.3281	2.8163	908.7	2.115	0.82665
190	195	-10.001	2.6312	3.1688	893.6	2.351	0.83034
190	195	-15.001	2.9974	3.5940	876.1	2.626	0.83400
190	195	-20.001	3.4468	4.1148	855.7	2.949	0.83766
190	195	-25.000	3.9886	4.7419	832.4	3.320	0.84113
190	195	-30.000	4.6936	5.5552	803.8	3.773	0.84492
190	195	-35.001	5.5876	6.5841	770.6	4.306	0.84864
190	195	-40.001	6.7996	7.9774	731.0	4.970	0.85235
190	195	-45.001	8.3542	9.7593	683.7	5.712	0.85603
190	195	-50.001	10.567	12.291	627.6	6.632	0.85979
190	195	-55.000	13.782	15.960	561.2	7.735	0.86350
195	200	59.999	0.7666	0.9807	1001	0.767	0.78163
195	200	40.000	1.0090	1.2660	983.7	0.993	0.79702
195	200	29.999	1.1784	1.4645	972.6	1.146	0.80459
195	200	25.000	1.2831	1.5879	965.8	1.239	0.80806
195	200	19.999	1.4020	1.7269	958.3	1.344	0.81182
195	200	15.000	1.5388	1.8869	950.0	1.462	0.81551
195	200	9.999	1.6977	2.0723	940.5	1.597	0.81922
195	200	-0.002	2.1030	2.5440	917.6	1.930	0.82662
195	200	-5.001	2.4057	2.8974	903.6	2.174	0.83028
195	200	-10.001	2.7350	3.2796	887.2	2.427	0.83395
195	200	-15.002	3.1372	3.7456	868.0	2.723	0.83759
195	200	-20.001	3.6330	4.3186	845.7	3.072	0.84125
195	200	-25.001	4.2515	5.0318	819.3	3.483	0.84493
195	200	-30.000	5.0427	5.9422	788.1	3.974	0.84863

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
195	200	-35.002	6.0729	7.1250	751.0	4.561	0.85233
195	200	-40.000	7.4855	8.7443	707.0	5.292	0.85605
195	200	-45.001	9.3307	10.853	654.6	6.108	0.85976
195	200	-50.001	11.995	13.891	593.0	7.112	0.86348
195	200	-55.000	15.893	18.327	521.8	8.293	0.86719
200	205	60.000	0.8109	1.0318	995.7	0.807	0.78587
200	205	40.000	1.0724	1.3389	977.7	1.049	0.80100
200	205	29.998	1.2575	1.5550	965.6	1.214	0.80865
200	205	24.998	1.3718	1.6889	958.3	1.315	0.81222
200	205	19.999	1.5031	1.8423	950.1	1.428	0.81588
200	205	15.000	1.6547	2.0190	941.0	1.557	0.81958
200	205	9.999	1.8326	2.2260	930.5	1.705	0.82328
200	205	-0.002	2.2884	2.7550	905.2	2.071	0.83065
200	205	-5.002	2.6273	3.1491	889.5	2.337	0.83430
200	205	-10.001	3.0008	3.5812	871.3	2.615	0.83795
200	205	-15.000	3.4596	4.1106	850.0	2.941	0.84163
200	205	-20.000	4.0312	4.7694	825.0	3.326	0.84523
200	205	-25.001	4.7519	5.5978	795.6	3.781	0.84888
200	205	-30.001	5.6821	6.6649	760.8	4.323	0.85254
200	205	-35.002	6.9074	8.0672	719.6	4.971	0.85623
200	205	-40.000	8.6114	10.014	670.7	5.776	0.85992
200	205	-45.001	10.875	12.592	613.2	6.669	0.86361
200	205	-50.001	14.190	16.360	546.5	7.755	0.86731
200	205	-55.001	19.130	21.963	471.0	9.011	0.87101
205	210	60.001	0.8511	1.0759	991.5	0.844	0.79113
205	210	39.999	1.1317	1.4035	972.2	1.100	0.80632
205	210	30.000	1.3318	1.6361	959.1	1.277	0.81398
205	210	24.999	1.4563	1.7814	951.2	1.385	0.81746
205	210	19.999	1.5991	1.9473	942.4	1.507	0.82118
205	210	14.999	1.7654	2.1402	932.5	1.646	0.82487
205	210	9.999	1.9601	2.3658	921.3	1.806	0.82854
205	210	-0.001	2.4599	2.9428	893.9	2.199	0.83590
205	210	-5.001	2.8310	3.3721	876.8	2.482	0.83953
205	210	-10.001	3.2452	3.8488	857.1	2.781	0.84317
205	210	-15.000	3.7550	4.4342	834.0	3.132	0.84683
205	210	-20.001	4.3960	5.1692	806.9	3.547	0.85042
205	210	-25.002	5.2093	6.0994	775.0	4.038	0.85407
205	210	-30.001	6.2668	7.3062	737.4	4.621	0.85774
205	210	-35.001	7.6727	8.9071	693.0	5.317	0.86142
205	210	-40.001	9.6474	11.152	640.5	6.180	0.86511
205	210	-45.001	12.298	14.155	579.4	7.126	0.86880
205	210	-50.001	16.227	18.599	509.5	8.268	0.87249
205	210	-55.001	22.169	25.302	431.6	9.568	0.87618
210	215	60.002	0.8943	1.1275	987.0	0.883	0.79316
210	215	39.999	1.1890	1.4711	966.9	1.150	0.80823
210	215	29.998	1.4068	1.7244	952.7	1.340	0.81582
210	215	25.000	1.5429	1.8832	944.2	1.457	0.81930

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
210	215	19.998	1.6980	2.0632	934.7	1.587	0.82299
210	215	15.000	1.8787	2.2727	924.0	1.736	0.82664
210	215	9.999	2.0898	2.5169	912.0	1.906	0.83030
210	215	-0.001	2.6422	3.1545	882.2	2.331	0.83758
210	215	-5.001	3.0465	3.6215	863.9	2.632	0.84122
210	215	-10.001	3.5059	4.1497	842.4	2.954	0.84486
210	215	-15.001	4.0749	4.8025	817.5	3.331	0.84851
210	215	-20.002	4.7927	5.6248	788.1	3.777	0.85208
210	215	-25.002	5.7131	6.6778	753.6	4.305	0.85554
210	215	-30.001	6.9211	8.0542	712.9	4.934	0.85932
210	215	-35.001	8.5421	9.8983	665.0	5.680	0.86299
210	215	-40.001	10.980	12.670	608.8	6.685	0.86665
210	215	-45.001	13.982	16.066	544.0	7.606	0.87033
210	215	-50.001	18.692	21.386	470.9	8.801	0.87401
210	215	-55.001	25.931	29.546	391.0	10.14	0.87764
215	220	60.001	0.9404	1.1861	982.2	0.924	0.79281
215	220	39.999	1.2681	1.5700	959.8	1.217	0.80772
215	220	29.999	1.5064	1.8480	944.4	1.423	0.81515
215	220	24.999	1.6554	2.0223	935.1	1.548	0.81859
215	220	20.000	1.8273	2.2222	924.8	1.690	0.82226
215	220	14.999	2.0298	2.4580	913.0	1.853	0.82580
215	220	9.999	2.2681	2.7351	899.6	2.040	0.82923
215	220	-0.002	2.8916	3.4575	866.8	2.506	0.83633
215	220	-5.001	3.3507	3.9895	846.2	2.835	0.83990
215	220	-10.001	3.8789	4.5994	822.3	3.190	0.84336
215	220	-15.001	4.5396	5.3603	794.4	3.606	0.84689
215	220	-20.001	5.3930	6.3412	761.7	4.108	0.85047
215	220	-25.001	6.4782	7.5850	723.2	4.685	0.85408
215	220	-30.002	7.9321	9.2478	678.0	5.378	0.85773
215	220	-35.002	9.9115	11.506	625.2	6.197	0.86139
215	220	-40.001	12.912	14.926	564.2	7.285	0.86507
215	220	-45.001	16.703	19.226	495.0	8.268	0.86876
215	220	-50.001	22.742	26.067	418.7	9.521	0.87247
220	225	60.002	0.9911	1.2481	977.1	0.968	0.79404
220	225	40.000	1.3430	1.6601	953.1	1.280	0.80894
220	225	29.998	1.6037	1.9641	936.4	1.502	0.81650
220	225	25.000	1.7671	2.1552	926.4	1.637	0.81992
220	225	19.999	1.9566	2.3757	915.1	1.790	0.82358
220	225	14.999	2.1803	2.6357	902.2	1.967	0.82719
220	225	10.000	2.4455	2.9435	887.6	2.171	0.83081
220	225	-0.001	3.1440	3.7516	851.6	2.678	0.83805
220	225	-5.002	3.6557	4.3436	829.1	3.031	0.84162
220	225	-10.000	4.2555	5.0349	803.0	3.417	0.84521
220	225	-15.001	5.0123	5.9050	772.3	3.871	0.84881
220	225	-20.001	5.9991	7.0382	736.3	4.417	0.85236
220	225	-25.001	7.2658	8.4887	694.3	5.045	0.85594
220	225	-30.000	8.9829	10.451	645.2	5.795	0.85955

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
220	225	-35.001	11.354	13.154	588.2	6.678	0.86318
220	225	-40.002	14.986	17.289	523.1	7.839	0.86681
220	225	-45.001	19.679	22.608	450.6	8.867	0.87045
220	225	-50.002	27.254	31.180	372.6	10.16	0.87410
225	230	60.002	1.0476	1.3145	971.4	1.018	0.79698
225	230	39.999	1.4332	1.7653	945.2	1.355	0.81189
225	230	30.000	1.7201	2.0991	927.0	1.595	0.81942
225	230	24.999	1.9009	2.3101	916.0	1.741	0.82285
225	230	20.000	2.1115	2.5548	903.7	1.908	0.82651
225	230	15.000	2.3598	2.8428	889.7	2.100	0.83011
225	230	9.999	2.6551	3.1846	873.8	2.320	0.83372
225	230	-0.002	3.4471	4.0992	834.1	2.875	0.84092
225	230	-5.001	4.0286	4.7708	809.2	3.260	0.84443
225	230	-10.000	4.7188	5.5643	780.3	3.682	0.84805
225	230	-15.001	5.5978	6.5729	746.6	4.179	0.85165
225	230	-20.001	6.7537	7.8974	707.1	4.775	0.85518
225	230	-25.001	8.2600	9.6187	661.0	5.460	0.85875
225	230	-30.001	10.332	11.981	607.4	6.275	0.86235
225	230	-35.001	13.229	15.276	546.0	7.223	0.86597
225	230	-40.000	17.723	20.381	477.1	8.456	0.86960
225	230	-45.001	23.687	27.126	402.0	9.522	0.87323
225	230	-50.000	44.874	51.191	260.6	11.70	0.87659
230	235	60.002	1.1365	1.4210	962.5	1.094	0.79979
230	235	39.999	1.5645	1.9211	933.9	1.461	0.81440
230	235	29.998	1.8880	2.2982	913.8	1.725	0.82152
230	235	24.999	2.0939	2.5372	901.5	1.888	0.82530
230	235	20.000	2.3358	2.8178	887.7	2.074	0.82896
230	235	14.999	2.6236	3.1513	871.9	2.288	0.83254
230	235	9.999	2.9688	3.5507	853.8	2.535	0.83612
230	235	-0.002	3.9012	4.6262	809.1	3.157	0.84329
230	235	-5.001	4.5865	5.4161	781.1	3.582	0.84684
230	235	-10.001	5.4214	6.3751	748.3	4.057	0.85040
230	235	-15.002	6.4927	7.6028	710.3	4.612	0.85399
230	235	-20.001	7.9192	9.2353	666.1	5.275	0.85749
230	235	-25.000	9.8565	11.448	613.6	6.048	0.86099
230	235	-30.002	12.447	14.396	556.2	6.923	0.86462
230	235	-35.001	16.189	18.646	490.5	7.940	0.86824
230	235	-40.002	22.100	25.350	418.3	9.245	0.87183
230	235	-44.999	42.634	48.716	266.1	11.34	0.87516
235	240	60.003	1.1764	1.4679	958.6	1.128	0.80141
235	240	39.999	1.6349	2.0036	928.0	1.517	0.81599
235	240	29.999	1.9847	2.4103	906.4	1.799	0.82341
235	240	24.999	2.2074	2.6697	893.2	1.972	0.82682
235	240	19.999	2.4710	2.9755	878.4	2.170	0.83043
235	240	14.999	2.7822	3.3360	861.6	2.397	0.83399
235	240	10.000	3.1593	3.7720	842.2	2.661	0.83755
235	240	-0.001	4.1858	4.9555	794.2	3.324	0.84468

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
235	240	-5.000	4.9426	5.8274	764.1	3.777	0.84816
235	240	-10.001	5.8677	6.8890	729.3	4.279	0.85175
235	240	-15.001	7.0688	8.2647	688.8	4.869	0.85531
235	240	-20.001	8.6819	10.109	641.7	5.571	0.85880
235	240	-25.001	10.836	12.565	587.7	6.368	0.86234
235	240	-30.001	13.865	16.012	526.4	7.299	0.86591
235	240	-35.001	18.242	20.980	458.1	8.357	0.86950
235	240	-40.001	25.207	28.871	384.7	9.696	0.87308
240	245	60.003	1.2510	1.5550	951.4	1.190	0.80452
240	245	40.000	1.7518	2.1391	918.3	1.609	0.81893
240	245	30.000	2.1387	2.5892	894.7	1.914	0.82601
240	245	25.000	2.3865	2.8763	880.4	2.101	0.82971
240	245	19.998	2.6798	3.2159	864.3	2.316	0.83329
240	245	14.998	3.0318	3.6229	845.8	2.564	0.83683
240	245	9.999	3.4588	4.1158	824.5	2.852	0.84038
240	245	-0.001	4.6333	5.4673	771.8	3.576	0.84745
240	245	-5.001	5.5033	6.4673	738.8	4.066	0.85095
240	245	-10.000	6.5821	7.7028	700.7	4.612	0.85451
240	245	-15.002	8.0010	9.3253	656.5	5.253	0.85799
240	245	-20.000	9.9202	11.515	605.7	6.009	0.86150
240	245	-25.001	12.517	14.470	548.0	6.860	0.86505
240	245	-30.001	16.219	18.672	483.5	7.841	0.86862
240	245	-35.001	21.629	24.798	413.2	8.937	0.87219
240	245	-40.000	97.233	111.09	134.1	13.04	0.87524
245	250	60.001	1.3258	1.6455	944.2	1.252	0.80572
245	250	39.999	1.8788	2.2917	908.0	1.706	0.81983
245	250	29.999	2.3089	2.7929	882.2	2.037	0.82671
245	250	24.999	2.5850	3.1139	866.7	2.240	0.83013
245	250	19.999	2.9136	3.4945	849.0	2.474	0.83378
245	250	14.999	3.3099	3.9527	828.7	2.743	0.83738
245	250	10.000	3.7941	4.5117	805.5	3.056	0.84095
245	250	-0.001	5.1380	6.0582	748.0	3.843	0.84810
245	250	-5.001	6.1414	7.2116	712.0	4.373	0.85160
245	250	-10.000	7.4034	8.6573	670.5	4.964	0.85516
245	250	-15.001	9.0786	10.573	622.8	5.654	0.85866
245	250	-20.000	11.371	13.188	568.5	6.464	0.86221
245	250	-25.001	14.518	16.769	507.2	7.364	0.86576
245	250	-30.001	19.060	21.925	440.1	8.388	0.86932
250	255	60.000	1.4015	1.7359	937.1	1.313	0.80735
250	255	39.999	2.0051	2.4398	898.0	1.801	0.82183
250	255	30.000	2.4792	2.9909	870.1	2.157	0.82893
250	255	24.999	2.7858	3.3471	853.1	2.377	0.83232
250	255	19.999	3.1528	3.7718	833.9	2.629	0.83588
250	255	15.000	3.5980	4.2864	811.8	2.921	0.83940
250	255	9.999	4.1452	4.9176	786.5	3.260	0.84292
250	255	-0.002	5.6851	6.6889	723.7	4.115	0.84993
250	255	-5.001	6.8411	8.0164	684.7	4.684	0.85339

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
250	255	-10.001	8.3136	9.7017	639.9	5.320	0.85693
250	255	-15.001	10.281	11.949	588.9	6.055	0.86044
250	255	-20.001	13.011	15.061	531.3	6.912	0.86390
250	255	-25.001	16.803	19.372	467.4	7.854	0.86739
250	255	-30.001	22.352	25.666	398.6	8.910	0.87089

Table S8 – Viscosity, density, shear rate and shear stress determined at different temperatures for narrow boiling range distillation cuts of synthetic distillate. The data is the raw data collected from the instrument and not rounded.

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
140	145	40.001	0.5303	0.7391	1033	0.548	0.71744
140	145	29.999	0.6015	0.8287	1028	0.619	0.72581
140	145	24.999	0.6422	0.8801	1026	0.659	0.72969
140	145	19.998	0.6876	0.9373	1023	0.703	0.73362
140	145	15.000	0.7373	0.9997	1020	0.752	0.73755
140	145	10.000	0.7948	1.0721	1016	0.808	0.74140
140	145	-0.001	0.9281	1.2385	1008	0.936	0.74937
140	145	-5.002	1.0429	1.3848	1003	1.046	0.75312
140	145	-10.001	1.1440	1.5113	998.1	1.142	0.75698
140	145	-15.001	1.2595	1.6554	992.1	1.250	0.76082
140	145	-20.001	1.3966	1.8265	984.8	1.375	0.76464
140	145	-25.001	1.5568	2.0258	977.0	1.521	0.76848
140	145	-30.000	1.7430	2.2568	967.7	1.687	0.77233
140	145	-35.001	1.9650	2.5317	956.9	1.880	0.77618
140	145	-40.000	2.2099	2.8337	945.4	2.089	0.77987
140	145	-45.001	2.5267	3.2234	930.8	2.352	0.78386
140	145	-50.001	2.9177	3.7040	913.2	2.664	0.78771
140	145	-55.000	3.3975	4.2924	892.6	3.033	0.79153
140	145	-60.001	3.9884	5.0150	868.7	3.465	0.79528
145	150	60.000	0.4336	0.6162	1039	0.450	0.70368
145	150	39.998	0.5456	0.7577	1031	0.563	0.72003
145	150	29.999	0.6200	0.8518	1027	0.637	0.72788
145	150	24.998	0.6642	0.9078	1024	0.680	0.73162
145	150	19.998	0.7121	0.9681	1021	0.727	0.73550
145	150	14.999	0.7653	1.0349	1017	0.779	0.73942
145	150	9.999	0.8247	1.1095	1014	0.836	0.74335
145	150	0.000	0.9682	1.2892	1005	0.973	0.75102
145	150	-5.000	1.0881	1.4414	999.7	1.088	0.75489
145	150	-10.000	1.1974	1.5782	993.9	1.190	0.75872
145	150	-15.000	1.3229	1.7349	987.3	1.306	0.76256
145	150	-20.001	1.4687	1.9165	979.7	1.439	0.76632
145	150	-25.002	1.6402	2.1298	971.1	1.593	0.77013
145	150	-30.000	1.8416	2.3796	961.1	1.770	0.77394
145	150	-35.001	2.0825	2.6775	949.4	1.977	0.77777
145	150	-40.001	2.3736	3.0369	935.6	2.221	0.78159
145	150	-45.001	2.7297	3.4754	919.2	2.509	0.78542
145	150	-50.000	3.1709	4.0177	899.7	2.853	0.78924
145	150	-55.001	3.7251	4.6971	876.4	3.265	0.79305
145	150	-60.000	4.4281	5.5574	848.6	3.758	0.79680
150	155	40.000	0.5737	0.7949	1028	0.590	0.72174
150	155	29.999	0.6545	0.8968	1023	0.670	0.72984
150	155	24.999	0.7001	0.9543	1020	0.714	0.73366
150	155	19.999	0.7521	1.0197	1017	0.765	0.73758
150	155	15.000	0.8087	1.0906	1014	0.820	0.74146
150	155	9.999	0.8730	1.1713	1009	0.881	0.74533

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2\ s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g\ cm^{-3}$
150	155	-0.001	1.0267	1.3635	1000	1.027	0.75298
150	155	-5.001	1.1537	1.5247	994.6	1.148	0.75673
150	155	-10.001	1.2748	1.6761	988.0	1.260	0.76059
150	155	-15.001	1.4138	1.8496	980.7	1.387	0.76438
150	155	-20.001	1.5749	2.0502	972.3	1.531	0.76816
150	155	-25.001	1.7634	2.2843	962.9	1.698	0.77196
150	155	-30.001	1.9857	2.5596	951.8	1.890	0.77576
150	155	-35.001	2.2537	2.8910	938.8	2.116	0.77956
150	155	-40.001	2.5818	3.2958	923.1	2.383	0.78337
150	155	-45.000	2.9881	3.7959	904.9	2.704	0.78717
150	155	-50.001	3.4958	4.4196	882.9	3.086	0.79097
150	155	-55.000	4.1375	5.2059	856.7	3.545	0.79477
150	155	-60.001	4.9699	6.2241	825.0	4.100	0.79850
155	160	59.999	0.4984	0.7022	1031	0.514	0.70976
155	160	39.998	0.6286	0.8660	1023	0.643	0.72579
155	160	29.998	0.7175	0.9780	1017	0.730	0.73362
155	160	24.998	0.7690	1.0429	1014	0.780	0.73735
155	160	19.998	0.8258	1.1143	1010	0.834	0.74116
155	160	14.999	0.8895	1.1939	1006	0.895	0.74499
155	160	10.000	0.9614	1.2839	1002	0.963	0.74882
155	160	-0.002	1.1353	1.5008	991.3	1.125	0.75647
155	160	-5.000	1.2762	1.6787	985.0	1.257	0.76022
155	160	-10.001	1.4099	1.8454	977.8	1.379	0.76399
155	160	-15.001	1.5647	2.0379	969.8	1.517	0.76777
155	160	-20.000	1.7489	2.2669	960.2	1.679	0.77149
155	160	-25.001	1.9947	2.5730	947.5	1.890	0.77522
155	160	-30.001	2.2554	2.8952	934.7	2.108	0.77902
155	160	-35.000	2.5769	3.2918	919.4	2.369	0.78281
155	160	-40.002	2.9838	3.7934	901.6	2.690	0.78659
155	160	-45.001	3.4748	4.3966	879.2	3.055	0.79035
155	160	-50.001	4.1119	5.1777	852.8	3.507	0.79415
155	160	-55.001	4.9403	6.1914	820.8	4.055	0.79793
155	160	-60.001	6.0502	7.5473	781.7	4.729	0.80164
160	165	60.000	0.5002	0.7016	1031	0.516	0.71294
160	165	39.999	0.6387	0.8763	1022	0.653	0.72886
160	165	29.999	0.7322	0.9940	1016	0.744	0.73663
160	165	24.999	0.7879	1.0643	1012	0.797	0.74031
160	165	19.999	0.8494	1.1415	1008	0.856	0.74410
160	165	14.999	0.9185	1.2281	1004	0.922	0.74790
160	165	10.000	0.9966	1.3258	998.7	0.995	0.75170
160	165	-0.001	1.1868	1.5629	987.1	1.171	0.75930
160	165	-5.001	1.3371	1.7524	980.2	1.311	0.76303
160	165	-10.001	1.4798	1.9300	972.4	1.439	0.76678
160	165	-15.001	1.6529	2.1455	963.5	1.593	0.77041
160	165	-20.000	1.8622	2.4058	952.5	1.774	0.77404
160	165	-25.001	2.1039	2.7044	940.3	1.978	0.77796
160	165	-30.001	2.3976	3.0670	926.0	2.220	0.78173

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
160	165	-35.000	2.7555	3.5080	909.1	2.505	0.78549
160	165	-40.000	3.2184	4.0778	888.8	2.861	0.78925
160	165	-45.000	3.7669	4.7502	864.4	3.256	0.79301
160	165	-50.001	4.4992	5.6467	834.9	3.756	0.79678
160	165	-55.001	5.4654	6.8271	798.9	4.366	0.80054
160	165	-60.000	6.7791	8.4293	754.9	5.118	0.80423
165	170	60.000	0.5220	0.7299	1029	0.537	0.71514
165	170	39.999	0.6667	0.9121	1019	0.679	0.73097
165	170	29.999	0.7654	1.0360	1012	0.775	0.73875
165	170	25.000	0.8244	1.1104	1009	0.831	0.74240
165	170	19.999	0.8896	1.1923	1004	0.893	0.74616
165	170	15.000	0.9633	1.2845	999.6	0.963	0.74995
165	170	9.999	1.0468	1.3888	994.4	1.041	0.75373
165	170	-0.002	1.2508	1.6430	982.0	1.228	0.76128
165	170	-5.000	1.4130	1.8470	974.6	1.377	0.76500
165	170	-10.002	1.5705	2.0429	966.0	1.517	0.76874
165	170	-15.000	1.7560	2.2733	956.2	1.679	0.77244
165	170	-20.001	1.9791	2.5500	944.8	1.870	0.77612
165	170	-25.001	2.2452	2.8789	931.3	2.091	0.77988
165	170	-30.000	2.5670	3.2758	915.7	2.351	0.78363
165	170	-35.001	2.9639	3.7642	897.3	2.660	0.78738
165	170	-40.001	3.4792	4.3978	875.2	3.045	0.79112
165	170	-45.000	4.0966	5.1537	848.4	3.476	0.79487
165	170	-50.001	4.9269	6.1693	815.9	4.020	0.79862
165	170	-55.001	6.0375	7.5246	776.4	4.687	0.80237
165	170	-60.001	7.5691	9.3904	727.9	5.510	0.80605
170	175	59.999	0.5474	0.7618	1026	0.561	0.71859
170	175	39.999	0.7043	0.9591	1015	0.715	0.73433
170	175	29.999	0.8115	1.0936	1008	0.818	0.74201
170	175	25.000	0.8757	1.1744	1004	0.879	0.74565
170	175	19.998	0.9470	1.2637	999.1	0.946	0.74940
170	175	14.998	1.0270	1.3636	994.0	1.021	0.75317
170	175	10.000	1.1190	1.4783	988.3	1.106	0.75693
170	175	-0.002	1.3448	1.7592	974.7	1.311	0.76444
170	175	-5.001	1.5164	1.9741	966.9	1.466	0.76815
170	175	-10.001	1.6942	2.1950	957.0	1.621	0.77187
170	175	-15.001	1.9017	2.4519	946.2	1.799	0.77560
170	175	-20.001	2.1490	2.7579	933.6	2.006	0.77921
170	175	-25.001	2.4510	3.1304	918.5	2.251	0.78297
170	175	-30.001	2.8164	3.5800	901.1	2.538	0.78670
170	175	-35.001	3.2691	4.1359	880.5	2.879	0.79043
170	175	-40.001	3.8650	4.8667	855.5	3.307	0.79416
170	175	-45.001	4.5858	5.7473	825.6	3.786	0.79790
170	175	-50.001	5.5661	6.9434	789.2	4.393	0.80163
170	175	-55.000	6.8924	8.5581	744.9	5.134	0.80537
170	175	-60.001	8.7487	10.814	691.0	6.045	0.80903
175	180	60.000	0.5922	0.8182	1021	0.604	0.72381

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
175	180	39.998	0.7640	1.0333	1009	0.771	0.73936
175	180	29.999	0.8837	1.1829	1001	0.885	0.74700
175	180	24.999	0.9564	1.2742	996.2	0.953	0.75063
175	180	19.999	1.0379	1.3759	991.0	1.029	0.75435
175	180	14.999	1.1298	1.4903	985.2	1.113	0.75809
175	180	9.999	1.2345	1.6204	978.7	1.208	0.76183
175	180	-0.002	1.4935	1.9414	963.2	1.439	0.76929
175	180	-5.000	1.6916	2.1885	953.8	1.613	0.77298
175	180	-10.001	1.8953	2.4403	942.8	1.787	0.77667
175	180	-15.002	2.1396	2.7420	930.2	1.990	0.78032
175	180	-20.002	2.4352	3.1061	915.4	2.229	0.78399
175	180	-25.002	2.7929	3.5457	898.0	2.508	0.78770
175	180	-30.001	3.2370	4.0902	877.4	2.840	0.79139
175	180	-35.001	3.7947	4.7726	853.0	3.237	0.79510
175	180	-40.001	4.5360	5.6785	823.6	3.736	0.79881
175	180	-45.001	5.4528	6.7945	788.0	4.297	0.80253
175	180	-50.001	6.7420	8.3622	744.2	5.017	0.80624
175	180	-55.001	8.5035	10.499	692.0	5.884	0.80995
175	180	-60.001	11.021	13.547	629.4	6.937	0.81358
180	185	60.000	0.6132	0.8443	1018	0.624	0.72628
180	185	39.998	0.7961	1.0734	1006	0.801	0.74170
180	185	29.998	0.9228	1.2314	997.3	0.920	0.74935
180	185	24.999	0.9994	1.3274	992.3	0.992	0.75292
180	185	20.000	1.0854	1.4345	986.8	1.071	0.75661
180	185	14.999	1.1833	1.5563	980.6	1.160	0.76034
180	185	9.999	1.2957	1.6959	973.7	1.262	0.76406
180	185	-0.002	1.5764	2.0433	956.9	1.509	0.77149
180	185	-5.001	1.7904	2.3098	946.6	1.695	0.77516
180	185	-10.000	2.0110	2.5820	934.9	1.880	0.77884
180	185	-15.001	2.2773	2.9103	921.2	2.098	0.78248
180	185	-20.001	2.5989	3.3058	905.2	2.353	0.78615
180	185	-25.002	2.9930	3.7894	886.2	2.653	0.78983
180	185	-30.002	3.4856	4.3925	864.1	3.012	0.79353
180	185	-35.001	4.1076	5.1524	837.4	3.440	0.79722
180	185	-40.001	4.9396	6.1674	805.4	3.979	0.80092
180	185	-45.001	5.9800	7.4320	766.8	4.585	0.80463
180	185	-50.001	7.4308	9.1928	720.1	5.351	0.80833
180	185	-55.001	9.4594	11.649	664.0	6.281	0.81203
180	185	-60.001	12.400	15.202	597.1	7.404	0.81567
185	190	60.002	0.6368	0.8734	1013	0.645	0.72905
185	190	39.999	0.8380	1.1262	1001	0.839	0.74409
185	190	30.000	0.9756	1.2978	993.8	0.970	0.75170
185	190	25.000	1.0568	1.3988	987.1	1.043	0.75550
185	190	20.000	1.1514	1.5170	981.1	1.130	0.75901
185	190	15.000	1.2569	1.6474	974.5	1.225	0.76294
185	190	10.000	1.3790	1.7987	967.0	1.333	0.76668
185	190	-0.001	1.6846	2.1763	948.9	1.599	0.77409

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
185	190	-5.002	1.9182	2.4664	937.6	1.798	0.77773
185	190	-10.001	2.1632	2.7684	924.7	2.000	0.78140
185	190	-15.002	2.4592	3.1326	909.6	2.237	0.78503
185	190	-20.001	2.8212	3.5771	891.8	2.516	0.78867
185	190	-25.001	3.2639	4.1193	871.2	2.844	0.79233
185	190	-30.001	3.8221	4.8018	846.5	3.235	0.79598
185	190	-35.002	4.5354	5.6719	817.0	3.706	0.79963
185	190	-40.001	5.4976	6.8438	781.6	4.297	0.80330
185	190	-45.001	6.7170	8.3235	739.0	4.964	0.80699
185	190	-50.000	8.4353	10.405	687.7	5.801	0.81067
185	190	-55.001	10.868	13.345	626.6	6.810	0.81435
185	190	-60.001	14.442	17.656	554.9	8.014	0.81797
190	195	60.001	0.6732	0.9205	1012	0.681	0.73129
190	195	39.998	0.8822	1.1817	997.3	0.880	0.74655
190	195	29.998	1.0289	1.3643	987.4	1.016	0.75413
190	195	24.998	1.1182	1.4758	981.7	1.098	0.75768
190	195	19.999	1.2192	1.6013	975.3	1.189	0.76137
190	195	14.999	1.3348	1.7446	968.1	1.292	0.76509
190	195	9.998	1.4689	1.9106	959.9	1.410	0.76878
190	195	-0.002	1.8078	2.3293	940.0	1.699	0.77613
190	195	-5.001	2.0599	2.6417	927.8	1.911	0.77977
190	195	-10.001	2.3301	2.9743	913.8	2.129	0.78342
190	195	-15.002	2.6599	3.3797	897.2	2.386	0.78700
190	195	-20.002	3.0635	3.8747	877.8	2.689	0.79065
190	195	-25.001	3.5644	4.4874	854.9	3.047	0.79431
190	195	-30.002	4.2001	5.2635	827.7	3.476	0.79797
190	195	-35.001	5.0174	6.2590	795.2	3.990	0.80164
190	195	-40.001	6.1309	7.6130	756.2	4.636	0.80531
190	195	-45.001	7.5608	9.3459	709.5	5.365	0.80899
190	195	-50.002	9.5972	11.810	653.6	6.273	0.81267
190	195	-55.000	12.519	15.336	587.8	7.359	0.81634
190	195	-60.002	16.899	20.609	511.5	8.643	0.81995
195	200	60.001	0.7063	0.9626	1008	0.712	0.73368
195	200	39.998	0.9302	1.2420	992.6	0.923	0.74896
195	200	29.999	1.0881	1.4384	982.1	1.069	0.75648
195	200	25.000	1.1848	1.5589	975.9	1.156	0.76003
195	200	20.000	1.2945	1.6951	968.9	1.254	0.76367
195	200	14.999	1.4207	1.8514	961.0	1.365	0.76735
195	200	9.999	1.5670	2.0324	952.2	1.492	0.77102
195	200	-0.002	1.9405	2.4931	930.5	1.806	0.77835
195	200	-5.002	2.2160	2.8339	917.2	2.033	0.78198
195	200	-10.000	2.5165	3.2033	901.7	2.269	0.78561
195	200	-15.001	2.8831	3.6529	883.6	2.548	0.78927
195	200	-20.001	3.3389	4.2113	862.3	2.879	0.79284
195	200	-25.001	3.9063	4.9045	837.1	3.270	0.79647
195	200	-30.001	4.6330	5.7904	807.1	3.739	0.80012
195	200	-35.001	5.5739	6.9345	771.5	4.300	0.80378

IBP	FBP	Cell Temp.	Dyn. Visc.	Kin. Visc.	Shear Rate	Shear Stress	Density
°C	°C	°C	mPa s	$mm^2\ s^{-1}$	s^{-1}	Pa	$g\ cm^{-3}$
195	200	-40.001	6.8695	8.5077	728.7	5.006	0.80744
195	200	-45.001	8.5546	10.547	677.6	5.797	0.81111
195	200	-50.001	10.991	13.490	617.0	6.781	0.81478
195	200	-55.001	14.528	17.751	546.7	7.942	0.81844
s195	200	-60.001	19.874	24.176	467.1	9.284	0.82204
200	205	60.000	0.7668	1.0416	1002	0.768	0.73618
200	205	39.999	1.0194	1.3563	984.0	1.003	0.75158
200	205	29.998	1.2009	1.5817	972.1	1.167	0.75922
200	205	24.998	1.3099	1.7174	965.2	1.264	0.76273
200	205	19.999	1.4339	1.8711	957.4	1.373	0.76636
200	205	14.999	1.5784	2.0498	948.6	1.497	0.77001
200	205	9.999	1.7436	2.2536	938.7	1.637	0.77367
200	205	-0.001	2.1697	2.7783	914.7	1.985	0.78095
200	205	-5.001	2.4839	3.1660	899.6	2.235	0.78456
200	205	-10.000	2.8336	3.5952	882.1	2.500	0.78818
200	205	-15.001	3.2625	4.1203	861.7	2.811	0.79181
200	205	-20.000	3.7989	4.7763	837.6	3.182	0.79537
200	205	-25.000	4.4666	5.5921	809.4	3.615	0.79873
200	205	-30.001	5.3224	6.6320	776.3	4.132	0.80253
200	205	-35.000	6.4578	8.0120	736.5	4.756	0.80601
200	205	-40.000	8.0399	9.9302	688.8	5.538	0.80965
205	210	60.003	0.7641	1.0320	1002	0.765	0.74044
205	210	39.999	1.0139	1.3417	985.7	0.999	0.75566
205	210	29.999	1.1916	1.5613	972.8	1.159	0.76323
205	210	25.000	1.2992	1.6944	965.9	1.255	0.76677
205	210	20.001	1.4222	1.8460	958.1	1.363	0.77040
205	210	15.000	1.5679	2.0256	949.1	1.488	0.77406
205	210	9.999	1.7358	2.2319	939.1	1.630	0.77772
205	210	-0.001	2.1663	2.7596	914.9	1.982	0.78502
205	210	-5.002	2.4877	3.1545	899.0	2.237	0.78864
205	210	-10.001	2.8454	3.5917	881.3	2.508	0.79222
205	210	-15.001	3.2824	4.1245	860.4	2.824	0.79583
205	210	-20.003	3.8314	4.7926	835.7	3.202	0.79945
205	210	-25.001	4.5232	5.6324	806.6	3.649	0.80307
205	210	-30.001	5.4232	6.7228	771.9	4.186	0.80669
205	210	-35.001	6.6054	8.1515	730.8	4.827	0.81034
205	210	-40.002	8.2540	10.140	681.9	5.629	0.81399
205	210	-45.001	10.445	12.775	624.2	6.520	0.81764
205	210	-50.000	13.659	16.631	557.1	7.609	0.82130
205	210	-55.001	18.437	22.349	481.1	8.869	0.82495
210	215	60.003	0.8186	1.1041	995.9	0.815	0.74140
210	215	40.000	1.0898	1.4414	977.5	1.065	0.75610
210	215	29.999	1.2875	1.6863	964.5	1.242	0.76350
210	215	25.001	1.4060	1.8323	957.0	1.346	0.76733
210	215	20.000	1.5450	2.0039	948.4	1.465	0.77099
210	215	15.000	1.7044	2.2003	938.6	1.600	0.77463
210	215	9.998	1.8945	2.4343	927.5	1.757	0.77827

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
210	215	-0.001	2.3840	3.0356	900.2	2.146	0.78535
210	215	-5.000	2.7403	3.4726	883.3	2.421	0.78910
210	215	-10.001	3.1460	3.9688	863.5	2.717	0.79269
210	215	-15.001	3.6491	4.5823	840.3	3.066	0.79634
210	215	-20.002	4.2842	5.3559	812.9	3.483	0.79990
210	215	-25.001	5.0955	6.3416	780.5	3.977	0.80351
215	220	60.001	0.8307	1.1189	994.7	0.826	0.74239
215	220	39.999	1.1179	1.4765	974.8	1.090	0.75712
215	220	29.999	1.3243	1.7329	961.3	1.273	0.76419
215	220	24.998	1.4511	1.8899	953.3	1.383	0.76786
215	220	20.000	1.5987	2.0727	944.0	1.509	0.77133
215	220	14.999	1.7698	2.2841	933.9	1.653	0.77484
215	220	10.000	1.9698	2.5306	922.1	1.816	0.77841
215	220	-0.001	2.4939	3.1751	893.1	2.227	0.78546
215	220	-5.001	2.8766	3.6458	874.9	2.517	0.78903
215	220	-10.001	3.3153	4.1832	853.9	2.831	0.79252
215	220	-15.001	3.8632	4.8540	829.0	3.203	0.79587
215	220	-20.002	4.5655	5.7077	799.6	3.651	0.79989
215	220	-25.001	5.4487	6.7803	765.1	4.169	0.80361
215	220	-30.001	6.6210	8.2025	724.2	4.795	0.80720
215	220	-35.001	8.1967	10.109	676.0	5.541	0.81080
215	220	-40.001	10.564	12.971	619.4	6.543	0.81440
215	220	-45.002	13.486	16.486	554.0	7.471	0.81803
215	220	-50.001	18.052	21.971	480.3	8.671	0.82165
215	220	-55.000	24.973	30.260	400.6	10.00	0.82529
220	225	60.000	0.8725	1.1731	990.1	0.864	0.74375
220	225	39.998	1.1796	1.5552	969.2	1.143	0.75852
220	225	29.999	1.4032	1.8317	954.6	1.339	0.76604
220	225	24.999	1.5424	2.0047	945.9	1.459	0.76940
220	225	19.999	1.7036	2.2037	935.8	1.594	0.77305
220	225	14.999	1.8915	2.4355	924.6	1.749	0.77666
220	225	9.999	2.1135	2.7087	911.8	1.927	0.78026
220	225	-0.001	2.6945	3.4218	880.2	2.372	0.78746
220	225	-5.000	3.1184	3.9423	860.5	2.683	0.79101
220	225	-10.001	3.6109	4.5444	837.4	3.024	0.79458
220	225	-15.001	4.2300	5.3000	810.3	3.427	0.79811
220	225	-20.002	5.0274	6.2712	778.3	3.913	0.80168
220	225	-25.002	6.0432	7.5046	740.5	4.475	0.80526
220	225	-30.001	7.4062	9.1565	695.9	5.154	0.80885
220	225	-35.001	9.2600	11.398	643.7	5.960	0.81245
220	225	-40.001	12.066	14.785	583.0	7.034	0.81606
220	225	-45.000	15.591	19.021	513.9	8.013	0.81967
220	225	-50.001	21.158	25.699	437.6	9.260	0.82329
220	225	-55.000	29.735	35.959	357.1	10.62	0.82691
225	230	60.002	0.9179	1.2326	985.6	0.905	0.74466
225	230	40.000	1.2465	1.6410	963.1	1.201	0.75957
225	230	29.999	1.4894	1.9423	947.4	1.411	0.76679

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
225	230	25.000	1.6412	2.1301	937.8	1.539	0.77048
225	230	20.000	1.8175	2.3479	927.0	1.685	0.77410
225	230	14.999	2.0244	2.6031	914.8	1.852	0.77769
225	230	9.999	2.2681	2.9031	901.0	2.044	0.78128
225	230	-0.001	2.9134	3.6949	866.6	2.525	0.78848
225	230	-5.001	3.3847	4.2737	845.0	2.860	0.79200
225	230	-10.001	3.9400	4.9525	819.8	3.230	0.79555
225	230	-15.000	4.6391	5.8053	790.2	3.666	0.79912
225	230	-20.000	5.5509	6.9159	755.3	4.193	0.80263
225	230	-25.001	6.7211	8.3369	714.3	4.801	0.80619
225	230	-30.000	8.3037	10.254	666.2	5.532	0.80977
225	230	-35.001	10.482	12.888	610.1	6.396	0.81335
225	230	-40.001	13.802	16.895	545.9	7.534	0.81695
225	230	-45.001	18.047	21.994	473.9	8.553	0.82055
225	230	-50.000	24.816	30.111	396.2	9.831	0.82415
230	235	60.002	0.9730	1.3046	980.0	0.953	0.74584
230	235	40.000	1.3323	1.7522	955.5	1.273	0.76031
230	235	29.999	1.6007	2.0863	938.2	1.502	0.76727
230	235	24.999	1.7678	2.2934	927.8	1.640	0.77085
230	235	19.999	1.9618	2.5335	916.2	1.797	0.77435
230	235	14.999	2.1917	2.8179	902.8	1.979	0.77778
230	235	9.999	2.4697	3.1613	887.4	2.192	0.78123
230	235	-0.002	3.2032	4.0640	849.4	2.721	0.78820
230	235	-5.001	3.7392	4.7234	825.5	3.087	0.79163
230	235	-10.001	4.3783	5.5067	797.5	3.492	0.79507
230	235	-15.001	5.1918	6.5016	764.8	3.971	0.79855
230	235	-20.002	6.2602	7.8059	726.4	4.547	0.80198
230	235	-25.001	7.6487	9.4962	681.4	5.212	0.80545
230	235	-30.000	9.5471	11.802	629.0	6.005	0.80895
230	235	-35.001	12.187	14.999	568.8	6.932	0.81248
230	235	-40.001	16.252	19.915	500.9	8.140	0.81604
230	235	-45.001	21.551	26.294	426.5	9.192	0.81963
230	235	-50.001	30.091	36.551	348.5	10.49	0.82326
235	240	60.001	1.0203	1.3663	975.2	0.995	0.74674
235	240	39.997	1.4086	1.8507	948.8	1.337	0.76114
235	240	29.997	1.7002	2.2128	930.2	1.581	0.76832
235	240	24.998	1.8838	2.4403	918.9	1.731	0.77197
235	240	19.999	2.0986	2.7059	906.1	1.902	0.77554
235	240	14.998	2.3529	3.0201	891.7	2.098	0.77909
235	240	9.999	2.6576	3.3957	875.0	2.325	0.78265
235	240	-0.001	3.4742	4.3992	834.1	2.898	0.78974
235	240	-5.001	4.0717	5.1329	807.8	3.289	0.79326
235	240	-10.002	4.7922	6.0144	777.6	3.726	0.79678
235	240	-15.002	5.7153	7.1412	742.2	4.242	0.80033
235	240	-20.002	6.9390	8.6327	700.6	4.862	0.80380
235	240	-25.002	8.5413	10.580	652.4	5.572	0.80733
235	240	-30.001	10.756	13.264	596.5	6.416	0.81088

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2\ s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g\ cm^{-3}$
235	240	-35.001	13.851	17.007	533.4	7.388	0.81443
235	240	-40.000	18.671	22.825	463.1	8.646	0.81800
235	240	-45.001	25.043	30.482	387.8	9.713	0.82157
240	245	60.001	1.0809	1.4454	969.1	1.048	0.74782
240	245	39.998	1.5006	1.9688	940.8	1.412	0.76221
240	245	29.999	1.8193	2.3649	920.7	1.675	0.76930
240	245	25.000	2.0214	2.6151	908.4	1.836	0.77295
240	245	19.998	2.2597	2.9100	894.6	2.021	0.77652
240	245	14.999	2.5426	3.2595	878.8	2.234	0.78004
240	245	9.999	2.8834	3.6797	860.6	2.481	0.78358
240	245	-0.003	3.8069	4.8150	815.4	3.104	0.79063
240	245	-5.000	4.4829	5.6449	787.0	3.528	0.79414
240	245	-10.001	5.3076	6.6540	754.0	4.002	0.79765
240	245	-15.001	6.3756	7.9582	715.4	4.561	0.80113
240	245	-20.001	7.7972	9.6905	670.5	5.228	0.80462
240	245	-25.001	9.6809	11.979	618.7	5.990	0.80814
240	245	-30.000	12.317	15.175	559.2	6.888	0.81167
240	245	-35.002	16.040	19.675	493.1	7.909	0.81521
240	245	-40.001	21.866	26.706	421.1	9.208	0.81876
240	245	-45.001	29.704	36.122	346.0	10.28	0.82232
245	250	60.003	1.1339	1.5144	963.9	1.093	0.74874
245	250	39.999	1.5861	2.0782	933.5	1.481	0.76320
245	250	29.999	1.9321	2.5083	911.9	1.762	0.77029
245	250	24.999	2.1525	2.7814	898.8	1.935	0.77390
245	250	19.999	2.4125	3.1029	883.8	2.132	0.77749
245	250	14.999	2.7234	3.4870	866.8	2.361	0.78101
245	250	9.998	3.0991	3.9502	847.2	2.625	0.78453
245	250	-0.002	4.1258	5.2123	798.5	3.295	0.79154
245	250	-5.001	4.8779	6.1354	767.9	3.746	0.79505
245	250	-10.001	5.8056	7.2702	732.5	4.253	0.79855
245	250	-15.001	7.0121	8.7424	691.3	4.847	0.80207
245	250	-20.001	8.6354	10.720	643.5	5.557	0.80551
245	250	-25.001	10.811	13.364	588.6	6.363	0.80898
245	250	-30.001	13.856	17.052	526.8	7.299	0.81253
245	250	-35.001	18.204	22.307	458.8	8.351	0.81606
245	250	-40.001	25.059	30.574	386.2	9.677	0.81961
250	255	60.002	1.2022	1.6025	957.2	1.151	0.75020
250	255	40.000	1.6984	2.2215	924.1	1.570	0.76454
250	255	30.000	2.0805	2.6964	900.6	1.874	0.77160
250	255	24.999	2.3252	2.9994	886.3	2.061	0.77520
250	255	19.999	2.6150	3.3578	870.0	2.275	0.77877
250	255	15.000	2.9631	3.7878	851.4	2.523	0.78226
250	255	9.998	3.3835	4.3059	830.2	2.809	0.78578
250	255	-0.002	4.5496	5.7388	777.0	3.535	0.79278
250	255	-5.003	5.4054	6.7885	744.1	4.022	0.79626
250	255	-10.001	6.4755	8.0970	705.5	4.569	0.79974
250	255	-15.001	7.8771	9.8067	661.1	5.207	0.80324

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
250	255	-20.001	9.7770	12.120	610.0	5.964	0.80667
250	255	-25.002	12.347	15.240	552.0	6.816	0.81016
250	255	-30.001	15.980	19.639	487.6	7.792	0.81367
250	255	-35.002	21.214	25.960	418.2	8.873	0.81719
255	260	60.001	1.2757	1.6967	950.1	1.212	0.75187
255	260	39.997	1.8142	2.3675	914.6	1.659	0.76629
255	260	29.998	2.2342	2.8885	889.2	1.987	0.77346
255	260	24.998	2.5053	3.2255	873.5	2.189	0.77672
255	260	20.000	2.8270	3.6233	856.1	2.420	0.78025
255	260	15.000	3.2172	4.1050	835.7	2.689	0.78373
255	260	9.999	3.6912	4.6889	812.5	2.999	0.78723
255	260	-0.001	5.0167	6.3177	754.7	3.786	0.79407
255	260	-5.001	5.9903	7.5098	718.9	4.307	0.79767
255	260	-10.001	7.2200	9.0120	677.6	4.892	0.80116
255	260	-15.001	8.8489	10.998	630.1	5.575	0.80459
255	260	-20.001	11.066	13.695	576.1	6.375	0.80805
255	260	-25.000	14.085	17.356	515.7	7.264	0.81153
255	260	-30.002	18.405	22.583	449.5	8.272	0.81500
255	260	-35.001	24.717	30.198	379.2	9.373	0.81850
260	265	60.002	1.3378	1.7761	944.2	1.263	0.75320
260	265	40.000	1.9186	2.5024	906.2	1.739	0.76672
260	265	30.002	2.3870	3.0830	878.1	2.096	0.77424
260	265	25.001	2.6718	3.4343	862.2	2.304	0.77798
260	265	19.999	3.0192	3.8631	843.6	2.547	0.78156
260	265	14.999	3.4439	4.3868	822.1	2.831	0.78507
260	265	9.999	3.9643	5.0272	797.4	3.161	0.78857
260	265	-0.001	5.4217	6.8150	736.2	3.991	0.79555
260	265	-5.002	6.5228	8.1889	697.6	4.550	0.79655
260	265	-10.001	7.9051	9.8817	653.9	5.169	0.79998
260	265	-15.001	9.7415	12.124	604.1	5.885	0.80346
260	265	-20.001	12.270	15.207	547.7	6.720	0.80684
260	265	-25.001	15.731	19.413	485.5	7.637	0.81031
260	265	-30.001	20.716	25.455	418.3	8.665	0.81381
260	265	-35.001	28.041	34.307	348.4	9.769	0.81734
265	270	60.001	1.4026	1.8572	938.1	1.316	0.75520
265	270	39.998	2.0250	2.6319	897.8	1.818	0.76942
265	270	29.999	2.5158	3.2403	868.9	2.186	0.77642
265	270	24.999	2.8354	3.6361	851.2	2.414	0.77980
265	270	19.998	3.2181	4.1083	831.2	2.675	0.78332
265	270	14.999	3.6829	4.6810	808.2	2.977	0.78679
265	270	9.999	4.2546	5.3838	781.9	3.327	0.79026
265	270	-0.002	5.8666	7.3598	717.0	4.206	0.79712
265	270	-5.000	7.0680	8.8280	676.9	4.784	0.80063
265	270	-10.001	8.6066	10.703	631.1	5.432	0.80409
265	270	-15.002	10.676	13.221	578.9	6.181	0.80750
265	270	-20.002	13.522	16.674	520.9	7.043	0.81094
265	270	-25.001	17.448	21.425	457.4	7.981	0.81441

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2\ s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g\ cm^{-3}$
265	270	-30.002	23.146	28.300	389.8	9.022	0.81789
265	270	-35.001	31.541	38.400	320.9	10.12	0.82138
270	275	60.000	1.4832	1.9593	930.7	1.380	0.75699
270	275	40.000	2.1534	2.7931	887.8	1.912	0.77098
270	275	29.998	2.6887	3.4561	856.9	2.304	0.77795
270	275	24.998	3.0387	3.8882	838.0	2.547	0.78152
270	275	20.000	3.4599	4.4078	816.5	2.825	0.78494
270	275	14.999	3.9736	5.0397	791.9	3.147	0.78847
270	275	9.999	4.6089	5.8197	763.8	3.520	0.79194
270	275	-0.001	6.4118	8.0268	694.8	4.455	0.79879
270	275	-5.001	7.7642	9.6781	652.2	5.064	0.80225
270	275	-10.001	9.5104	11.804	604.1	5.745	0.80572
270	275	-15.001	11.862	14.659	549.9	6.523	0.80918
270	275	-20.001	15.107	18.591	490.0	7.402	0.81256
270	275	-25.001	19.677	24.114	425.5	8.372	0.81601
270	275	-30.002	26.313	32.109	358.0	9.420	0.81947
275	280	60.002	1.5546	2.0490	924.0	1.436	0.75871
275	280	39.999	2.2739	2.9429	878.7	1.998	0.77269
275	280	29.998	2.8512	3.6571	845.9	2.412	0.77963
275	280	24.998	3.2301	4.1243	825.8	2.668	0.78320
275	280	19.999	3.6877	4.6875	803.2	2.962	0.78670
275	280	15.000	4.2478	5.3760	777.2	3.301	0.79015
275	280	9.999	4.9430	6.2286	747.5	3.695	0.79360
275	280	-0.001	6.9317	8.6600	674.7	4.677	0.80043
275	280	-5.001	8.4302	10.487	630.2	5.313	0.80387
275	280	-10.001	10.378	12.854	580.2	6.021	0.80735
275	280	-15.001	13.014	16.051	524.4	6.824	0.81080
275	280	-20.000	16.675	20.480	463.2	7.724	0.81417
275	280	-25.001	21.866	26.744	398.2	8.707	0.81760
275	280	-30.001	29.443	35.859	331.3	9.754	0.82107
280	285	60.000	1.6538	2.1744	915.2	1.514	0.76058
280	285	39.997	2.4453	3.1563	866.0	2.118	0.77472
280	285	29.999	3.0858	3.9474	830.5	2.563	0.78172
280	285	24.999	3.5095	4.4707	808.8	2.839	0.78500
280	285	19.998	4.0226	5.1020	784.3	3.155	0.78843
280	285	14.998	4.6540	5.8767	756.3	3.520	0.79194
280	285	9.999	5.4415	6.8415	724.3	3.941	0.79537
280	285	-0.001	7.7142	9.6168	646.6	4.988	0.80215
280	285	-5.001	9.4385	11.716	599.6	5.659	0.80562
280	285	-10.001	11.699	14.459	547.2	6.401	0.80907
280	285	-15.001	14.788	18.202	489.3	7.236	0.81244
280	285	-20.001	19.095	23.405	427.1	8.156	0.81585
280	285	-25.001	25.259	30.831	362.2	9.148	0.81928
280	285	-30.000	58.313	70.907	196.2	11.44	0.82238
285	290	60.003	1.7519	2.2982	906.6	1.588	0.76228
285	290	39.998	2.6056	3.3571	854.4	2.226	0.77615
285	290	29.999	3.3070	4.2233	816.6	2.700	0.78304

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
285	290	25.000	3.7720	4.7954	793.5	2.993	0.78658
285	290	20.000	4.3374	5.4905	767.3	3.328	0.78998
285	290	15.000	5.0358	6.3469	737.7	3.715	0.79343
285	290	10.000	5.9113	7.4177	703.9	4.161	0.79691
285	290	-0.001	8.4567	10.523	622.0	5.260	0.80366
285	290	-5.002	10.401	12.887	573.0	5.960	0.80711
285	290	-10.001	12.965	15.995	518.9	6.727	0.81057
285	290	-15.000	16.491	20.261	459.8	7.583	0.81394
285	290	-20.000	21.495	26.299	397.2	8.537	0.81733
285	290	-25.000	28.567	34.806	332.8	9.507	0.82075
290	295	60.001	1.8600	2.4340	897.2	1.669	0.76417
290	295	40.000	2.7980	3.5960	841.0	2.353	0.77810
290	295	29.999	3.5712	4.5485	800.4	2.858	0.78514
290	295	25.000	4.0880	5.1852	775.6	3.171	0.78839
290	295	20.000	4.7192	5.9601	747.8	3.529	0.79180
290	295	15.000	5.5032	6.9208	716.0	3.940	0.79517
290	295	9.999	6.4901	8.1261	680.0	4.414	0.79866
290	295	-0.002	9.3828	11.650	593.8	5.572	0.80539
290	295	-5.001	11.609	14.352	542.8	6.301	0.80885
290	295	-10.000	14.567	17.934	487.0	7.094	0.81228
290	295	-15.001	18.669	22.890	426.9	7.969	0.81562
290	295	-20.001	24.522	29.941	364.2	8.932	0.81902
290	295	-25.001	32.867	39.963	301.1	9.895	0.82243
295	300	60.001	1.9722	2.5758	887.8	1.751	0.76567
295	300	39.999	2.9929	3.8402	827.7	2.477	0.77936
295	300	29.999	3.8403	4.8846	784.6	3.013	0.78621
295	300	24.999	4.4094	5.5834	758.4	3.344	0.78974
295	300	20.000	5.1067	6.4387	728.8	3.722	0.79311
295	300	15.000	5.9732	7.4992	695.7	4.155	0.79652
295	300	9.999	7.0772	8.8473	657.5	4.653	0.79993
295	300	-0.001	10.330	12.806	567.5	5.862	0.80669
295	300	-5.000	12.870	15.891	514.4	6.621	0.80991
295	300	-10.000	16.238	19.959	457.6	7.431	0.81353
295	300	-15.001	20.928	25.619	397.3	8.315	0.81691
295	300	-20.001	27.676	33.740	335.3	9.279	0.82028
300	305	60.000	2.0597	2.6848	880.5	1.814	0.76717
300	305	39.998	3.1510	4.0355	817.3	2.575	0.78083
300	305	29.999	4.0626	5.1579	772.0	3.136	0.78766
300	305	24.999	4.6766	5.9110	744.5	3.482	0.79117
300	305	20.000	5.4320	6.8366	713.6	3.877	0.79454
300	305	14.999	6.3771	7.9920	678.7	4.328	0.79793
300	305	10.000	7.5756	9.4537	639.5	4.844	0.80134
300	305	-0.002	11.149	13.796	546.5	6.093	0.80807
300	305	-5.001	13.927	17.162	492.8	6.863	0.81152
300	305	-10.001	17.664	21.675	435.2	7.688	0.81494
300	305	-15.001	22.897	27.982	374.7	8.579	0.81827
300	305	-20.001	30.436	37.042	313.5	9.540	0.82167

IBP °C	FBP °C	Cell Temp. °C	Dyn. Visc. mPa s	Kin. Visc. $mm^2 s^{-1}$	Shear Rate s^{-1}	Shear Stress Pa	Density $g cm^{-3}$
305	310	60.002	2.1790	2.8383	870.8	1.898	0.76772
305	310	39.999	3.3475	4.2838	804.7	2.694	0.78143
305	310	29.998	4.3368	5.5020	757.1	3.283	0.78824
305	310	24.999	5.0066	6.3234	728.2	3.646	0.79175
305	310	20.000	5.8338	7.3371	695.8	4.059	0.79511
305	310	15.000	6.8728	8.6072	659.3	4.531	0.79849
305	310	9.998	8.1970	10.222	618.3	5.069	0.80189
305	310	-0.002	12.164	15.044	522.5	6.356	0.80857
305	310	-5.001	15.267	18.802	467.9	7.144	0.81202
305	310	-10.001	19.474	23.885	409.8	7.980	0.81530
305	310	-15.002	25.380	30.998	349.6	8.873	0.81876
310	315	60.002	2.3570	3.0643	856.7	2.019	0.76918
310	315	39.998	3.6727	4.6916	784.8	2.882	0.78282
310	315	29.999	4.8017	6.0808	733.0	3.520	0.78964
310	315	24.999	5.5665	7.0197	702.1	3.908	0.79299
310	315	19.999	6.5184	8.1855	667.3	4.350	0.79633
310	315	14.999	7.7178	9.6508	628.7	4.852	0.79970
310	315	9.998	9.2618	11.533	585.2	5.420	0.80307
310	315	-0.001	13.938	17.214	485.3	6.765	0.80972
310	315	-5.001	17.625	21.675	429.6	7.573	0.81317
310	315	-10.000	22.663	27.760	371.4	8.418	0.81642
310	315	-15.000	29.782	36.324	312.5	9.306	0.81988
315	320	60.000	2.4999	3.2439	845.8	2.114	0.77065
315	320	39.999	3.9376	5.0210	769.1	3.029	0.78423
315	320	29.999	5.1768	6.5447	714.6	3.699	0.79099
315	320	24.998	6.0248	7.5845	681.9	4.109	0.79435
315	320	19.999	7.0836	8.8802	645.5	4.572	0.79769
315	320	14.999	8.4261	10.519	604.9	5.097	0.80105
315	320	9.999	10.155	12.624	560.0	5.687	0.80442
315	320	-0.002	15.435	19.031	457.8	7.066	0.81101
315	320	-5.001	19.639	24.117	401.6	7.887	0.81433
315	320	-10.001	25.404	31.064	343.8	8.733	0.81779
315	320	-15.001	44.777	54.553	229.4	10.27	0.82081
320	325	60.000	2.7743	3.5921	825.4	2.290	0.77234
320	325	39.999	4.4427	5.6542	741.1	3.292	0.78572
320	325	30.000	5.9037	7.4499	681.5	4.024	0.79246
320	325	24.999	6.9123	8.6859	646.1	4.466	0.79581
320	325	19.999	8.1800	10.236	606.9	4.964	0.79912
320	325	14.999	9.7997	12.212	563.6	5.524	0.80245
320	325	9.999	11.901	14.769	516.4	6.146	0.80581
320	325	-0.001	18.397	22.646	411.5	7.571	0.81236
320	325	-5.001	23.635	28.973	355.5	8.402	0.81577
320	325	-10.002	30.888	37.710	299.2	9.242	0.81910

3. Aromatics Volume Fractions of Petroleum-based Kerosene Cuts

The volume fraction of aromatics in petroleum-based kerosene cuts determined according to ASTM D6379 are shown in Figure S2. Analyses were carried out as duplicates for selected samples. The deviation between repetitions was well within the estimated repeatability in ASTM D6379.

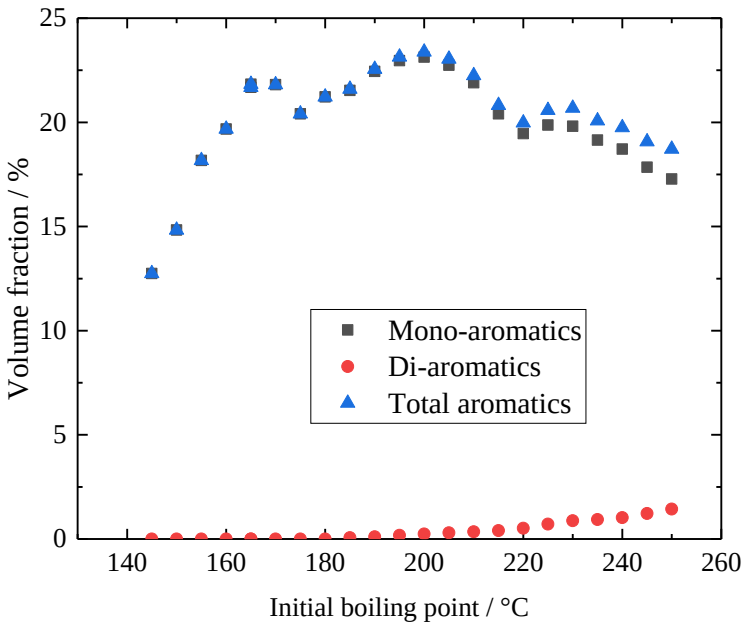

Figure S2 – Aromatics volume fraction petroleum-based kerosene cuts as a function of the initial boiling point. The final boiling point is 5 °C above the initial boiling point.

4. Parameters of MacCoull's Equation for Viscosity-temperature Dependence

The parameters of MacCoull's equation as well as the estimates for low-temperature viscosity are shown in Table S9 the petroleum-based kerosene cuts and Table S10 for the synthetic distillate cuts.

Table S9 – Petroleum-derived kerosene cuts: Parameters A and B of MacCoull's equation determined using viscosity data above -20 °C. Estimates for the viscosity at -40 °C using MacCoull's equation with the shown parameters and relative difference to experimentally determined viscosity at these temperatures (see Table S1). Positive relative differences indicate that the calculated viscosity is higher than the measured viscosity and vice versa.

IBP	A	B	Estimated kinematic viscosity at -40 °C	Relative difference viscosity estimate and experiment at -40 °C
°C	-	-	$mm^2 s^{-1}$	%
140	9.441	4.088	3.100	4.6
145	9.486	4.110	3.028	2.6
150	9.648	4.168	3.298	3.4
155	9.357	4.037	3.575	0.1
160	9.912	4.260	4.009	4.2
165	9.881	4.239	4.329	4.0
170	9.454	4.049	4.796	1.4
175	9.529	4.069	5.444	-4.1
180	9.499	4.047	6.011	0.9
185	9.491	4.035	6.653	0.5
190	8.785	3.727	7.512	-5.8
195	9.569	4.047	8.763	0.2
200	9.606	4.052	9.977	-0.4
205	9.615	4.049	11.085	-0.6
210	9.612	4.040	12.352	-2.5
215	9.681	4.059	14.503	-2.8
220	9.702	4.059	16.613	-3.9
225	9.741	4.066	19.363	-5.0
230	9.747	4.057	23.670	-6.6
235	9.823	4.082	26.956	-6.6
240	9.860	4.089	a)	b)
245	9.899	4.096	a)	b)
250	9.960	4.113	a)	b)

a) Not estimated because sample freezes above the indicated temperature
b) No exp. data available as sample freezes above the indicated temperature

Table S10 – Synthetic distillate cuts: Parameters A and B of MacCoull's equation determined using viscosity data above -20 °C. Estimates for the viscosity at -40 and -60 °C using MacCoull's equation with the shown parameters and relative difference to experimentally determined viscosity at these temperatures (see Table S2). Positive relative differences indicate that the calculated viscosity is higher than the measured viscosity and vice versa.

IBP	A	B	Estimated kinematic viscosity at -40 °C	Relative difference viscosity estimate and experiment at -40 °C
°C	-	-	$mm^2 s^{-1}$	%
140	9.330	4.047	2.933	3.4
145	9.447	4.089	3.138	3.2
150	8.712	3.779	3.142	-4.9
155	9.109	3.927	3.753	-1.1
160	9.473	4.071	4.141	1.5
165	9.467	4.061	4.458	1.3
170	9.506	4.068	4.946	1.6
175	9.516	4.058	5.744	1.1
180	9.558	4.069	6.241	1.2
185	9.617	4.085	6.945	1.5
190	9.593	4.067	7.658	0.6
195	9.605	4.064	8.523	0.2
200	9.490	4.004	9.928	0.0
205	9.610	4.054	10.031	-1.1
210	9.543	4.016	11.494	a)
215	9.693	4.073	12.681	-2.3
220	9.711	4.072	14.341	-3.1
225	9.720	4.068	16.273	-3.8
230	9.751	4.071	19.109	-4.2
235	9.772	4.072	21.865	-4.4
240	9.783	4.068	25.438	-5.0
245	9.796	4.067	29.101	-5.1
250	9.803	4.061	b)	c)
255	9.816	4.059	b)	c)
260	9.822	4.055	b)	c)
265	9.814	4.046	b)	c)
270	9.800	4.033	b)	c)
275	9.794	4.025	b)	c)
280	9.798	4.019	b)	c)
285	9.779	4.005	b)	c)
290	9.777	3.997	b)	c)
295	9.756	3.982	b)	c)
300	9.750	3.975	b)	c)
305	10.070	4.099	b)	c)
310	10.128	4.114	b)	c)
315	9.996	4.055	b)	c)
320	10.215	4.133	b)	c)

a) No exp. data available due to instrument error during determination
b) Not estimated because sample freezes above the indicated temperature
c) No exp. data available as sample freezes above the indicated temperature

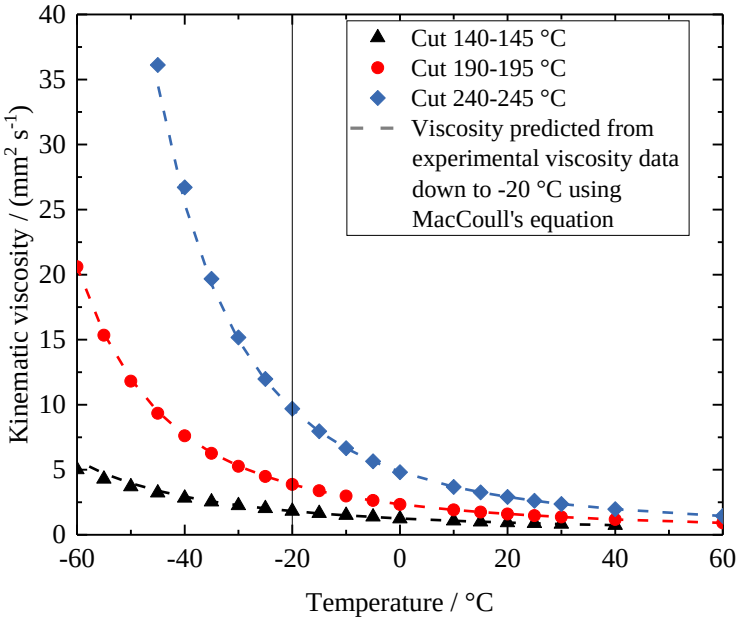

Figure S3 – Kinetmatic viscosity of three synthetic distillate cuts as a function of the temperature and predicted viscosity from MacCoull's equation using experimental data down to -20 °C to determine the parameters A and B. The parameters are listed in Table S7. Below a temperature of -20 °C (marked by vertical line), the predicted viscosity from MacCoull's equaiton is an extrapolation.

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