

LAMPIRAN

Tabel L. 1 Matriks Jurnal Rujukan

No	Author/ tahun	Judul	Tujuan	Metode	Hasil
1	Annasruddin Pratama ¹ , Basyirun ¹ , Yohan Widhi Atmojo ¹ , Gilang Wahyu Ramadhan ¹ , Alif Rivan Hidayat ¹ (2020)	Rancang Bangun Kompor (Burner) Berbahan Bakar Oli Bekas	Penelitian ini bertujuan untuk mengetahui rancangan bangun kompor (burner) berbahan bakar oli bekas, beserta spesifikasi nya dan mengetahui hasil pengujian menggunakan kompor (burner) pembakaran oli bekas.	Metode penelitian menggunakan metode rancangan berbentuk deskriptif French, selain itu menggunakan pengujian water boiling test. Water boiling test disini tidak menggunakan media air namun langsung diujicoba dengan meleburkan alumunium.	Pengujian tersebut juga menghasilkan data bahwa menggunakan elpiji lebih cepat 16 menit dibandingkan oli bekas. Hal ini dipengaruhi karena perbedaan nilai kalor antara gas elpiji dengan oli bekas. Temperatur api yang dihasilkan oli bekas memiliki perbedaan kurang lebih 100 °C dengan gas elpiji yang notabene adalah bahan bakar. Adanya pengaruh waktu terhadap kenaikan suhu yang terjadi pada tungku. Pengaruh tersebut terjadi ketika semakin lama tungku tersebut dipanaskan, akan semakin panas pula tungku tersebut.

2	Gilang Wahyu Ramadhan , Basyirun (2020)	Pengaruh tekanan udara terhadap temperatur pembakaran oli bekas pada kompor	Oli bekas merupakan limbah, dimana belum terlalu optimal untuk di jadikan bahan bakar. Pada pembakaran oli bekas tekanan udara sangat berpengaruh untuk mencapai temperatur yang optimal.	Metode Penelitian yang berkaitan dengan pengaruh tekanan udara terhadap temperatur pembakaran oli bekas pada kompor gas ini menggunakan metode eksperimen.	Pengaruh tekanan udara terhadap temperatur pembakaran yaitu apabila tekanan udara semakin tinggi maka temperatur pembakaran yang di hasilkan lebih maksimal dengan tekanan 2,5 bar mendapatkan 994,5°C dan pembakaran semakin cepat yaitu mencatatkan waktu 151 detik, sebaliknya tekanan semakin rendah maka temperatur pembakaran minimal dengan 0,5 bar mendapatkan temperatur 662,0 °C dan memperoleh waktu pembakaran yang lebih lama yaitu sebesar 843 detik.
3	Khabibullah Enggal Mahardhika, Deri Teguh Santoso,Kardi man. (2020)	Pengaruh Kecepatan Udara dan Debit Bahan Bakar pada Pembaka	Penggunaan pelumas meningkatkan seiring berkemungkinan mesin yang digunakan, namun	Penelitian kali ini akan dilakukan pengujian pada burner yang menggunakan oli bekas sebagai bahan	Dari penelitian yang telah dilakukan dapat disimpulkan bahwa kecepatan udara yang semakin besar berpengaruh pada

		ran Burner Berbahan Bakar Oli Bekas	daur ulang pelumas bekas masih belum optimal. Penelitian kali ini akan dilakukan pengujian pada burner yang mengguna kan oli bekas sebagai bahan bakar, dengan pemanasan awal pada oli bekas yang bertujuan untuk memudahk an proses pembakara n burner,	bakar, dengan pemanasan awal pada oli bekas yang bertujuan untuk memudahkan proses pembakaran burner, selain itu akan dilakukan eksperimen mengenai kecepatan udara dan debit bahan bakar terhadap temperatur, panjang lidah api, dan waktu pembakaran.	peningkatan temperatur, dan panjang lidah api. Sedangkan waktu pembakaran menjadi semakin cepat seiring besarnya kecepatan udara. Serta semakin besar debit aliran berpengaruh pada peningkatan temperatur dan panjang lidah api, namun tidak berpengaruh pada kenaikan waktu pembakaran.
4	Athallahariq F.Kamal P, Deni Fajar F, Ridhol, Wahyu1, Lutfhi1	komporekonomis berbahan bakar oli bekas	Penelitian ini bertujuan untuk mengetahu i rancang bangun kompore (burner) berbahan bakar oli bekas, beserta spesifikasi nya dan	Penelitian ini menggunaka n model perancangan French. Penelitian ini disimpulkan bahwa kompore (burner) yang dirancang memiliki bentuk yang besar dibandingkan	Dibandingkan dengan Kompore Berbahan Bakar Elpiji Kompore (burner) tersebut diuji dengan metode water boiling test dan membandingkan bahan bakar antara menggunakan oli bekas dengan elpiji. Air tersebut pada metode

			mengetahu i hasil pengujian mengguna kan kompor (burner) pembakara n oli bekas	pada burner pada umumnya	water boiling test diganti dengan alumunium sebesar 22 kg. Peleburan alumunium menggunakan bahan bakar oli bekas tersebut memakan waktu 57 menit dengan menghabiskan 8 liter oli bekas. Sedangkan menggunakan bahan bakar gas elpiji memakan waktu sebesar 41 menit dengan menghabiskan waktu 2,1 kg gas elpiji
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Tabel L. 2 jadwal penelitian

No.	Urutan penelitian		Bulan ke-					
			I	II	III	IV	V	VI
1.	Seminar Proposal							
2.	Persiapan alat dan bahan							
3.	Pembuatan kompor berbahan bakar oli dengan variasi viskositas							
4.	Pengambilan data							
5.	Pengolahan data dan analisis data							
6.	Seminar hasil							
7.	Ujian tugas akhir							

Tabel L. 3 Sifat fisik fluida

TABLE A-15							
Properties of air at 1 atm pressure							
Temp. $T, ^\circ\text{C}$	Density $\rho, \text{kg/m}^3$	Specific Heat $c_p, \text{J/kg} \cdot \text{K}$	Thermal Conductivity $k, \text{W/m} \cdot \text{K}$	Thermal Diffusivity $\alpha, \text{m}^2/\text{s}$	Dynamic Viscosity $\mu, \text{kg/m} \cdot \text{s}$	Kinematic Viscosity $\nu, \text{m}^2/\text{s}$	Prandtl Number Pr
-150	2.866	983	0.01171	4.158×10^{-6}	8.636×10^{-6}	3.013×10^{-6}	0.7246
-100	2.038	966	0.01582	8.036×10^{-6}	1.189×10^{-5}	5.837×10^{-6}	0.7263
-50	1.582	999	0.01979	1.252×10^{-5}	1.474×10^{-5}	9.319×10^{-6}	0.7440
-40	1.514	1002	0.02057	1.356×10^{-5}	1.527×10^{-5}	1.008×10^{-5}	0.7436
-30	1.451	1004	0.02134	1.465×10^{-5}	1.579×10^{-5}	1.087×10^{-5}	0.7425
-20	1.394	1005	0.02211	1.578×10^{-5}	1.630×10^{-5}	1.169×10^{-5}	0.7408
-10	1.341	1006	0.02288	1.696×10^{-5}	1.680×10^{-5}	1.252×10^{-5}	0.7387
0	1.292	1006	0.02364	1.818×10^{-5}	1.729×10^{-5}	1.338×10^{-5}	0.7362
5	1.269	1006	0.02401	1.880×10^{-5}	1.754×10^{-5}	1.382×10^{-5}	0.7350
10	1.246	1006	0.02439	1.944×10^{-5}	1.778×10^{-5}	1.426×10^{-5}	0.7336
15	1.225	1007	0.02476	2.009×10^{-5}	1.802×10^{-5}	1.470×10^{-5}	0.7323
20	1.204	1007	0.02514	2.074×10^{-5}	1.825×10^{-5}	1.516×10^{-5}	0.7309
25	1.184	1007	0.02551	2.141×10^{-5}	1.849×10^{-5}	1.562×10^{-5}	0.7296
30	1.164	1007	0.02588	2.208×10^{-5}	1.872×10^{-5}	1.608×10^{-5}	0.7282
35	1.145	1007	0.02625	2.277×10^{-5}	1.895×10^{-5}	1.655×10^{-5}	0.7268
40	1.127	1007	0.02662	2.346×10^{-5}	1.918×10^{-5}	1.702×10^{-5}	0.7255
45	1.109	1007	0.02699	2.416×10^{-5}	1.941×10^{-5}	1.750×10^{-5}	0.7241
50	1.092	1007	0.02735	2.487×10^{-5}	1.963×10^{-5}	1.798×10^{-5}	0.7228
60	1.059	1007	0.02808	2.632×10^{-5}	2.008×10^{-5}	1.896×10^{-5}	0.7202
70	1.028	1007	0.02881	2.780×10^{-5}	2.052×10^{-5}	1.995×10^{-5}	0.7177
80	0.9994	1008	0.02953	2.931×10^{-5}	2.096×10^{-5}	2.097×10^{-5}	0.7154
90	0.9718	1008	0.03024	3.086×10^{-5}	2.139×10^{-5}	2.201×10^{-5}	0.7132
100	0.9458	1009	0.03095	3.243×10^{-5}	2.181×10^{-5}	2.306×10^{-5}	0.7111
120	0.8977	1011	0.03235	3.565×10^{-5}	2.264×10^{-5}	2.522×10^{-5}	0.7073
140	0.8542	1013	0.03374	3.898×10^{-5}	2.345×10^{-5}	2.745×10^{-5}	0.7041
160	0.8148	1016	0.03511	4.241×10^{-5}	2.420×10^{-5}	2.975×10^{-5}	0.7014
180	0.7788	1019	0.03646	4.593×10^{-5}	2.504×10^{-5}	3.212×10^{-5}	0.6992
200	0.7459	1023	0.03779	4.954×10^{-5}	2.577×10^{-5}	3.455×10^{-5}	0.6974
250	0.6746	1033	0.04104	5.890×10^{-5}	2.760×10^{-5}	4.091×10^{-5}	0.6946
300	0.6158	1044	0.04418	6.871×10^{-5}	2.934×10^{-5}	4.765×10^{-5}	0.6935
350	0.5664	1056	0.04721	7.892×10^{-5}	3.101×10^{-5}	5.475×10^{-5}	0.6937
400	0.5243	1069	0.05015	8.951×10^{-5}	3.261×10^{-5}	6.219×10^{-5}	0.6948
450	0.4880	1081	0.05298	1.004×10^{-4}	3.415×10^{-5}	6.997×10^{-5}	0.6965
500	0.4565	1093	0.05572	1.117×10^{-4}	3.563×10^{-5}	7.806×10^{-5}	0.6986
600	0.4042	1115	0.06093	1.352×10^{-4}	3.846×10^{-5}	9.515×10^{-5}	0.7037
700	0.3627	1135	0.06581	1.598×10^{-4}	4.111×10^{-5}	1.133×10^{-4}	0.7092
800	0.3289	1153	0.07037	1.855×10^{-4}	4.362×10^{-5}	1.326×10^{-4}	0.7149
900	0.3008	1169	0.07465	2.122×10^{-4}	4.600×10^{-5}	1.529×10^{-4}	0.7206
1000	0.2772	1184	0.07868	2.398×10^{-4}	4.826×10^{-5}	1.741×10^{-4}	0.7260
1500	0.1990	1234	0.09599	3.908×10^{-4}	5.817×10^{-5}	2.922×10^{-4}	0.7478
2000	0.1553	1264	0.11113	5.664×10^{-4}	6.630×10^{-5}	4.270×10^{-4}	0.7539

Note: For ideal gases, the properties c_p , k , μ , and Pr are independent of pressure. The properties ρ , ν , and α at a pressure P (in atm) other than 1 atm are determined by multiplying the values of ρ at the given temperature by P and by dividing ν and α by P .

Source: Data generated from the EES software developed by S. A. Klein and F. L. Alvarado. Original sources: Keenan, Chao, Keyes, Gas Tables, Wiley, 198; and Thermophysical Properties of Matter, Vol. 3: Thermal Conductivity, Y. S. Touloukian, P. E. Liley, S. C. Saxena, Vol. 11: Viscosity, Y. S. Touloukian, S. C. Saxena, and P. Hestermans, IFI/Plenum, NY, 1970, ISBN 0-306067020-8.

Tabel L. 4 viskositas 301.00 Ns/m²

No	Tanggal	Waktu	Temperatur didih, TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	16:00:04	36.3	43.1	55.3	33.6	86	665.2	487.5
2	11/02/2025	16:00:09	36.3	43.1	58.3	34.8	77.9	736.9	509.9
3	11/02/2025	16:00:14	36.3	43.1	45.5	34	61.6	722.5	486.2
4	11/02/2025	16:00:19	36.3	43.1	48.6	35.2	68.5	710.7	457.5
5	11/02/2025	16:00:24	36.3	43.1	42.1	34.4	61.1	731.6	466.7
6	11/02/2025	16:00:29	36.3	44.4	37.4	33.6	58.2	693.5	506.1
7	11/02/2025	16:00:34	36.3	44.2	39.1	34.6	50.2	675.3	534.1
8	11/02/2025	16:00:39	36.3	56.3	58.5	36	54.8	657.6	469.6
9	11/02/2025	16:00:44	36.3	55.4	57.5	36	54	634.2	461.8
10	11/02/2025	16:00:49	36.3	55.5	48.3	35.9	48.8	622.7	507.9
11	11/02/2025	16:00:54	36.3	51.4	52	36.9	57.2	659.8	495.6
12	11/02/2025	16:00:59	36.3	62.5	68.4	38.5	61.3	714.7	480.4
13	11/02/2025	16:01:04	36.3	63.4	71.2	38.5	63.8	740.7	512
14	11/02/2025	16:01:09	36.3	62.7	70.9	39.6	63.5	801.8	467
15	11/02/2025	16:01:14	36.3	54.2	54.6	38.8	56.3	763	493.2
16	11/02/2025	16:01:19	36.3	50	48.3	38.7	53	707.6	491.7
17	11/02/2025	16:01:24	36.3	68.6	71.6	40.3	53.9	719.6	485.7
18	11/02/2025	16:01:29	36.3	69.8	72.5	41.2	49.7	719.1	504.7
19	11/02/2025	16:01:34	36.3	60.4	59	40.5	53.1	687.9	538
20	11/02/2025	16:01:39	36.3	63.7	68.9	41.2	53.2	706.2	513.9
21	11/02/2025	16:01:44	36.3	75.3	84.9	43.9	59.5	792.2	471.5
22	11/02/2025	16:01:49	36.3	78.2	88.5	44.5	67	725.9	499.5
23	11/02/2025	16:01:54	36.3	76.7	83.7	44.5	57.7	743	521.8
24	11/02/2025	16:01:59	36.3	79	88.2	44.8	57	730.4	521
25	11/02/2025	16:02:04	36.3	79.6	85.3	45.4	54.5	721.6	513.6
26	11/02/2025	16:02:09	36.3	82	88.2	45.8	58.8	728.7	506.7
27	11/02/2025	16:02:14	36.3	83.1	89	46	55.5	735.4	503.7
28	11/02/2025	16:02:19	36.3	83	89	46.5	54.8	731.6	506.4
29	11/02/2025	16:02:24	36.3	84.1	90.1	46.9	55.1	734	509.3
30	11/02/2025	16:02:29	52.4	84.9	90.1	48.4	55.5	734.2	509.2
31	11/02/2025	16:02:34	52.7	83.8	89.5	49.2	52.7	742.2	511
32	11/02/2025	16:02:39	52.9	81.1	83.9	49.9	55.5	733.2	501.5
33	11/02/2025	16:02:44	54.7	87	93.3	49.9	54.1	744.2	504
34	11/02/2025	16:02:49	54.7	86.9	91.9	50.6	57.4	752	516.5
35	11/02/2025	16:02:54	55.1	86.9	91.9	50.7	59.2	752.5	518.6
36	11/02/2025	16:02:59	56.9	87.7	92.4	51.8	61.9	762.3	527.6
37	11/02/2025	16:03:04	56.8	86	89.5	52.4	61.9	766.4	529
38	11/02/2025	16:03:09	56.7	78.6	80.4	52.3	66.8	768.1	533.6
39	11/02/2025	16:03:14	56.5	77.1	72.6	52.1	66.4	767.8	530.7

40	11/02/2025	16:03:19	56.5	79.6	77.9	51.9	68.1	757.1	514
41	11/02/2025	16:03:24	55.9	76.3	73.2	52.4	64.3	786.7	522.8
42	11/02/2025	16:03:29	55.9	74.3	72.7	52.6	63	769.7	531.2
43	11/02/2025	16:03:34	56.5	74	71.8	52.6	62.3	746	527.5
44	11/02/2025	16:03:39	56.6	74.6	71.8	54	62.4	743.7	523.2
45	11/02/2025	16:03:44	58	75.9	72.3	55.1	61.9	757.6	529.4
46	11/02/2025	16:03:49	58.7	77.8	76.2	54.5	63.7	765.3	519.5
47	11/02/2025	16:03:54	57.7	76.9	74.9	55.4	67	774.8	519.9
48	11/02/2025	16:03:59	57.9	70.1	65.5	54.5	62.3	824.4	538.8
49	11/02/2025	16:04:04	58.6	69.5	62.8	54.5	62.3	828.8	548.9
50	11/02/2025	16:04:09	58.6	67.2	60.9	55.1	60.9	727.3	536
51	11/02/2025	16:04:14	59.1	68.9	62.6	54.4	61.3	732.1	534.5
52	11/02/2025	16:04:19	59.1	72.8	68.8	55.4	62.4	797.4	532.8
53	11/02/2025	16:04:24	59.8	72.6	66.9	55.4	63.4	798.6	544.2
54	11/02/2025	16:04:29	59.8	74	68.8	57.4	63.7	802.8	533.3
55	11/02/2025	16:04:34	60.1	76.8	72.1	56.8	66	795.5	511.1
56	11/02/2025	16:04:39	60.6	77.4	72.7	57.5	66	811.6	515
57	11/02/2025	16:04:44	60.9	79	73.4	57.5	66	809.8	514.3
58	11/02/2025	16:04:49	61.1	76.4	72.4	57.3	65.9	798.7	516.8
59	11/02/2025	16:04:54	62.6	80.5	76.1	57.9	65.4	775.2	521.5
60	11/02/2025	16:04:59	63.2	85.1	82.3	58.6	64.3	744.8	527.9
61	11/02/2025	16:05:04	63.3	82.5	79.9	58.6	63.5	719.3	536.6
62	11/02/2025	16:05:09	62.6	77	75.4	59	66.2	684.8	520.3
63	11/02/2025	16:05:14	61.7	69.3	65.9	59	65.3	663.2	519.2
64	11/02/2025	16:05:19	62.4	74.8	72.1	58.8	63.7	649.9	478.3
65	11/02/2025	16:05:24	62.3	72.6	69.5	58.6	63.7	632.8	462.8
66	11/02/2025	16:05:29	62.1	68.5	59.4	58.3	63	610.1	485.6
67	11/02/2025	16:05:34	62.1	71.3	64.2	58.5	60.8	590.1	506.5
68	11/02/2025	16:05:39	62.5	69.1	59.1	58.7	61.9	566.2	488.1
69	11/02/2025	16:05:44	63.1	70.5	61.7	58.6	61.9	654	502.6
70	11/02/2025	16:05:49	63.2	70.1	48.5	58.6	57.7	654.6	587.2
71	11/02/2025	16:05:54	63	72.2	64.4	59.6	65.7	645.9	493.3
72	11/02/2025	16:05:59	63.6	74.4	62.1	60.8	75.4	604.3	407.7
73	11/02/2025	16:06:04	63.6	73.8	59.1	60.7	81.5	585.2	402.8
74	11/02/2025	16:06:09	73.4	107.8	65	60.3	29.5	530.9	396.4
75	11/02/2025	16:06:14	67.6	75.2	68.2	59.4	60.7	379.5	524.8
76	11/02/2025	16:06:19	66.9	74.1	62.2	59.4	76.1	288.6	434.9
77	11/02/2025	16:06:24	67.7	79	69.3	60.4	90.4	232.4	395.3
78	11/02/2025	16:06:29	72.9	79.7	71.6	60.4	87.3	203.2	437
79	11/02/2025	16:06:34	69.8	88.7	84.3	61.8	85.4	166.3	398.5
80	11/02/2025	16:06:39	76.1	104.3	129.2	65.3	67.4	137.9	378.9
81	11/02/2025	16:06:44	72.1	89	106.5	63.9	89.5	115.3	402.9

82	11/02/2025	16:06:49	73.4	86.4	104.6	64.9	90.1	97.8	410.6
83	11/02/2025	16:06:54	70.4	79.3	79.3	63.9	97.4	86.3	400.9
84	11/02/2025	16:06:59	70.5	76.1	69.5	62.4	101.3	76.1	433.1
85	11/02/2025	16:07:04	71.8	76	76.3	63.5	103.8	69.4	445.2
86	11/02/2025	16:07:09	72.1	94.3	70	63.5	89.6	61.4	415.5
87	11/02/2025	16:07:14	71.2	87.7	65.6	63.4	84.8	138.9	416.6
88	11/02/2025	16:07:19	71.8	88.8	66.7	62.8	84.6	298.7	418.7
89	11/02/2025	16:07:24	71.7	90.8	66	62.8	84.7	405.1	421.6
90	11/02/2025	16:07:29	73.9	103.7	93.9	64.8	83.5	494.2	384.8
91	11/02/2025	16:07:34	74.4	104.5	79.3	64.4	84.4	539.8	424.5
92	11/02/2025	16:07:39	71.6	96.1	73.4	64.7	84.6	560.7	418.8
93	11/02/2025	16:07:44	71.6	91.2	71.5	64.7	84.6	585.1	407.8
94	11/02/2025	16:07:49	71.8	93.7	76.4	64.6	83.8	587.9	394.6
95	11/02/2025	16:07:54	74.5	103.5	97.4	66.6	83.5	590.1	353.3
96	11/02/2025	16:07:59	76	103.5	95.2	66.6	82.5	590.8	364.7
97	11/02/2025	16:08:04	76.9	104.9	136.1	67.9	60.6	617.4	380.6
98	11/02/2025	16:08:09	75.3	102.2	88.4	66.6	57.6	613	335.3
99	11/02/2025	16:08:14	75.3	95.2	84	66.7	60.3	615.5	402.2
100	11/02/2025	16:08:19	76.4	99.5	89.7	67	47.7	707.3	418.1
101	11/02/2025	16:08:24	77.8	104.9	94	67.8	37.8	786.8	430.6
102	11/02/2025	16:08:29	76.9	101.8	90.5	67.8	36.9	741.3	438.1
103	11/02/2025	16:08:34	76.7	98.8	83.7	67.8	45.8	663.2	425
104	11/02/2025	16:08:39	78.1	103.3	93.6	67.9	40.4	735.5	420.6
105	11/02/2025	16:08:44	78.8	104.5	98.5	68.3	38.4	795	423.3
106	11/02/2025	16:08:49	78.8	106.8	93.2	69.4	36.7	820	426.8
107	11/02/2025	16:08:54	79	106.7	98.4	70	36.7	807.8	423.1
108	11/02/2025	16:08:59	79.4	107	98.1	70	37.5	798.5	423.2
109	11/02/2025	16:09:04	79.2	108.1	91.7	69.9	36.4	800.1	424.1
110	11/02/2025	16:09:09	73.8	79.8	42.6	68.7	53.7	793.1	438.6
111	11/02/2025	16:09:14	75.3	81.6	43.3	67.4	51.4	780.5	436.7
112	11/02/2025	16:09:19	74.5	82.7	48.4	67.4	53.3	759.1	431.3
113	11/02/2025	16:09:24	74.5	78.7	42.6	67.1	55.2	715.5	436.7
114	11/02/2025	16:09:29	74.6	78.9	42.1	67.1	55.8	665.2	439
115	11/02/2025	16:09:34	74.7	80.2	42.1	67.3	55.8	619	446.3
116	11/02/2025	16:09:39	74.7	84	48.9	67.3	55.8	581.7	448.3
117	11/02/2025	16:09:44	86	134.3	136	75.4	14.7	553.1	463.1
118	11/02/2025	16:09:49	81.5	111.5	108.7	72.1	35.5	524.9	482.8
119	11/02/2025	16:09:54	81.5	107.9	92.2	71.5	43.3	507.6	441.6
120	11/02/2025	16:09:59	77.6	89.3	59.4	69	42.8	478.1	462.6
121	11/02/2025	16:10:04	77	87.2	57	69	43.5	457.7	485.6
122	11/02/2025	16:10:09	77.1	87	59	69.1	43.1	416.7	479.7
123	11/02/2025	16:10:14	84.9	114.1	117.2	76.4	19.7	369.2	441.6

124	11/02/2025	16:10:19	86.9	137.1	120	74	6.3	384.7	449.3
125	11/02/2025	16:10:24	85.1	134.2	138.5	76.1	22	387	403.1
126	11/02/2025	16:10:29	87.8	136	154.7	76.1	14.1	380.2	401.7
127	11/02/2025	16:10:34	87.8	135.9	154.7	75.9	16	365.3	386.5
128	11/02/2025	16:10:39	87.7	134.2	151.7	75.7	16.7	364.5	424.9
129	11/02/2025	16:10:44	86.6	134.8	152	75.8	29.6	359.2	386.7
130	11/02/2025	16:10:49	86.6	134.7	150.6	75.9	37.1	343.2	395.8
131	11/02/2025	16:10:54	86.8	134.5	152.4	75.9	39.1	337.8	384.3
132	11/02/2025	16:10:59	87	134.5	153.2	75.9	42.5	337.8	386.1
133	11/02/2025	16:11:04	87	135.9	155.3	76.5	41.3	336.8	379
134	11/02/2025	16:11:09	80.4	95.5	117.1	73.5	53.1	332	405
135	11/02/2025	16:11:14	80.3	92.2	112.8	73.4	55.2	322.4	309.3
136	11/02/2025	16:11:19	80.3	92.1	113.5	73.4	56.5	314	240.6
137	11/02/2025	16:11:24	82.5	97	130.8	75.2	50.3	297.9	192.6
138	11/02/2025	16:11:29	82.5	98.8	131.6	75.2	50.3	275.5	155.4
139	11/02/2025	16:11:34	82.4	98.8	132.3	75.4	50.2	265.4	138.2
140	11/02/2025	16:11:39	82.3	99.1	131	75.5	50.1	258.8	115.6
141	11/02/2025	16:11:44	33.8	32.9	32.3	29.8	32.5	598.2	417.5
142	11/02/2025	16:11:49	32.7	33.3	36.1	29.9	32.5	708.3	470.7
143	11/02/2025	16:11:54	38.8	36.8	40.7	29.9	32.5	824.5	489.4
144	11/02/2025	16:11:59	38.5	36.4	42	30.6	33.6	844.8	529.4
145	11/02/2025	16:12:04	34.8	34.6	36.8	30.6	32.9	860.9	554.7
146	11/02/2025	16:12:09	37.8	34.6	38.5	30.4	32.9	853.7	567.1
147	11/02/2025	16:12:14	40.2	39.3	43.5	30.3	32.2	860.2	570
148	11/02/2025	16:12:19	38.4	40	42	31.4	33.5	869.3	589.3
149	11/02/2025	16:12:24	41.6	38.7	45	31.4	34.1	866.6	587.1
150	11/02/2025	16:12:29	42.9	39.3	46.9	31.2	33.4	886.7	587.7
151	11/02/2025	16:12:34	45.3	40.7	47.5	31.3	32.4	898.8	596.6
152	11/02/2025	16:12:39	44.6	41.6	51.1	32.2	31.8	898.5	591.9
153	11/02/2025	16:12:44	46.4	43	48.5	32.8	31.8	899	601.7
154	11/02/2025	16:12:49	48.2	44	50.3	32.8	31.9	901.3	606.5
155	11/02/2025	16:12:54	52.7	46.2	55.8	33.1	32.5	903.5	605.8
156	11/02/2025	16:12:59	58.6	49.1	59.3	33.7	33.2	904.4	603.7
157	11/02/2025	16:13:04	63.1	50	63.6	34	34.1	903.8	603.5
158	11/02/2025	16:13:09	60.1	50.1	63.3	34.1	34.7	909.1	605
159	11/02/2025	16:13:14	60.1	51.3	63.5	34.4	33.3	910.7	604
160	11/02/2025	16:13:19	63.9	53	68.2	34.9	31.9	904.4	600.8
161	11/02/2025	16:13:24	66.3	53.9	69.6	35.4	30.9	904.4	603.4
162	11/02/2025	16:13:29	66.4	55.1	69.6	36	30.9	903.2	595.2
163	11/02/2025	16:13:34	67.1	55.7	69.6	36.7	30.8	898.8	595.9
164	11/02/2025	16:13:39	67.8	56.4	71.1	36.9	30.7	892.4	601.6
165	11/02/2025	16:13:44	67.5	56.4	71.1	36.8	30.5	900	604.5

166	11/02/2025	16:13:49	62.2	55.2	68.2	36.8	31.9	900.4	603.2
167	11/02/2025	16:13:54	65.7	50.3	75.1	37.2	30.3	900.6	635.8
168	11/02/2025	16:13:59	35.4	42.6	40.7	37.7	30.5	900.3	658.8
169	11/02/2025	16:14:04	62.6	49.2	80	38.6	31.5	898	623.5
170	11/02/2025	16:14:09	61.1	49.2	79.2	39.2	31.6	888	615
171	11/02/2025	16:14:14	27.1	46.7	28.7	38.5	32	900.9	647.8
172	11/02/2025	16:14:19	47.5	51.4	31.7	39.6	32.3	910.8	651.6
173	11/02/2025	16:14:24	54.6	55.5	59.9	39.6	32.1	912.1	611.2
174	11/02/2025	16:14:29	57.6	57.8	64.5	39.6	32	914.8	605.5
175	11/02/2025	16:14:34	59.6	58.6	64.9	40.3	31.9	916.6	610
176	11/02/2025	16:14:39	57	54.2	54.7	40.3	31.8	916.7	625.9
177	11/02/2025	16:14:44	55.2	56.4	59.1	41.4	31.9	924.5	619.4
178	11/02/2025	16:14:49	28.7	48.3	38.5	41.4	31.1	914.4	661.6
179	11/02/2025	16:14:54	31.1	42.6	50.7	41.2	31.1	914	639.5
180	11/02/2025	16:14:59	29.5	44.4	35.9	42.2	31.2	905.4	668.5
181	11/02/2025	16:15:04	50.9	56.4	76.1	42.2	31.6	925.7	619.1
182	11/02/2025	16:15:09	62.5	58	62.9	42.6	31.6	917.2	634.6
183	11/02/2025	16:15:14	63	58.1	70.2	43.3	31.6	896	616.9
184	11/02/2025	16:15:19	65.9	62	73	43.6	31.6	877.9	598.4
185	11/02/2025	16:15:24	67.5	63.7	74.8	43.7	31.4	851.4	588.5
186	11/02/2025	16:15:29	66.8	63.7	74.8	43.8	31.3	852.3	587.9
187	11/02/2025	16:15:34	65.3	60.5	68.4	44.4	33	822.6	591.2
188	11/02/2025	16:15:39	52.7	56.6	60.4	44.9	39.4	769.5	557.4
189	11/02/2025	16:15:44	45.5	52.2	51.2	45.9	41.7	754	560.5
190	11/02/2025	16:15:49	39.2	49.4	40	45.9	47.1	729.4	554.2
191	11/02/2025	16:15:54	38.4	50.9	47.4	46	46.9	728.6	549.2
192	11/02/2025	16:15:59	53.9	50.8	37.3	47.1	39.9	743.2	558.6
193	11/02/2025	16:16:04	62.6	58.1	67.5	47.1	32.6	787.1	574.8
194	11/02/2025	16:16:09	54.8	54.6	60.7	47.5	32.6	709.4	569.1
195	11/02/2025	16:16:14	59.2	56.9	75.5	48.9	34.2	675	568
196	11/02/2025	16:16:19	34.6	49.9	46.8	48.9	33	655.6	587.8
197	11/02/2025	16:16:24	57.8	56.9	54.8	49	34.3	651.2	580
198	11/02/2025	16:16:29	41.8	54.5	49.5	49.4	33	638.5	577
199	11/02/2025	16:16:34	41.6	51.7	50.1	49.8	32.9	623.3	568.5
200	11/02/2025	16:16:39	38.5	51.9	46.4	50.1	32.8	638	585.1
201	11/02/2025	16:16:44	47.6	55.9	58	50.7	33.6	633.8	568.7
202	11/02/2025	16:16:49	53.6	57.3	44.5	51.2	41.8	604.8	510.7
203	11/02/2025	16:16:54	42.8	56.8	38.2	51.7	35.4	564.3	537.9
204	11/02/2025	16:16:59	69.9	63.9	81.4	52.2	34.2	548.8	503.6
205	11/02/2025	16:17:04	61.8	61.3	78.5	54.8	36.9	562.2	499.2
206	11/02/2025	16:17:09	55.3	61.4	68.9	54.2	38	572.5	496.8
207	11/02/2025	16:17:14	44.1	61.4	70.9	54.2	35.8	570.6	498.1

208	11/02/2025	16:17:19	55.9	60.2	67.5	55.9	38.5	571.4	480.3
209	11/02/2025	16:17:24	55	60.2	65.3	55.9	38.5	585.2	477.4
210	11/02/2025	16:17:29	49.7	59.5	64	55.6	39.4	617.1	481.4
211	11/02/2025	16:17:34	27.5	56.5	28.3	55.3	38.1	655.2	508.5
212	11/02/2025	16:17:39	33.5	56	39.6	56	36.6	679.3	503.8
213	11/02/2025	16:17:44	59.2	63.3	62.3	56.1	37.8	618.4	490.1
214	11/02/2025	16:17:49	47.1	60.5	57.1	57.6	38.7	582.3	495.8
215	11/02/2025	16:17:54	67.3	67.6	83.6	57.6	34.7	569	486.4
216	11/02/2025	16:17:59	55.9	63.8	71.3	58.4	38.6	547.4	474.4
217	11/02/2025	16:18:04	68.8	68.2	80.7	59.4	34.8	529.8	476.1
218	11/02/2025	16:18:09	55.4	66	77.5	60.2	37.2	543.3	483.9
219	11/02/2025	16:18:14	38.4	65	60.9	60.8	42.9	557.9	474.5
220	11/02/2025	16:18:19	58.9	68.9	72.1	61.5	40.8	567.9	485.9
221	11/02/2025	16:18:24	58.1	69	71.8	62.5	38.4	566.6	505.9
222	11/02/2025	16:18:29	43.3	66.7	60.5	61.3	35.8	561.8	516.5
223	11/02/2025	16:18:34	64.7	72.6	78.1	63	35.1	530.5	494.1
224	11/02/2025	16:18:39	57.8	72	78.4	63.6	37.4	507.4	478
225	11/02/2025	16:18:44	57.3	69.9	74.9	63.6	36.4	486.9	469.8
226	11/02/2025	16:18:49	63.2	71.8	78.2	65.7	37.6	480.7	455.9
227	11/02/2025	16:18:54	65.2	72.5	77.8	65.7	37.6	486.3	451.9
228	11/02/2025	16:18:59	64.7	71.6	78.4	65.6	37.5	477.4	447.3
229	11/02/2025	16:19:04	24.4	70.9	39.4	66.4	40.4	470.6	455.7
230	11/02/2025	16:19:09	35.3	70.3	52.7	67	39.2	462.7	444.9
231	11/02/2025	16:19:14	56	74.3	62.6	66.3	35.4	455.4	446.6
232	11/02/2025	16:19:19	57.8	72.8	52.1	68	35.4	451	444.3
233	11/02/2025	16:19:24	52.8	74.7	64.3	68.6	35.6	450	439.9
234	11/02/2025	16:19:29	60.4	76.7	63.9	69.3	35.9	447.6	439.2
235	11/02/2025	16:19:34	57.4	73.1	67.1	69.3	39	448.5	430.2
236	11/02/2025	16:19:39	53.8	74.3	63.4	69.6	43.6	462.1	416.8
237	11/02/2025	16:19:44	43.5	72.9	52.2	69.8	44.4	528.3	414.7
238	11/02/2025	16:19:49	43.1	73.9	51.4	71	44.4	537.6	420
239	11/02/2025	16:19:54	27.7	70.7	56.6	69.6	43.6	546.5	429.1
240	11/02/2025	16:19:59	23.2	74.2	50.8	70.7	37.5	523.6	437.7
241	11/02/2025	16:20:04	27.8	77.7	39.6	71.7	37.4	479.1	444.1
242	11/02/2025	16:20:09	51.7	79.4	25.2	71.8	37.4	474.9	453.4
243	11/02/2025	16:20:14	49.1	76.3	52.8	72.3	37.5	472	415
244	11/02/2025	16:20:19	43.6	77.2	47.3	72.7	41.1	458.4	417.3
245	11/02/2025	16:20:24	47.6	78.8	55.7	73.7	41.1	454.3	411.6
246	11/02/2025	16:20:29	54.9	82.2	66.6	74	39.8	514.2	420.9
247	11/02/2025	16:20:34	59.5	83.5	75.4	75	38.3	500.2	414.1
248	11/02/2025	16:20:39	54.9	76.4	53.8	75.6	40.3	473.3	417.3
249	11/02/2025	16:20:44	21.4	73.6	56.9	76.3	38.5	458.8	403.6

250	11/02/2025	16:20:49	45.1	83.6	54.4	77.1	38	491.3	416.9
251	11/02/2025	16:20:54	24.8	84.2	43.7	77.1	38.6	484.5	420.7
252	11/02/2025	16:20:59	39.7	82.6	64	77.2	42.8	497.5	420.5
253	11/02/2025	16:21:04	39.9	77.6	49.8	77.6	39.9	474.7	427.3
254	11/02/2025	16:21:09	32.7	78.7	52.6	78.6	39.2	470.1	423.1
255	11/02/2025	16:21:14	18.2	84.5	26.9	78.6	39.2	467.3	445.6
256	11/02/2025	16:21:19	8.7	78.9	60.6	80.1	45.4	460.2	417.6
257	11/02/2025	16:21:24	41	83.7	49.5	80.1	39.1	459.6	422.9
258	11/02/2025	16:21:29	46.7	86.6	63.2	80.7	39.1	455	420.7
259	11/02/2025	16:21:34	31.5	87.2	54.7	81.6	39.2	455.3	429.9
260	11/02/2025	16:21:39	39.4	88.8	52	82.9	38.9	458.5	423.4
261	11/02/2025	16:21:44	34.4	88.2	59.7	82.9	38.5	458.5	420.9
262	11/02/2025	16:21:49	44.4	90	61.9	84.4	38.5	457.7	420.2
263	11/02/2025	16:21:54	20.8	83.7	57.3	84.4	38.3	482.8	425.8
264	11/02/2025	16:21:59	45.1	89.5	65.1	85.4	38.3	465	420.3
265	11/02/2025	16:22:04	17.6	80.6	28.3	86.3	38.3	460	453.9
266	11/02/2025	16:22:09	52.1	92.8	69.5	86.9	39.4	459.9	422.9
267	11/02/2025	16:22:14	22.8	91.3	52.5	86.9	39	457.6	427.4
268	11/02/2025	16:22:19	35.8	90.1	48.2	87.5	39	457.6	427
269	11/02/2025	16:22:24	11.7	86	37.3	88.1	39.2	457	436.9
270	11/02/2025	16:22:29	35.7	91.3	52.1	88.7	39.1	458	434.4
271	11/02/2025	16:22:34	8.9	93.8	52.4	89.2	39.1	509.3	429.6
272	11/02/2025	16:22:39	-4.9	84.3	7	88.3	39.2	503.4	455.1
273	11/02/2025	16:22:44	7.3	88.9	24.7	88.3	39.2	489.5	445.6
274	11/02/2025	16:22:49	2.7	86.7	28.2	90.6	39.2	479.1	444.3
275	11/02/2025	16:22:54	15.4	85.3	12.4	91.3	39.2	473.2	456.4
276	11/02/2025	16:22:59	100	89.8	29.2	90.5	40.5	492.2	407.1
277	11/02/2025	16:23:04	100	89.5	64.3	90.7	47.6	566.7	418.3
278	11/02/2025	16:23:09	100	88.9	51.1	88.7	50.9	713.3	415.7
279	11/02/2025	16:23:14	100	88.4	100.5	90.6	51.5	602.4	413.3
280	11/02/2025	16:23:19	100	83.4	100.5	91.5	47	594.7	424.2
281	11/02/2025	16:23:24	100	87.6	100.5	91.5	51.1	650.3	419.5
282	11/02/2025	16:23:29	100	88.5	100.5	91.7	55.6	622.5	443.7
283	11/02/2025	16:23:34	100	84.8	100.5	92.4	55.1	556.9	430
284	11/02/2025	16:23:39	100	93.8	100.5	93.4	42.8	529.2	452.5
285	11/02/2025	16:23:44	100	93.1	100.5	95	45.1	525.4	427.9
286	11/02/2025	16:23:49	100	100.3	100.5	100.6	44.3	519.2	432.6
Rata- rata		00:23:45	100	100.3	100.5	100.6	86	665.2	487.5

Tabel L. 5 temperatur dengan viskositas (301 Ns/m²)

No	Tanggal	Waktu	Temperatur didih TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	20:07:47	32.8	24.3	18.3	34.3	64.2	447.7	333.9
2	11/02/2025	20:07:51	32.8	24.4	20.1	34.4	61.7	448.3	325.8
3	11/02/2025	20:07:56	32.7	24.9	21.7	34.9	49	560.1	356
4	11/02/2025	20:08:01	32.2	24.9	21.2	34.9	42.5	656.2	455.8
5	11/02/2025	20:08:06	32.2	25.2	21.7	35.2	40.6	796.9	536.5
6	11/02/2025	20:08:11	33.8	25.6	22.1	35.6	39.1	827.1	588.3
7	11/02/2025	20:08:16	32.7	27.7	22.1	37.7	38	818.9	639.3
8	11/02/2025	20:08:21	33.5	27.7	22.5	37.7	38	822.8	689.4
9	11/02/2025	20:08:26	34.2	27.7	22.5	37.7	37.3	840.6	713.3
10	11/02/2025	20:08:31	36.1	27.5	22.5	37.5	37.3	857.9	701
11	11/02/2025	20:08:36	36.1	27.5	22.5	37.5	37.3	889.2	672.1
12	11/02/2025	20:08:41	37	28.5	23.8	38.5	37.3	919	659.7
13	11/02/2025	20:08:46	34.8	28.5	24.9	38.5	36.8	927.1	650.9
14	11/02/2025	20:08:51	34.9	28.5	25.4	38.5	36.7	921.1	638.6
15	11/02/2025	20:08:56	36	29.4	25.4	39.4	36.2	935.4	637
16	11/02/2025	20:09:01	37.2	31.5	25.7	41.5	35.9	934.1	637
17	11/02/2025	20:09:06	38.5	32.4	25.7	42.4	35.8	912.2	632.7
18	11/02/2025	20:09:11	38.5	33.8	25.9	43.8	36	920.4	629.5
19	11/02/2025	20:09:16	39.2	35.6	27.8	45.6	37.7	929.1	631.5
20	11/02/2025	20:09:21	38.6	37.6	27.8	47.6	35.8	923.2	636
21	11/02/2025	20:09:26	38.7	37.3	32.2	47.3	35.8	900.6	636.5
22	11/02/2025	20:09:31	38.8	37.3	31.5	47.3	35.8	887.5	627.8
23	11/02/2025	20:09:36	39.4	37.5	31.5	47.5	35.7	894.2	626.7
24	11/02/2025	20:09:41	40	37.7	31.5	47.7	35.6	883.9	624.3
25	11/02/2025	20:09:46	41.3	37.9	32.7	47.9	35.5	860.6	620
26	11/02/2025	20:09:51	41.9	39.3	32.2	49.3	35.5	817.4	614.2
27	11/02/2025	20:09:56	41.9	40	33.3	50	35.5	765.6	609.1
28	11/02/2025	20:10:01	41.3	40.8	35.5	50.8	35.5	736.1	603.9
29	11/02/2025	20:10:06	41.9	42	35.5	52	35.5	716.8	600.3
30	11/02/2025	20:10:11	43.1	42.9	35.5	52.9	35.4	709.1	595.3
31	11/02/2025	20:10:16	43.7	43.7	37.6	53.7	35.4	697.1	587.3
32	11/02/2025	20:10:21	46.6	44.4	37.6	54.4	35.5	684.7	577.6
33	11/02/2025	20:10:26	47.4	46.9	37.6	56.9	35.6	675	567.1
34	11/02/2025	20:10:31	47.4	49.5	39.5	59.5	35.5	672.4	561.2
35	11/02/2025	20:10:36	48.7	50.5	40.2	60.5	35.6	670	554.3
36	11/02/2025	20:10:41	48.7	51.6	43.6	61.6	35.7	667.3	553
37	11/02/2025	20:10:46	52.4	52.7	46.6	62.7	35.7	667.9	552.1

38	11/02/2025	20:10:51	50.9	53.9	46.5	63.9	35.7	670.2	554.9
39	11/02/2025	20:10:56	50.9	55.8	47.2	65.8	35.7	665.4	554.9
40	11/02/2025	20:11:01	55.3	55.9	47.2	65.9	35.8	659.1	551.1
41	11/02/2025	20:11:06	56	55.9	47.2	65.9	35.9	657.4	552
42	11/02/2025	20:11:11	59.1	56.2	47.2	66.2	35.8	659.1	556.2
43	11/02/2025	20:11:16	59.7	58.2	47.2	68.2	35.6	658.4	558.2
44	11/02/2025	20:11:21	60.4	58.6	48	68.6	35.7	654.1	555.7
45	11/02/2025	20:11:26	59.4	60.3	48.2	70.3	35.8	647.6	551
46	11/02/2025	20:11:31	59.5	61.2	48.3	71.2	35.9	647.6	551
47	11/02/2025	20:11:36	59.5	62.7	48.5	72.7	36	650.4	550.8
48	11/02/2025	20:11:41	61.7	63.9	48.7	73.9	36.1	651.2	551.3
49	11/02/2025	20:11:46	61.2	63.9	48.8	73.9	36.1	615.3	553.8
50	11/02/2025	20:11:51	66.2	61.6	49.1	71.6	36.2	615	554.9
51	11/02/2025	20:11:56	65.1	62.4	49.1	72.4	37.4	625.6	555.8
52	11/02/2025	20:12:01	63.6	64.7	49.1	74.7	36.8	627.6	557.7
53	11/02/2025	20:12:06	63.6	66.4	50.7	76.4	36.7	624.7	557.8
54	11/02/2025	20:12:11	61.1	68.9	53.5	78.9	36.6	621.1	559.3
55	11/02/2025	20:12:16	61.3	69.7	53.5	79.7	36.6	618.6	563.6
56	11/02/2025	20:12:21	61.9	71.3	53.7	81.3	36.6	616.7	568.3
57	11/02/2025	20:12:26	62.4	72	54.6	82	36.6	617.8	569
58	11/02/2025	20:12:31	63.8	72.9	55.6	82.9	36.6	616.7	570.4
59	11/02/2025	20:12:36	63.8	74.5	56.9	84.5	36.6	613.8	567.6
60	11/02/2025	20:12:41	65	75.8	56.9	85.8	36.6	615.1	568.2
61	11/02/2025	20:12:46	65.6	76.9	58.6	86.9	36.6	618.7	573.7
62	11/02/2025	20:12:51	65.7	78.5	58.6	88.5	36.6	618.1	574.9
63	11/02/2025	20:12:56	77.8	74.1	60.2	84.1	36.6	618.9	577.7
64	11/02/2025	20:13:01	69.1	79.3	60.2	89.3	36.5	618.9	578.5
65	11/02/2025	20:13:06	69.1	80.9	60.2	90.9	36.4	619.6	575.5
66	11/02/2025	20:13:11	69.7	82.3	60.2	92.3	36.5	619.6	565.7
67	11/02/2025	20:13:16	69.7	83.7	60.2	93.7	36.5	622.3	562.6
68	11/02/2025	20:13:21	77.4	80.8	60.2	90.8	37.6	619.7	556.3
69	11/02/2025	20:13:26	72.3	84.1	62.4	94.1	37	613.2	544.9
70	11/02/2025	20:13:31	76.3	84	62.4	94	37	613.2	541.1
71	11/02/2025	20:13:36	78.9	83.9	62.4	93.9	37.1	611	539.1
72	11/02/2025	20:13:41	79.4	83.9	62.4	93.9	37.1	610	540.2
73	11/02/2025	20:13:46	73.3	86.6	62.4	96.6	37.1	615.1	551.4
74	11/02/2025	20:13:51	72.7	87.2	65.3	97.2	36.9	621.4	554.9
75	11/02/2025	20:13:56	84.3	82.3	65.3	92.3	36.6	623	555.7
76	11/02/2025	20:14:01	81.7	84.7	69.5	94.7	36.5	599.1	554
77	11/02/2025	20:14:06	82.3	88.7	69.5	98.7	36.5	588.8	554.7
78	11/02/2025	20:14:11	81	83.5	66.7	93.5	36.6	585.5	557.1
79	11/02/2025	20:14:16	85.2	81.7	72.6	91.7	35.9	584.1	554.9

80	11/02/2025	20:14:21	79.2	85.5	72	95.5	35.9	581.6	552.6
81	11/02/2025	20:14:26	80.2	83	69.9	93	36.1	579.6	553.2
82	11/02/2025	20:14:31	88.3	80.2	71.8	90.2	36.1	578.8	553.5
83	11/02/2025	20:14:36	86.3	79.5	72.5	89.5	36.6	575.5	551.6
84	11/02/2025	20:14:41	86.3	79.4	71.6	89.4	36.6	570.5	550.4
85	11/02/2025	20:14:46	86.3	77.2	70.9	87.2	36.6	564.6	545.3
86	11/02/2025	20:14:51	86.3	78.7	70.3	88.7	36.4	559	543.6
87	11/02/2025	20:14:56	86.3	80.5	74.3	90.5	37.4	559.1	536.5
88	11/02/2025	20:15:01	86.3	83.1	72.8	93.1	36.6	556	532.6
89	11/02/2025	20:15:06	86.3	80	74.7	90	36.5	552.7	531.3
90	11/02/2025	20:15:11	86.3	78.4	76.7	88.4	36.4	550.7	531.3
91	11/02/2025	20:15:16	86.3	76.6	73.1	86.6	36.5	550	539
92	11/02/2025	20:15:21	86.3	76.4	74.3	86.4	36.6	549.9	543.4
93	11/02/2025	20:15:26	92.4	77.8	72.9	87.8	36.6	548.7	547.6
94	11/02/2025	20:15:31	92.4	80.7	73.9	90.7	36.6	548.7	548.5
95	11/02/2025	20:15:36	92.4	82.1	70.7	92.1	36.7	548.8	545.7
96	11/02/2025	20:15:41	92.4	82.1	74.2	92.1	36.7	551.4	545.9
97	11/02/2025	20:15:46	92.4	76.2	77.7	86.2	36.7	551.4	546.6
98	11/02/2025	20:15:51	92.4	75.6	79.4	85.6	36.7	552.4	547.5
99	11/02/2025	20:15:56	92.4	79.5	76.3	89.5	36.7	558.1	555
100	11/02/2025	20:16:01	92.4	80.8	77.2	90.8	36.8	554.1	548.5
101	11/02/2025	20:16:06	92.4	83.7	78.8	90.8	36.8	551.9	545.3
102	11/02/2025	20:16:11	92.4	83.2	82.2	90.8	36.9	551.9	544.6
103	11/02/2025	20:16:16	92.4	82.4	83.5	90.8	37	549.1	543.3
104	11/02/2025	20:16:21	95.9	82.8	83.5	90.8	37	552.1	543.3
105	11/02/2025	20:16:26	95.9	90.8	83.5	90.8	36.9	551.8	543.2
106	11/02/2025	20:16:31	95.9	84.2	83.5	90.8	36.9	548.1	543
107	11/02/2025	20:16:36	95.9	83.6	83.5	90.8	36.9	548	542.8
108	11/02/2025	20:16:41	95.9	86.2	85.6	90.8	36.9	548.7	543.1
109	11/02/2025	20:16:46	95.9	86.2	85.6	93.6	37	548.6	540.3
110	11/02/2025	20:16:51	95.9	87	85.6	93.6	37.1	547.9	538.4
111	11/02/2025	20:16:56	95.9	88.7	85.6	93.6	37.1	549.8	535
112	11/02/2025	20:17:01	95.9	88.7	85.6	93.6	37	550.6	534.3
113	11/02/2025	20:17:06	95.9	88.7	85.6	94.2	37	554.3	537.2
114	11/02/2025	20:17:11	95.9	88.7	86	94.2	37	550.4	533.2
115	11/02/2025	20:17:16	95.9	89.2	86	94.2	37.1	549.6	530.9
116	11/02/2025	20:17:21	95.9	89.2	86	94.2	37.2	546.9	529.2
117	11/02/2025	20:17:26	95.9	89.2	86	94.2	37.2	548.2	528.5
118	11/02/2025	20:17:31	95.9	89.2	89.4	94.2	37.2	547.1	528.5
119	11/02/2025	20:17:36	95.9	90.8	89.4	94.2	37.2	546.5	528.8
120	11/02/2025	20:17:41	95.9	93.5	89.4	94.2	37.2	546.3	528.1
121	11/02/2025	20:17:46	95.9	93.5	89.4	96.2	37.3	547.3	529

122	11/02/2025	20:17:51	95.9	93.5	89.4	96.2	37.3	547.1	532.8
123	11/02/2025	20:17:56	95.9	93.5	90.1	96.2	37.3	547.5	537.4
124	11/02/2025	20:18:01	95.9	93.5	90.1	96.2	37.2	553.4	539.6
125	11/02/2025	20:18:06	95.9	95.7	90.1	97	37.3	555.4	543.9
126	11/02/2025	20:18:11	95.9	95.7	90.1	97	37.4	560.6	550
127	11/02/2025	20:18:16	100.1	95.7	90.1	97	37.6	561.2	556.6
128	11/02/2025	20:18:21	100.1	95.8	93.3	97	37.5	558.5	565.5
129	11/02/2025	20:18:26	100.1	95.7	93.3	98.7	37.4	558.9	578
130	11/02/2025	20:18:31	100.1	95.7	93.3	98.7	37.4	560.2	589.4
131	11/02/2025	20:18:36	100.1	95.7	93.3	98.7	37.4	560.8	595.1
132	11/02/2025	20:18:41	100.1	95.7	54.1	98.7	37.4	562	601.6
133	11/02/2025	20:18:46	100.1	96.7	95.7	98.7	37.4	563	609.4
134	11/02/2025	20:18:51	100.1	96.7	95.7	98.7	37.4	564.9	615.9
135	11/02/2025	20:18:56	100.1	97.4	95.7	98.7	37.5	574.2	623.2
136	11/02/2025	20:19:01	100.1	97.4	96.7	98.7	37.4	581.3	629.4
137	11/02/2025	20:19:06	100.1	97.4	96.7	98.7	37.4	588.2	636
138	11/02/2025	20:19:11	100.1	97.4	97.4	98.7	37.5	595.4	641.5
139	11/02/2025	20:19:16	100.1	98.1	97.4	98.7	37.5	605.6	653.2
140	11/02/2025	20:19:21	100.1	98.3	97.4	98.7	37.4	622.6	668.9
141	11/02/2025	20:19:26	100.1	98.5	98.2	100.3	37.4	641.1	688
142	11/02/2025	20:20:31	100.1	98.5	98.2	100.3	37.4	653.9	707.6
143	11/02/2025	20:20:36	100.1	98.6	98.5	100.3	37.3	660.7	723.8
144	11/02/2025	20:20:41	100.1	98.6	98.5	100.3	37.1	662.9	734.7
145	11/02/2025	20:20:46	100.1	98.7	98.5	100.3	37	662.6	739.7
146	11/02/2025	20:20:51	100.1	98.7	99.3	100.3	36.9	668.1	737.2
147	11/02/2025	20:20:56	100.1	99.8	99.3	100.3	36.9	675.1	728.4
148	11/02/2025	20:20:01	100.1	99.8	99.3	100.3	36.8	690.2	714.8
149	11/02/2025	20:20:06	100.1	99.9	100	100.3	36.7	706.6	697.9
150	11/02/2025	20:20:11	100.1	100	100.1	100.3	36.7	709.5	681.3
Rata- rata		00:12:24	100.1	100	100.1	100.3	63.396	641.936	576.412

Tabel L. 6 pada viskositas 301.Ns/m²

No	Tanggal	Waktu	Temperatur didih, TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	16:40:56	101.3	42.7	44	31.2	61.9	563.8	453.1
2	11/02/2025	16:41:01	92.6	42.1	48.6	31.1	57.2	628	471.1
3	11/02/2025	16:41:06	102.3	40	48.6	31	50.9	709.8	500.2
4	11/02/2025	16:41:11	104.6	40.9	48.6	31.8	45.4	679.3	520.8
5	11/02/2025	16:41:16	135.3	50.2	51.6	31.8	40.2	673.5	503.9
6	11/02/2025	16:41:21	143.5	53.5	51.6	31.9	40.3	690.2	504.8
7	11/02/2025	16:41:26	146.4	50.9	51.6	32.5	40.4	715.1	539.4
8	11/02/2025	16:41:31	160.5	54.9	51.6	33.2	39	724.6	551.7
9	11/02/2025	16:41:36	161	56.5	51.6	33.8	38.9	683.2	530.3
10	11/02/2025	16:41:41	175	58.3	51.6	33.8	38.7	661.2	508.5
11	11/02/2025	16:41:46	170	48.5	51.6	34	38.6	683.5	511.1
12	11/02/2025	16:41:51	170.9	44.4	51.6	34.3	38.4	702.4	534.6
13	11/02/2025	16:41:56	191.4	52.4	54.9	35.6	38.3	699.1	535.4
14	11/02/2025	16:42:01	194.1	49.7	54.9	35.6	39.6	692	555.9
15	11/02/2025	16:42:06	186.3	50.9	54.9	36	40.5	668.1	531.8
16	11/02/2025	16:42:11	207.2	57.2	54.9	36.5	39.3	659.5	517.9
17	11/02/2025	16:42:16	217.7	49.8	54.9	37.6	38.7	681.4	552.8
18	11/02/2025	16:42:21	243.1	54.8	54.9	38.5	40.1	709.7	558.8
19	11/02/2025	16:42:26	229.9	48.2	54.9	39.6	42.5	713.4	545.2
20	11/02/2025	16:42:31	238	45.6	54.9	40.2	42.5	694.5	545.8
21	11/02/2025	16:42:36	238.5	44.3	54.9	40.8	45.3	715.5	560.6
22	11/02/2025	16:42:41	250.3	44.3	54.9	40.8	45.4	712.8	553.9
23	11/02/2025	16:42:46	239.4	46.5	54.9	41.4	37.3	698.1	574.9
24	11/02/2025	16:42:51	262.5	54.6	54.9	42.1	37.2	677.2	553.6
25	11/02/2025	16:42:56	273.6	47.2	54.9	42.8	37.2	694.2	564.2
26	11/02/2025	16:43:01	290	48.1	54.9	43.7	37.1	703.9	556.5
27	11/02/2025	16:43:06	326.3	60.1	66.6	44.4	37.1	689.1	524.2
28	11/02/2025	16:43:11	328	55.9	66.6	44.4	37	678.4	544.2
29	11/02/2025	16:43:16	308.3	51.3	66.6	44.6	37	673.9	550.3
30	11/02/2025	16:43:21	326.9	48.1	66.6	44.9	37	670.6	549
31	11/02/2025	16:43:26	366.4	52.9	66.6	45.2	36.9	673.3	533.6
32	11/02/2025	16:43:31	360.9	46.5	66.6	47.8	36.9	672.8	556.8
33	11/02/2025	16:43:36	362.9	48	66.6	47.8	36.9	680.7	557.4
34	11/02/2025	16:43:41	375.1	46.9	77.2	48.2	36.9	703.4	572.5
35	11/02/2025	16:43:46	375.3	46.9	77.2	49.1	36.8	699.2	579
36	11/02/2025	16:43:51	377.7	47.3	77.2	50.1	36.8	685.7	576.5
37	11/02/2025	16:43:56	402.2	47.6	77.2	50.5	36.8	675.8	574
38	11/02/2025	16:44:01	404.5	47.7	88.9	51.2	36.9	663	567.2
39	11/02/2025	16:44:06	408	48.7	88.9	52.2	36.9	665.5	562.3

40	11/02/2025	16:44:11	394.8	48.7	89.1	52.6	36.9	662	556.6
41	11/02/2025	16:44:16	471.3	48.7	89.1	52.9	36.9	669.4	553.3
42	11/02/2025	16:44:21	461.5	49.7	89.1	53.2	37	670.2	546.7
43	11/02/2025	16:44:26	453.7	50.8	90.8	53.4	37	666.8	536.5
44	11/02/2025	16:44:31	454.3	49.6	90.8	55.3	36.9	666.7	557
45	11/02/2025	16:44:36	473.8	50.6	90.8	54.4	36.9	678.7	557.6
46	11/02/2025	16:44:41	258.6	54.1	90.8	56.6	37.7	683.2	552.7
47	11/02/2025	16:44:46	424.6	55.4	90.8	54.5	39.7	695.1	536.1
48	11/02/2025	16:44:51	503.4	52.2	90.8	57.2	41.7	704.4	526.8
49	11/02/2025	16:44:56	286	64.4	90.8	52.1	42.3	694.6	523.8
50	11/02/2025	16:45:01	235.7	64.6	90.8	57.4	42.3	689.5	521.9
51	11/02/2025	16:45:06	266	64.9	90.8	52.7	42.5	676.5	521
52	11/02/2025	16:45:11	703.1	66	90.8	54.4	42.5	673	522.6
53	11/02/2025	16:45:16	273.6	67.4	90.8	54.2	42.5	682.2	526.3
54	11/02/2025	16:45:21	310.1	66.1	90.8	55.5	42.4	672.6	524.5
55	11/02/2025	16:45:26	644.3	52.5	90.8	63.2	42.4	680.3	526.4
56	11/02/2025	16:45:31	674.5	50.7	90.8	65.6	42.4	671	514.8
57	11/02/2025	16:45:36	652.4	50	90.8	65.6	42	679	519.7
58	11/02/2025	16:45:41	655.4	50.7	90.8	67.1	42	681.9	516
59	11/02/2025	16:45:46	659	58.2	90.9	67.7	42.5	691.7	517
60	11/02/2025	16:45:51	713.9	50.3	90.9	68.4	42.5	708.4	537.6
61	11/02/2025	16:45:56	829.2	51	90.9	68.4	43.1	685.9	536.2
62	11/02/2025	16:46:01	846.8	51.3	90.9	68.8	43	679.9	529.9
63	11/02/2025	16:46:06	767.2	51.9	90.9	69.3	42.9	681.5	534.6
64	11/02/2025	16:46:11	713.6	51.3	90.9	71.3	43	706.5	533.8
65	11/02/2025	16:46:16	727.6	52.9	90.9	71.3	43.1	720.5	536.2
66	11/02/2025	16:46:21	779.3	58.6	90.9	67.2	43	734.3	538.1
67	11/02/2025	16:46:26	880.6	65.8	90.9	61.6	42.6	742.5	534.1
68	11/02/2025	16:46:31	1053	60.8	90.9	70	42.6	702.6	528.7
69	11/02/2025	16:46:36	881.8	54.1	90.9	72.7	42.6	677.8	520.1
70	11/02/2025	16:46:41	1011	56.3	90.9	72.7	42.8	680.9	531.7
71	11/02/2025	16:46:46	401.2	78.4	90.9	66.6	42.8	724.2	543.9
72	11/02/2025	16:46:51	410.3	76.8	90.9	63.4	42.8	711.3	544.1
73	11/02/2025	16:46:56	1079	59.1	90.9	73.1	42.8	704	549.9
74	11/02/2025	16:47:01	404.4	87.3	90.9	71.2	41.3	697	533.2
75	11/02/2025	16:47:06	1080	73	90.9	72.9	39.7	718.3	554
76	11/02/2025	16:47:11	1146	70	90.9	77.4	41.4	708.4	528.4
77	11/02/2025	16:47:16	982.2	64.4	90.9	77.1	42.9	742	543.8
78	11/02/2025	16:47:21	960.5	60	95.9	77	42.9	754.3	546.1
79	11/02/2025	16:47:26	754.7	74.3	95.9	70.1	43	762.9	556
80	11/02/2025	16:47:31	830.5	72	95.9	73.9	42.4	714.9	547.7
81	11/02/2025	16:47:36	508.6	80.7	95.9	68.9	43	700.3	559.3

82	11/02/2025	16:47:41	941.3	69.9	95.9	75.6	43	710.2	553.4
83	11/02/2025	16:47:46	808.4	67.4	95.9	74.1	43.1	726.5	542.7
84	11/02/2025	16:47:51	840.3	81.4	95.9	75.4	37	727.6	544
85	11/02/2025	16:47:56	403.6	86.6	95.9	69.6	37	705.1	535.8
86	11/02/2025	16:48:01	448.7	81.7	97.8	70.6	37	710	562.3
87	11/02/2025	16:48:06	704.4	94.5	97.8	72.3	37	700.6	538.3
88	11/02/2025	16:48:11	436.2	84.3	97.8	72.9	37	706.5	554.5
89	11/02/2025	16:48:16	441.1	71.3	97.8	73.2	37	701.3	545
90	11/02/2025	16:48:21	840.1	85.2	97.8	78.1	37	694.8	536.5
91	11/02/2025	16:48:26	1343	94.6	97.8	81.7	37	702.8	537.8
92	11/02/2025	16:48:31	1012	68.2	97.8	81.7	37	699.6	549.5
93	11/02/2025	16:48:36	1348	78.4	99.9	85.4	37.1	721.6	536.5
94	11/02/2025	16:48:41	9999	67.7	99.9	86.5	37.1	737.8	579.9
95	11/02/2025	16:48:46	1139	74.2	99.9	83.6	37.1	742.9	588.9
96	11/02/2025	16:48:51	398.1	92.5	99.9	86.1	37.1	724	598.6
97	11/02/2025	16:48:56	1335	69.1	99.9	86.6	37.1	704.3	606
98	11/02/2025	16:49:01	9999	63.9	99.9	88.8	37.2	698.6	597.4
99	11/02/2025	16:49:06	1263	73.3	99.9	85.1	38.9	701.9	585.4
100	11/02/2025	16:49:11	1047	79.5	99.9	86.3	40.1	699.7	585
101	11/02/2025	16:49:16	1159	71.7	99.9	86.5	40.1	695.7	583.2
102	11/02/2025	16:49:21	1086	70.8	100.2	88	40.7	679.7	588.5
103	11/02/2025	16:49:26	905.3	79.8	100.2	88.1	40.6	669.5	594.9
104	11/02/2025	16:49:31	967	76.2	100.2	86.3	40.6	663.9	589.7
105	11/02/2025	16:49:36	805.3	81	100.2	85.6	40.6	666.4	596.8
106	11/02/2025	16:49:41	1025	76.3	100.2	88.8	40.7	686.2	602.8
107	11/02/2025	16:49:46	1015	75.3	100.2	89.4	40.7	706.2	613.5
108	11/02/2025	16:49:51	1022	76.8	100.2	91.6	40.4	692.4	617.2
109	11/02/2025	16:49:56	823	81.7	100.2	86.6	39.8	689.8	615.5
110	11/02/2025	16:50:01	1017	81.6	99.9	88.6	39.3	691.8	615.4
111	11/02/2025	16:50:06	969.9	81.4	102.1	90	39.1	674.8	613
112	11/02/2025	16:50:11	1168	75.8	102.1	92.7	39	672.1	616.6
113	11/02/2025	16:50:16	645.4	87.1	102.1	89.8	39.3	664.7	616.3
114	11/02/2025	16:50:21	953.5	78.9	102.1	91.6	39.4	667.3	610.7
115	11/02/2025	16:50:26	978.9	78.9	102.1	95.8	39.6	657.4	611.7
116	11/02/2025	16:50:31	1131	75.2	102.1	96.6	39.9	654.8	614.5
117	11/02/2025	16:50:36	800.5	83.7	102.1	85.1	48.3	651.2	574.3
118	11/02/2025	16:50:41	181.9	92.1	102.1	120.7	48.3	656.1	572.8
119	11/02/2025	16:50:46	144.2	82.3	102.1	96	48.2	651.4	579.6
120	11/02/2025	16:50:51	128	89.5	102.1	90	48.4	651.8	578.6
121	11/02/2025	16:50:56	121	96.8	103.8	89.1	48.5	652.8	579.8
122	11/02/2025	16:51:01	135.1	96.8	103.8	94.3	47.9	657.6	573.9
123	11/02/2025	16:51:06	102.5	96.8	103.8	94.3	46.7	660.9	565.9

124	11/02/2025	16:51:11	102.5	103.3	103.8	105.7	46.7	738.8	569.7
Rata- rata		00:10:15	102.5	103.3	103.8	105.7	40.78306	690.175	553.0718

Tabel L. 7 viskositas 446.72 Ns/m²

No	Tanggal	Waktu	Temperatur didih, (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	10/02/2025	22:50:33	34.3	23.3	15.7	21.8	34.5	248.8	226.3
2	10/02/2025	22:50:37	33.5	23.3	12	22.9	34.6	265.8	236.6
3	10/02/2025	22:50:42	34.2	23.3	2	22	33.8	273.5	240.4
4	10/02/2025	22:50:47	36	24.9	18.8	23.1	33.7	274.2	240.3
5	10/02/2025	22:50:52	38.6	24.9	14.4	22.7	33.6	272.6	239.4
6	10/02/2025	22:50:57	41.7	29.5	-4.4	19.7	32.3	354.1	242.1
7	10/02/2025	22:51:02	42.2	30.7	0.3	21.3	30.1	404.9	245.5
8	10/02/2025	22:51:07	40.2	27.9	8.4	21.9	30.8	441.3	248.4
9	10/02/2025	22:51:12	42.4	27.8	13.5	24	31	472.6	252.6
10	10/02/2025	22:51:17	39.7	28.7	21	25.6	31.1	507.8	258.2
11	10/02/2025	22:51:22	39.5	28.1	22.3	26.3	31.3	517.7	262.1
12	10/02/2025	22:51:27	38.4	28.9	14.3	26.6	34.9	513.9	246.2
13	10/02/2025	22:51:32	39.8	29.4	3	26.6	38.7	536.3	232.4
14	10/02/2025	22:51:37	41	30.5	23.1	27.3	34.2	564	228.1
15	10/02/2025	22:51:42	44.9	30.6	10.7	23.3	43.6	566.7	222.6
16	10/02/2025	22:51:47	44.4	34.7	0	22.3	44.3	567.3	223.8
17	10/02/2025	22:51:52	45	33.2	6.1	25.3	45	566.2	227.4
18	10/02/2025	22:51:57	46.7	30.5	12.9	26.5	43.9	561.6	228.6
19	10/02/2025	22:52:02	49.2	29.4	19.5	27.3	39.8	564.9	214
20	10/02/2025	22:52:07	45	30.8	25	31.2	47.4	566.3	212.7
21	10/02/2025	22:52:12	50.3	28.5	11.1	27.8	48.3	569.2	220.8
22	10/02/2025	22:52:17	46.5	30.1	25.4	30.4	48.8	574.4	220.7
23	10/02/2025	22:52:22	51	29.9	14.7	28.1	48.3	576.5	226.2
24	10/02/2025	22:52:27	47.3	35.7	30.3	31.2	47.8	568.3	227.8
25	10/02/2025	22:52:32	48.4	34.5	25.4	30.5	36.9	552.6	256.4
26	10/02/2025	22:52:37	56.1	32	19.2	29.9	39	553.6	252.6
27	10/02/2025	22:52:42	48.2	32.9	16.9	32.8	39.7	556.1	255
28	10/02/2025	22:52:47	49.9	36.4	22.6	31.7	39.6	536.5	251.7
29	10/02/2025	22:52:52	50.9	37.3	32.7	31.7	40.4	524.4	246.3
30	10/02/2025	22:52:57	49.9	37.3	32.7	34	39	538.3	244.9
31	10/02/2025	22:53:02	53.5	39.1	24.9	32.6	39.4	550.2	246
32	10/02/2025	22:53:07	52.6	39.8	29.1	34.1	40.1	559.1	242.8
33	10/02/2025	22:53:12	58.5	38.7	21.9	32	38.9	561.7	241.5
34	10/02/2025	22:53:17	58.7	39.2	26.5	34.7	40.8	564.5	238.4

35	10/02/2025	22:53:22	55.8	40.7	24.4	33.6	37.6	570.3	257.9
36	10/02/2025	22:53:27	52.1	40.6	36.2	36.6	39.9	573.7	245.2
37	10/02/2025	22:53:32	52.1	40.6	39.8	38.4	41.7	580	241.3
38	10/02/2025	22:53:37	53.4	40.6	38.6	38.5	42.7	583.2	236.2
39	10/02/2025	22:53:42	61	41.9	34.5	37.7	42.1	585.3	229.5
40	10/02/2025	22:53:47	54.7	41.8	40.3	39.3	45.9	582.7	228.8
41	10/02/2025	22:53:52	57.9	43.1	35.3	38.7	47.1	585.5	219.1
42	10/02/2025	22:53:57	59.1	43.2	34.3	39.2	46.4	581.5	242.9
43	10/02/2025	22:54:02	64.2	43.2	35.6	39.6	47.5	583.1	216.9
44	10/02/2025	22:54:07	55.2	44.2	43.7	41.9	48.8	580.6	217.7
45	10/02/2025	22:54:12	55.9	44.1	40.9	41.3	47.9	577.9	220.2
46	10/02/2025	22:54:17	57.4	43.9	40.9	42.2	48.6	580.6	219
47	10/02/2025	22:54:22	60.1	43.2	27.4	39.2	30.2	576.8	306.5
48	10/02/2025	22:54:27	60	43.6	26.5	39.7	30.3	573.4	303.3
49	10/02/2025	22:54:32	57.2	44.7	38.1	42.9	31.6	570.8	298.2
50	10/02/2025	22:54:37	61.2	44.8	31.3	43	30.9	571.5	304.3
51	10/02/2025	22:54:42	57	45.8	42	43.9	29.9	577.1	292.5
52	10/02/2025	22:54:47	57.7	45.8	43	44.8	29.9	581.4	311.5
53	10/02/2025	22:54:52	57.6	46	43	45.4	30.9	585.9	313.7
54	10/02/2025	22:54:57	63.9	46.5	28	41.6	30.2	586.7	316.6
55	10/02/2025	22:55:02	41.7	47.1	29.1	42.2	28.5	589	318.2
56	10/02/2025	22:55:07	42.2	45.9	30.3	42.8	29.4	585	318.2
57	10/02/2025	22:55:12	40.2	47.3	29.4	43.5	29.4	584.4	320.3
58	10/02/2025	22:55:17	42.4	48.7	31.3	43.5	29.5	582.6	321.5
59	10/02/2025	22:55:22	42.4	50.1	30.9	43.7	29.9	583.2	322.4
60	10/02/2025	22:55:27	43.4	50.6	36.7	45.6	29.9	577.6	321.7
61	10/02/2025	22:55:32	43.5	51.3	35.1	46.2	30.1	574.2	319
62	10/02/2025	22:55:37	43.8	52.2	35	46.2	30.5	571.6	317
63	10/02/2025	22:55:42	43.9	51	46.1	46.3	32.1	573.8	313.3
64	10/02/2025	22:55:47	44.9	51.1	47.1	50.3	32.8	577.7	311.8
65	10/02/2025	22:55:52	44.4	52.5	47.6	49.8	31.1	579.6	311.8
66	10/02/2025	22:55:57	45	53.6	48	51.3	31.8	582.3	311.5
67	10/02/2025	22:56:02	46.7	52.8	52.7	52.3	32.5	585.5	310.1
68	10/02/2025	22:56:07	49.2	53.8	50.8	52.6	32.4	588.7	310
69	10/02/2025	22:56:12	45	53.8	51.8	53.5	32.4	587.1	309.6
70	10/02/2025	22:56:17	50.3	53.8	33.8	53.5	32.3	580.5	308.9
71	10/02/2025	22:56:22	46.5	55.4	38.7	49.8	32.3	574.8	308.3
72	10/02/2025	22:56:27	51	55.4	30.4	49.6	31.6	574.8	306.6
73	10/02/2025	22:56:32	47.3	55	33.4	50.1	32.5	572.6	305.9
74	10/02/2025	22:56:37	48.4	55.1	33.5	50.5	33.7	571.9	305.1
75	10/02/2025	22:56:42	56.1	58.7	41.4	53.1	32.4	572.9	304.2
76	10/02/2025	22:56:47	48.2	58.7	55.4	56.8	32.4	573	303.3

77	10/02/2025	22:56:52	49.9	60	55.7	54.9	32.3	573.3	301.7
78	10/02/2025	22:56:57	50.9	59.4	55.1	57.8	32.5	571.8	301.7
79	10/02/2025	22:57:02	49.9	59.4	56.5	58.5	30.4	570.8	310.2
80	10/02/2025	22:57:07	53.5	59.6	58.5	59.3	30.4	569.3	308.9
81	10/02/2025	22:57:12	52.6	61.7	49.3	56.7	31	570	308.9
82	10/02/2025	22:57:17	58.5	61.5	53.9	59.3	31.1	572.5	308.7
83	10/02/2025	22:57:22	58.7	62.8	53.1	58.8	30.3	574.6	309.2
84	10/02/2025	22:57:27	55.8	63.5	50.8	58.8	30.3	577.8	311.5
85	10/02/2025	22:57:32	52.1	64.3	51.6	59.3	30.3	581.5	313
86	10/02/2025	22:57:37	52.1	66.3	46.1	58.3	30.4	583.3	314.6
87	10/02/2025	22:57:42	53.4	67.5	49.9	60.2	30.3	579.1	317.5
88	10/02/2025	22:57:47	61	67.3	48.1	58.7	33.8	576.7	321.3
89	10/02/2025	22:57:52	54.7	69.7	54.8	62.3	30.3	578.7	324.9
90	10/02/2025	22:57:57	57.9	69.5	53.2	61.6	30.3	581.1	331
91	10/02/2025	22:58:02	59.1	69.2	40.4	59.5	30.5	581.1	331.7
92	10/02/2025	22:58:07	64.2	63.5	25	58.2	30.8	586.8	332.6
93	10/02/2025	22:58:12	55.2	61.8	35.7	58.3	29.9	587.9	336.8
94	10/02/2025	22:58:17	55.9	64.8	32.4	59.3	30.1	587.3	338.4
95	10/02/2025	22:58:22	57.4	65	35.8	60.2	30.1	588.6	340.9
96	10/02/2025	22:58:27	60.1	65.1	32.8	60.3	30.2	590.3	343
97	10/02/2025	22:58:32	60	66.6	34.1	60.4	31.2	592.4	341.8
98	10/02/2025	22:58:37	57.2	65.1	38.1	60.4	31.8	586.5	343
99	10/02/2025	22:58:42	61.2	64.3	39.1	61.1	31.9	586.5	343.7
100	10/02/2025	22:58:47	57	64.9	41.2	62.2	32.1	587.4	343.7
101	10/02/2025	22:58:52	57.7	67.9	38.5	62.3	32.3	586.6	344
102	10/02/2025	22:58:57	57.6	65.3	37.4	61.5	32.5	586.6	344.6
103	10/02/2025	22:59:02	63.9	67.7	53.3	66.3	32.5	585.1	345.2
104	10/02/2025	22:59:07	64.9	69.2	57.4	68	32.6	591.1	346.1
105	10/02/2025	22:59:12	67.1	71.5	68.7	71.5	32.9	589.3	346.8
106	10/02/2025	22:59:17	65.9	72.4	40.8	63.4	33.6	588.6	345.7
107	10/02/2025	22:59:22	65.9	72.4	69.3	72.2	33.6	588	345
108	10/02/2025	22:59:27	64.1	72.6	69.3	70.5	33.6	583.9	343.7
109	10/02/2025	22:59:32	63.7	70.2	40.1	72.4	32.8	579.2	341.9
110	10/02/2025	22:59:37	64.2	74.6	73.8	74.3	33.7	575	340.4
111	10/02/2025	22:59:42	64.9	74.5	73.9	74.6	33.6	576.3	339.6
112	10/02/2025	22:59:47	61.1	74.6	73.1	74.6	33.8	576	339.6
113	10/02/2025	22:59:52	59.6	76.5	73.1	74.6	33.4	574	339.3
114	10/02/2025	22:59:57	67.3	74.6	52.3	74.7	34.4	577.3	336.6
115	10/02/2025	23:00:02	67.3	76.5	69.5	75.2	34.3	587	333.7
116	10/02/2025	23:00:07	61.1	68.4	33.6	64.2	34.3	585.9	333
117	10/02/2025	23:00:12	62.2	76.1	70.6	73.4	34.3	575.4	329
118	10/02/2025	23:00:17	63.1	70.5	28.7	74.5	34.6	566.5	327.5

119	10/02/2025	23:00:22	66.6	77	72.1	77.4	34.6	569.8	328.6
120	10/02/2025	23:00:27	66.7	79.6	13.2	61.9	30.6	586.9	329.6
121	10/02/2025	23:00:32	75.6	80.2	20.1	63.1	31.2	602.8	328.3
122	10/02/2025	23:00:37	73.2	80.1	22.8	64.3	30.6	608.8	326.2
123	10/02/2025	23:00:42	73.1	75	20.7	64.3	31.5	600.7	325
124	10/02/2025	23:00:47	70.9	75.2	22.6	64.1	33.1	587	323.7
125	10/02/2025	23:00:52	65.5	81.2	13.8	64.1	31.7	581.7	324.4
126	10/02/2025	23:00:57	66.7	79.4	11.6	64.2	35	577.7	324.4
127	10/02/2025	23:01:02	67.8	81.8	20.6	65.6	31.2	576.3	323.2
128	10/02/2025	23:01:07	67.8	81.2	38.9	75.7	34.4	575.1	322.5
129	10/02/2025	23:01:12	67.7	83.7	58.4	70.9	31.5	572.9	322.4
130	10/02/2025	23:01:17	69	83	41	64.6	34.4	571.9	322
131	10/02/2025	23:01:22	70.5	83.7	37.4	70.1	35.7	571.8	321.1
132	10/02/2025	23:01:27	71.5	80.9	53.3	77.1	39.8	572.4	320
133	10/02/2025	23:01:32	72.7	85	47.9	76.4	38.1	576	319.4
134	10/02/2025	23:01:37	72.7	83	57	77.5	37.4	576.9	317.5
135	10/02/2025	23:01:42	73	84.9	49.6	75.1	38.1	573.6	316.7
136	10/02/2025	23:01:47	73.8	85.5	54.1	74.8	39	572.3	316
137	10/02/2025	23:01:52	70.5	81.7	43.3	66	40.9	569.2	314.9
138	10/02/2025	23:01:57	72.2	86.5	34.1	72.5	37	569.2	315
139	10/02/2025	23:02:02	72.2	87.1	55.3	79.8	44.2	565.5	314.9
140	10/02/2025	23:02:07	75.5	90	44	71.5	37.6	564.8	311.9
141	10/02/2025	23:02:12	81	89.4	48.1	78	36.3	563.6	310.5
142	10/02/2025	23:02:17	89.4	91.5	17	76.1	35.9	564.6	309.6
143	10/02/2025	23:02:22	85.3	86.1	12.3	71	37.1	567.5	310.2
144	10/02/2025	23:02:27	85.9	86	15.7	70.4	35.5	566	309.6
145	10/02/2025	23:02:32	85.4	89.6	27.9	78.3	35.7	565.4	308.5
146	10/02/2025	23:02:37	81.7	93.9	61.5	78.7	35	569	307
147	10/02/2025	23:02:42	87	95.7	44.8	89.6	35	571.1	307
148	10/02/2025	23:02:47	87.7	96.3	77	86	36.2	571.6	306.2
149	10/02/2025	23:02:52	89.8	96.2	51.6	83.7	37.2	572.2	307.4
150	10/02/2025	23:02:57	89.1	96.2	43.5	79.3	36	572.2	307.4
151	10/02/2025	23:03:02	89.2	96.6	56	86	35.2	573.5	307.4
152	10/02/2025	23:03:07	87.9	93.8	43.2	82	33.3	573.5	306.6
153	10/02/2025	23:03:12	82.2	95.4	78.7	93.4	32.7	571.7	305.4
154	10/02/2025	23:03:17	89.2	91.9	85.8	93.4	35.3	576.3	305.4
155	10/02/2025	23:03:22	89.2	105.5	85.8	91.6	33.2	578.9	304.7
156	10/02/2025	23:03:27	89.2	97.4	85.8	71.1	34.5	578.8	303
157	10/02/2025	23:03:32	89.2	100.1	85.8	78.5	35.7	582.6	303
158	10/02/2025	23:03:37	95.6	115.1	92.8	72.7	35.8	583.9	302.9
159	10/02/2025	23:03:42	95.6	101.7	92.8	57.9	36.5	584.6	302
160	10/02/2025	23:03:47	95.6	101	92.8	70.2	40.4	584.5	301.4

161	10/02/2025	23:03:52	95.6	99.5	92.8	85.5	32.8	584.3	299.6
162	10/02/2025	23:03:57	94.4	102.7	92.8	74.1	33.6	584	299.6
163	10/02/2025	23:04:02	94.4	100.9	92.8	62.3	33.6	583.1	299
164	10/02/2025	23:04:07	94.4	107.8	92.8	84.1	36.4	583.1	297.5
165	10/02/2025	23:04:12	94.4	106.3	104.3	90.5	32.3	583.2	295.5
166	10/02/2025	23:04:17	99.5	104.6	104.3	92.2	35.7	583.1	294.6
167	10/02/2025	23:04:22	100.4	154.1	104.3	99.5	36.9	588.5	295.2
168	10/02/2025	23:04:27	100.5	102.6	104.3	105.4	36.3	592.1	295.8
Rata- rata		00:13:54	100.5	102.6	104.3	105.4	21.8	248.8	226.3

Tabel L. 8 viskositas 446.72 Ns/m²

No	Tanggal	Waktu	Temperatur didih (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	10/02/2025	22:18:03	26.5	33.6	18.9	24.1	33.4	448.2	232.3
2	10/02/2025	22:18:07	26.5	32.8	21	24.7	32.7	464.7	235.2
3	10/02/2025	22:18:12	26.6	32	22	24	32	479.9	238.1
4	10/02/2025	22:18:17	26.8	31.9	22	24.7	32	484.2	237.1
5	10/02/2025	22:18:22	27	31.6	21.7	24.6	31.4	504	237.7
6	10/02/2025	22:18:27	27.1	31.6	21.7	24.2	31.4	562.6	244.6
7	10/02/2025	22:18:32	27.3	31.8	21.4	24.3	31.5	617.8	251.9
8	10/02/2025	22:18:37	27.7	31.9	22	24.6	31.2	652.7	257
9	10/02/2025	22:18:42	28.2	31.8	22	25.2	31	651.1	259.1
10	10/02/2025	22:18:47	28.8	30.4	23.7	26.2	31.1	641.5	262.2
11	10/02/2025	22:18:52	29.3	31.1	24.9	26.2	30.9	622.2	264.1
12	10/02/2025	22:18:57	30.2	30.3	24.8	27.1	30.8	603.6	265
13	10/02/2025	22:19:02	30.5	32.5	24.8	26.5	30.9	588.2	267.2
14	10/02/2025	22:19:07	30.4	34	24.8	27.7	30.7	579.2	267.2
15	10/02/2025	22:19:12	31	33.4	25.1	28	30.5	571.9	267.1
16	10/02/2025	22:19:17	31.8	33.4	25.2	28.6	30.5	568.9	267
17	10/02/2025	22:19:22	32.3	33.5	25.3	28.7	30.5	567.8	266.8
18	10/02/2025	22:19:27	32.7	33.8	26.5	28.7	30.4	565.5	266.6
19	10/02/2025	22:19:32	33.2	33.8	27.1	28.7	30.1	562	266.7
20	10/02/2025	22:19:37	33.5	34.5	28	29.8	30	559.4	268.3
21	10/02/2025	22:19:42	34.1	34.3	29.3	30.4	30	554.6	269.6
22	10/02/2025	22:19:47	36.1	34.1	29.3	31.1	30.1	548.2	269.5
23	10/02/2025	22:19:52	36.1	34.4	29.4	31.2	30.2	544.6	269.1
24	10/02/2025	22:19:57	36.2	34.7	29.7	31.6	30.2	540.3	268.8
25	10/02/2025	22:20:02	36.3	35	29.6	32.1	30.2	533.6	268.8
26	10/02/2025	22:20:07	36.9	36	30.2	32.4	30.1	529.6	268.6
27	10/02/2025	22:20:12	37.7	36.6	29.5	32.1	30.1	524.6	268.5

28	10/02/2025	22:20:17	38.5	37.2	29.5	32.1	30	521.2	267
29	10/02/2025	22:20:22	39.1	37.3	29.7	32.1	29.9	521.5	265.5
30	10/02/2025	22:20:27	39.6	41.4	27.9	32.6	29.9	516.8	264.9
31	10/02/2025	22:20:32	41	40.3	30	35	30	513.1	264.9
32	10/02/2025	22:20:37	41.6	40.2	31.6	35.9	30.1	509.8	265.6
33	10/02/2025	22:20:42	42.2	39.6	32.2	37.1	30.1	510.6	265.4
34	10/02/2025	22:20:47	43.1	41	32.5	37.1	30.1	509.1	265.4
35	10/02/2025	22:20:52	43.1	40.6	32.5	35.2	30.1	507.5	265.9
36	10/02/2025	22:20:57	44.5	41.8	31.6	36.3	30.1	507.5	266.5
37	10/02/2025	22:21:02	45.2	43.2	31.4	38.9	30.1	508.6	267
38	10/02/2025	22:21:07	45.8	45.1	31	39.7	30	508.6	267.3
39	10/02/2025	22:21:12	46.4	45.1	32.4	40.3	30	510.4	267.4
40	10/02/2025	22:21:17	46.4	47	31.8	40.9	30	512.2	267.1
41	10/02/2025	22:21:22	46.8	47	32.7	40.9	30	513.2	266.6
42	10/02/2025	22:21:27	47.6	47.1	32.7	41.8	30.1	513.2	266.3
43	10/02/2025	22:21:32	48.4	48.1	33.4	42.8	30.2	512.7	266.2
44	10/02/2025	22:21:37	49.1	48.2	33.4	41.9	30.3	513.8	266.5
45	10/02/2025	22:21:42	49.8	49.6	33.4	43.4	30.5	514.5	266.9
46	10/02/2025	22:21:47	50.1	49.6	33.9	43.5	30.6	518.4	267.5
47	10/02/2025	22:21:52	50.7	49.4	35.9	45.4	30.5	521.7	267.7
48	10/02/2025	22:21:57	51.4	49.7	35.8	45.4	30.6	523.6	267.1
49	10/02/2025	22:22:02	51.9	50.5	36.2	46.8	30.7	527.6	266.4
50	10/02/2025	22:22:07	52.5	52.9	36.2	45.4	30	532	268.2
51	10/02/2025	22:22:12	53	52.9	36.6	46.4	30.1	535.1	268.2
52	10/02/2025	22:22:17	53.6	53	37	47.2	30.2	538.2	268.1
53	10/02/2025	22:22:22	53.9	55.8	36.2	47.2	30	539.2	270
54	10/02/2025	22:22:27	54.4	55.5	38.3	48.2	29.9	541.4	272.4
55	10/02/2025	22:22:32	55	58	36	47.7	29.9	543.8	274.5
56	10/02/2025	22:22:37	55.4	57.3	37.5	48.5	29.8	546.3	278.2
57	10/02/2025	22:22:42	55.9	57.9	37.6	48.5	29.9	545	280
58	10/02/2025	22:22:47	56.4	58	37.9	49.7	30	542.2	281.4
59	10/02/2025	22:22:52	56.7	57.5	39.2	49.6	30.1	544.3	284
60	10/02/2025	22:22:57	56.9	59.2	37.4	49.6	30.1	556.6	287.9
61	10/02/2025	22:23:02	57.2	61.4	38	49.5	30	575.8	291.5
62	10/02/2025	22:23:07	57.4	61.4	38.7	49.7	29.9	585.2	293.9
63	10/02/2025	22:23:12	57.8	62.2	38.8	49.7	29.9	596.2	296.9
64	10/02/2025	22:23:17	57.9	63.7	37.8	50.4	29.8	601.8	299.1
65	10/02/2025	22:23:22	58.4	63.6	37.8	51.4	29.7	602.2	300.2
66	10/02/2025	22:23:27	58.7	63.8	38.7	50.6	29.7	600.6	300.9
67	10/02/2025	22:23:32	58.8	64.9	38.7	50.3	29.8	593.9	300.9
68	10/02/2025	22:23:37	59.3	65	38.8	51.1	29.7	585.2	300.6
69	10/02/2025	22:23:42	59.6	64.8	39.7	52.3	29.7	577.1	299.9

70	10/02/2025	22:23:47	59.7	65	39.6	52.3	29.9	574.4	299.5
71	10/02/2025	22:23:52	60.1	73.8	32.1	50	29	575.2	300.7
72	10/02/2025	22:23:57	60.4	68.9	35.4	51.8	29.6	577.2	301.6
73	10/02/2025	22:24:02	60.6	70.6	32.7	49.7	29.6	576.1	302.4
74	10/02/2025	22:24:07	60.9	72.5	35.2	50.7	29	578	302.6
75	10/02/2025	22:24:12	61.4	73.1	35.8	52.6	29	576.8	303.1
76	10/02/2025	22:24:17	62	74.1	35.9	53.3	29	579.7	303.4
77	10/02/2025	22:24:22	62.4	74.1	36.6	52.7	28.9	583.8	303.7
78	10/02/2025	22:24:27	62.5	74.1	37.6	54.2	28.9	582.9	303.5
79	10/02/2025	22:24:32	62.8	74.1	38.5	54.1	29.1	581.2	302.9
80	10/02/2025	22:24:37	63.1	75	38.5	54.2	29.1	579.8	301.7
81	10/02/2025	22:24:42	63.7	74.1	40.7	56.6	29	579.8	300.9
82	10/02/2025	22:24:47	63.9	72.2	42.8	56.6	29.3	579.4	300.6
83	10/02/2025	22:24:52	64.1	74.5	42.4	56.5	29.5	577.9	299.3
84	10/02/2025	22:24:57	64.7	75.3	42.2	56.5	29.4	577.9	298.5
85	10/02/2025	22:25:02	64.8	62.7	53.4	60.6	31	579.4	298.5
86	10/02/2025	22:25:07	65.1	62.7	55.3	60.6	31.1	581.6	300.7
87	10/02/2025	22:25:12	65.6	64.1	54.9	61.2	31.5	582.2	300.7
88	10/02/2025	22:25:17	66.2	64.3	56.6	61.8	31.5	584.9	301
89	10/02/2025	22:25:22	66.2	72.3	49.5	58.8	31.1	586.6	302.6
90	10/02/2025	22:25:27	67	65.6	45.7	63.8	31.3	585.3	303.2
91	10/02/2025	22:25:32	68.2	80.2	44.1	59.6	29.7	583.3	303.2
92	10/02/2025	22:25:37	68.1	84	48.6	63.9	29.7	580.2	303
93	10/02/2025	22:25:42	68.2	69.6	54.1	64.1	31.3	578.6	301.6
94	10/02/2025	22:25:47	69.3	85.7	41	60.5	30	575.1	300.9
95	10/02/2025	22:25:52	68.5	69.4	59.9	65	31.1	573.6	300.9
96	10/02/2025	22:25:57	69.2	70.5	42.2	59.9	30.5	573.6	301
97	10/02/2025	22:26:02	70.6	79.8	51	64.8	30.2	572.3	300.9
98	10/02/2025	22:26:07	70.9	91.8	38.3	61	29.3	573.1	301.2
99	10/02/2025	22:26:12	71.6	93.6	37.4	60.2	29.3	571.7	301.2
100	10/02/2025	22:26:17	71.5	93.6	36.5	61.7	29.3	570.7	300.8
101	10/02/2025	22:26:22	71.8	94.2	37.3	61.6	29.3	570.1	300
102	10/02/2025	22:26:27	72.9	93.5	38.2	62.7	29.4	570.1	299.3
103	10/02/2025	22:26:32	72.9	93.6	38.8	63.6	29.5	570.6	298.8
104	10/02/2025	22:26:37	73.5	93.7	41.4	63.5	29.5	571.5	300.3
105	10/02/2025	22:26:42	74.2	95	42.1	64.3	29.6	574.2	301.6
106	10/02/2025	22:26:47	74.7	95.6	42.1	65.1	29.4	576.5	301.6
107	10/02/2025	22:26:52	75.2	92.3	45.5	66.8	29.5	576.5	301.4
108	10/02/2025	22:26:57	75.5	103.8	28.2	62.4	28.5	579.3	300.9
109	10/02/2025	22:27:02	75.8	119.8	21.3	61.7	26.8	579.3	300.2
110	10/02/2025	22:27:07	76.1	121	23.3	62.5	27.4	581.8	300
111	10/02/2025	22:27:12	76.8	121.1	25.2	62.5	27.4	578.5	300.5

112	10/02/2025	22:27:17	77.4	120.3	28.1	63.2	27.6	573	300.8
113	10/02/2025	22:27:22	78.2	118.6	29	64.2	28.1	568.9	301
114	10/02/2025	22:27:27	78.1	86.9	55.9	69.5	31.9	565.4	301.6
115	10/02/2025	22:27:32	78.3	85	60.7	74	32.1	560.3	301.8
116	10/02/2025	22:27:37	79.9	115	64.6	75.4	28.2	557.6	301.4
117	10/02/2025	22:27:42	79.3	83.7	67.1	75.4	31.7	554.2	301.7
118	10/02/2025	22:27:47	80.2	82.7	68.6	77.2	31.7	549.9	302
119	10/02/2025	22:27:52	80.8	122	33.6	66.4	28.3	545.4	301.6
120	10/02/2025	22:27:57	81.2	88.6	64.8	76.5	31.6	546.5	301
121	10/02/2025	22:28:02	81.8	115.3	59.4	74.6	27.8	549.2	300.8
122	10/02/2025	22:28:07	80.8	88.5	69.6	73.6	30.7	551	301.6
123	10/02/2025	22:28:12	82.2	84.9	75.3	80.6	31.5	550.9	302.1
124	10/02/2025	22:28:17	83.3	119.3	68	79.1	29.6	552.4	301.6
125	10/02/2025	22:28:22	83.8	105.6	44.7	78.9	29.9	554.3	299.6
126	10/02/2025	22:28:27	84.8	126.5	41.6	70.5	27.5	556	298.7
127	10/02/2025	22:28:32	85.4	124.6	37.6	71.3	28.2	556.8	297.9
128	10/02/2025	22:28:37	85.4	123	38.6	72.2	28.2	556.8	296.5
129	10/02/2025	22:28:42	85.6	118.2	45	73.5	29	556.3	295.1
130	10/02/2025	22:28:47	86.8	115.9	63.9	76.4	29.5	555.2	295.1
131	10/02/2025	22:28:52	86.8	118.2	72.9	80.6	29.2	556.4	294.3
132	10/02/2025	22:28:57	87.7	119.4	52.3	76	29.1	557.9	293.4
133	10/02/2025	22:29:02	89.1	119.3	72.6	83.8	28.8	560.6	293.5
134	10/02/2025	22:29:07	88.5	106.3	75.5	80.6	31.5	562.7	294
135	10/02/2025	22:29:12	88.5	92.2	78.1	85.8	31.5	562	294.6
136	10/02/2025	22:29:17	91.6	94.9	74.9	78.2	29.6	557.8	293.9
137	10/02/2025	22:29:22	89.3	93.5	78.7	86.2	32.8	557.1	291.9
138	10/02/2025	22:29:27	89.7	93.7	82.4	83.9	34	566.9	284.5
139	10/02/2025	22:29:32	91.3	98.4	82.6	87.5	35.6	568.3	272.4
140	10/02/2025	22:29:37	91.2	99.3	82.9	86.5	36.3	566.5	271.5
141	10/02/2025	22:29:42	92.9	108.1	83.4	80.1	31.8	566.5	297
142	10/02/2025	22:29:47	91.7	108.3	83.6	83.7	31.9	565.9	297
143	10/02/2025	22:29:52	93.8	108.3	83.8	76.1	38.4	565.2	264.6
144	10/02/2025	22:29:57	94.5	108.3	83.8	79	38.4	566.2	258.2
145	10/02/2025	22:30:02	95.4	108.3	83.9	77.7	32.1	566.2	297.4
146	10/02/2025	22:30:07	95.9	108.3	93.4	86.3	30.1	567.3	297.4
147	10/02/2025	22:30:12	95.7	108.3	93.4	81.1	30.4	568.9	297.4
148	10/02/2025	22:30:17	96.9	108.3	93.4	81.4	29.2	569.8	299
149	10/02/2025	22:30:22	97.4	108.3	93.4	88.9	28.9	572.6	300.6
150	10/02/2025	22:30:27	98.3	108.3	93.4	88.9	27.7	577.4	301.8
151	10/02/2025	22:30:32	98.9	145.2	93.4	88.9	27.7	579.3	302.8
152	10/02/2025	22:30:37	98.9	149	93.4	88.9	27.6	582.1	305.8
153	10/02/2025	22:30:42	99	153.2	93.4	88.9	27.3	580.6	307.3

154	10/02/2025	22:30:47	99.3	108.1	93.4	75.2	26.5	579.3	307.3
155	10/02/2025	22:30:52	99.8	108.1	93.4	81.6	29.8	577.9	306.7
156	10/02/2025	22:30:57	99.8	108.1	102.5	77.5	28.9	578.5	308.1
157	10/02/2025	22:31:02	99.7	103.1	104.5	73.2	25.7	576.2	308.1
158	10/02/2025	22:31:07	99.7	103.1	104.5	90.5	28.7	574.6	308.8
159	10/02/2025	22:31:12	100.4	103.1	104.5	90.5	30.4	573.5	308.6
160	10/02/2025	22:31:17	99.7	103.1	104.5	100.1	29.6	573.4	308.6
161	10/02/2025	22:31:22	99.7	103.1	104.5	100.5	29.6	572.7	308.9
162	10/02/2025	22:31:27	101.7	103.1	104.5	104.7	32.6	572.2	308.9
Rata- rata		00:13:24	101.7	103.1	104.5	104.7	33.4	448.2	232.3

Tabel L. 9 viskositas 466,72 Ns/m²

No	Tanggal	Waktu	Temperatu didih, TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	10/02/2025	19:46:56	25.9	11.4	15.4	28.1	32.3	501.5	208
2	10/02/2025	19:47:00	27.8	9.3	13	28.1	32.3	514.9	217.4
3	10/02/2025	19:47:05	32.1	14.4	12	29.4	29.8	531.1	228
4	10/02/2025	19:47:10	32.5	10.2	16.4	29.4	31.7	535.3	234.7
5	10/02/2025	19:47:15	32.2	17.2	20.3	29.5	29.8	517.7	244.7
6	10/02/2025	19:47:20	34.2	11.7	16.8	30	31.9	517.5	254.1
7	10/02/2025	19:47:25	36.8	10.3	20.3	29.7	33.7	478.4	260.6
8	10/02/2025	19:47:30	36.2	-18.2	-1.6	29.5	45.3	461.7	265.7
9	10/02/2025	19:47:35	37.4	-5.6	2.4	29.6	41.5	446.6	272.6
10	10/02/2025	19:47:40	39.2	17.2	11.7	30.5	31.3	425.5	279
11	10/02/2025	19:47:45	39	-10.6	4.7	30.7	39.1	425.8	282.6
12	10/02/2025	19:47:50	39	-9.2	2.7	32	40.6	412.9	287.8
13	10/02/2025	19:47:55	39	-16.3	0.3	32.7	42.7	407.4	293.8
14	10/02/2025	19:48:00	39.1	-16.5	-1.4	33	42.7	405.9	299.7
15	10/02/2025	19:48:05	39.2	-12.8	-2.1	31.8	43.2	420.7	304.2
16	10/02/2025	19:48:10	39.6	-2	8.2	33.1	41.1	410.4	305.8
17	10/02/2025	19:48:15	40.6	24.7	27.1	33.7	28.2	387.9	306.4
18	10/02/2025	19:48:20	42	25.9	26.5	36.1	28.3	376.9	307
19	10/02/2025	19:48:25	42.7	38.4	24.5	36.4	26.9	369.4	307
20	10/02/2025	19:48:30	44.4	46.6	44.2	36.4	22	366.9	307.3
21	10/02/2025	19:48:35	45.2	49.2	45.8	36.3	17.3	372.9	307.7
22	10/02/2025	19:48:40	46.5	48.7	14.7	37.7	18.5	376.9	306.3
23	10/02/2025	19:48:45	48.5	8.2	36.1	37.7	19	384.7	304.2
24	10/02/2025	19:48:50	48.5	43.5	51.3	38.3	17.6	382.9	301.8
25	10/02/2025	19:48:55	50.2	58	49.2	40.5	16.5	382.2	300.1
26	10/02/2025	19:49:00	49.3	29.1	49.2	41.1	19.3	371.5	297.8
27	10/02/2025	19:49:05	51.5	61.1	52.6	41.8	14.7	364.5	295.2

28	10/02/2025	19:49:10	50.9	41.3	29.6	41.8	26.6	381.5	293.7
29	10/02/2025	19:49:15	51	26	22	42.1	29	408.5	292.2
30	10/02/2025	19:49:20	53.3	61.9	50.6	42.4	15.1	395.4	291.3
31	10/02/2025	19:49:25	53.5	54.5	27.1	42.5	23.5	367.9	289.8
32	10/02/2025	19:49:30	53.5	52.8	49.9	43.1	17.6	355.2	288.7
33	10/02/2025	19:49:35	55	47.8	54.5	44.6	14.3	352.9	275.9
34	10/02/2025	19:49:40	55	62	51.1	44.6	14.8	359.2	287.7
35	10/02/2025	19:49:45	56.5	28	43.6	46.1	15.1	356.4	286.9
36	10/02/2025	19:49:50	57.4	64.1	53.8	46.7	15.9	373.2	287.8
37	10/02/2025	19:49:55	57.4	61.5	37.3	47.5	16.5	362.6	287.8
38	10/02/2025	19:50:00	57.5	63.7	53.8	47	19.7	368.1	287.9
39	10/02/2025	19:50:05	58.7	63.1	57	48	17.2	369.7	287.9
40	10/02/2025	19:50:10	58	60.8	50.2	47.9	23.1	396.8	289.6
41	10/02/2025	19:50:15	58.7	69	58.4	49.2	17.6	390.4	290.7
42	10/02/2025	19:50:20	59.4	63.2	39.3	51	17.5	399.5	290.7
43	10/02/2025	19:50:25	59.4	66.5	60.2	51	16.7	398.4	290.8
44	10/02/2025	19:50:30	59.9	47.1	38	51	22.3	404.4	291.2
45	10/02/2025	19:50:35	60.7	45.6	44.9	51.9	25.6	433.9	294
46	10/02/2025	19:50:40	61.5	58.7	51.1	51.9	26.8	441.9	295.9
47	10/02/2025	19:50:45	60.6	57.5	46.8	53.1	24.2	460.4	297.7
48	10/02/2025	19:50:50	61.1	28	30.6	53.8	33.9	458.4	297.7
49	10/02/2025	19:50:55	60.9	16.9	25.2	53.8	40.4	491.6	301.6
50	10/02/2025	19:51:00	62.6	49.1	53	54.2	22.5	464.3	302.7
51	10/02/2025	19:51:05	62.2	33.6	49.2	54.6	35.9	511.2	306.8
52	10/02/2025	19:51:10	62.2	57	55.8	56	22.6	511.9	310.1
53	10/02/2025	19:51:15	62.7	28.4	34.9	56	34.4	518.5	312.3
54	10/02/2025	19:51:20	63.7	44.1	53.8	57	20.8	504.8	313.3
55	10/02/2025	19:51:25	63.6	41.5	39.9	57.7	28.5	521.8	316.2
56	10/02/2025	19:51:30	62.7	20.9	24.8	58.4	36.5	530.1	317.7
57	10/02/2025	19:51:35	62.8	29.2	27.4	58.4	34.3	521.8	320.1
58	10/02/2025	19:51:40	65.5	56.9	57.5	58.5	22.2	515.1	320.7
59	10/02/2025	19:51:45	65.5	65.8	60.6	59.3	18.3	522.7	322.5
60	10/02/2025	19:51:50	65.4	61.7	55.2	60.1	19.3	527.4	323.3
61	10/02/2025	19:51:55	62.1	65.9	61.9	60.5	18.9	516.3	326.6
62	10/02/2025	19:52:00	65.6	66.7	58.2	61.2	19.1	526.8	329.7
63	10/02/2025	19:52:05	65.5	34.6	26.4	61.7	20.4	510.1	331.3
64	10/02/2025	19:52:10	65.4	48	47.4	62.3	28.3	478.6	331.3
65	10/02/2025	19:52:15	65.2	15.9	22.7	63.6	40.5	492.3	331.8
66	10/02/2025	19:52:20	64.9	7.7	38.3	64.2	44.6	499.9	333.3
67	10/02/2025	19:52:25	67.2	48	44	64.2	26.9	471.2	333.5
68	10/02/2025	19:52:30	67.1	40.8	42.4	65.4	28.9	412.9	330.1
69	10/02/2025	19:52:35	67	44.6	44.7	66.1	28.9	391.1	329.3

70	10/02/2025	19:52:40	67.3	43.7	43.1	66.9	29	384.2	328.5
71	10/02/2025	19:52:45	67.7	43.8	43.1	66.9	29	382.1	327.8
72	10/02/2025	19:52:50	67.6	43.7	43.4	67.7	29.9	384.4	327.8
73	10/02/2025	19:52:55	66.1	11.3	11	68.5	44.4	401.2	330.3
74	10/02/2025	19:53:00	67.2	11.9	14.3	68.5	45.1	419.5	332
75	10/02/2025	19:53:05	67.9	20.7	28.2	69.4	40.2	448.8	334.6
76	10/02/2025	19:53:10	67	19.5	24.1	67.5	43.9	491.8	337.5
77	10/02/2025	19:53:15	65.3	21.5	26.8	70.1	39	537.1	344.1
78	10/02/2025	19:53:20	67	21.1	25.4	70.2	41.4	578	349.5
79	10/02/2025	19:53:25	64	15.8	22.8	70.2	44.7	583.3	357.4
80	10/02/2025	19:53:30	64.4	17.6	25.4	70.3	42.8	592.4	364.9
81	10/02/2025	19:53:35	63.5	16.7	22.2	71.6	42.2	591.7	369.4
82	10/02/2025	19:53:40	65.1	16	22.8	71.6	43.1	588.7	373.9
83	10/02/2025	19:53:45	65.1	18.9	23.9	71.8	42.3	592.3	376.6
84	10/02/2025	19:53:50	65.7	28.5	31.2	72.5	40.5	589.1	377.2
85	10/02/2025	19:53:55	66.8	27.3	29.7	72.7	39.4	589.1	378
86	10/02/2025	19:54:00	66.8	23.3	27	74.1	40	595.2	377
87	10/02/2025	19:54:05	68.6	40.8	23.6	74.2	31.9	563.7	377
88	10/02/2025	19:54:10	68.6	40.8	42.8	74.7	31.9	533.9	377.8
89	10/02/2025	19:54:15	68.5	41.6	43.5	75.2	31.9	495.8	378.7
90	10/02/2025	19:54:20	68.7	45.3	46.5	74.5	32	464.5	377.9
91	10/02/2025	19:54:25	68.5	45.8	46.5	74.4	31.9	457	376.8
92	10/02/2025	19:54:30	69.7	48.6	47.9	74.2	30.4	486.3	373.2
93	10/02/2025	19:54:35	69	51.7	53.1	74.5	29.9	446.5	365.6
94	10/02/2025	19:54:40	69.6	51.7	55.1	75	30.5	422.1	357.6
95	10/02/2025	19:54:45	69.6	49.1	51.5	77.1	30.5	422.8	355.8
96	10/02/2025	19:54:50	72.2	56.4	57.3	77.7	29	427.8	354.4
97	10/02/2025	19:54:55	73	65.6	65.1	78.6	25.9	441.2	354.4
98	10/02/2025	19:55:00	73.7	56.7	59.2	79.8	28.6	450.6	354.3
99	10/02/2025	19:55:05	73.7	57.7	60.2	80.9	27.3	459.7	354.6
100	10/02/2025	19:55:10	73	56.7	58.1	81.8	26.5	450.3	353.4
101	10/02/2025	19:55:15	73	57.3	54.2	82.4	27.8	450.4	352.5
102	10/02/2025	19:55:20	74.1	62.2	61	83.2	24.6	462.7	352.5
103	10/02/2025	19:55:25	75	73.3	78.4	84.5	17.6	461.1	351.2
104	10/02/2025	19:55:30	74.9	59	63.1	84.5	26.8	469.9	351.2
105	10/02/2025	19:55:35	77.1	85.4	84.7	86.6	14.8	475.3	350.6
106	10/02/2025	19:55:40	76.3	68.1	69.1	86.6	21.1	478.8	350.6
107	10/02/2025	19:55:45	77.1	75.8	74.8	86.6	19.1	463.2	349.3
108	10/02/2025	19:55:50	77.3	65.3	67.7	87.6	24.3	463.2	348.3
109	10/02/2025	19:55:55	78.8	86.6	84.1	88.3	14.2	469.5	347.7
110	10/02/2025	19:56:00	79.6	95.8	94	88.3	11.5	459.4	349.2
111	10/02/2025	19:56:05	79	82.2	91.8	89.6	19.3	455.9	349.1

112	10/02/2025	19:56:10	78.9	64.3	89.6	91.1	25.1	448.9	348.5
113	10/02/2025	19:56:15	80.9	95.2	92.3	90.3	12.5	444.1	345.6
114	10/02/2025	19:56:20	83.2	95.9	93.8	91.2	11.8	435.9	344.3
115	10/02/2025	19:56:25	82.3	96.1	92.9	91.2	12.6	428.1	345.1
116	10/02/2025	19:56:30	82.3	92.7	88.8	92	13.2	430.8	345
117	10/02/2025	19:56:35	82.6	95.6	89.9	92.7	13.2	438.7	343.5
118	10/02/2025	19:56:40	83.7	91.2	84.1	93.6	13.8	443.1	342.6
119	10/02/2025	19:56:45	83.7	76.4	76.7	92.7	21.3	440.5	341.7
120	10/02/2025	19:56:50	83.3	63.7	67.1	92.7	29.8	430.6	341.4
121	10/02/2025	19:56:55	85.5	73.4	68.2	94.6	25.6	429.9	338.7
122	10/02/2025	19:57:00	84.3	60.3	62.8	95.4	30.8	432.9	338.7
123	10/02/2025	19:57:05	84.4	62.1	61.7	97.1	29.4	438	338.7
124	10/02/2025	19:57:10	84.6	60.2	60.9	97.1	30.9	438.8	338.2
125	10/02/2025	19:57:15	85.2	61.6	62.8	98	30.3	434.3	337.4
126	10/02/2025	19:57:20	86	61.2	61.7	98.8	31.1	422.6	334.3
127	10/02/2025	19:57:25	86.7	76.9	77.7	100.1	20.4	413.7	332.6
128	10/02/2025	19:57:30	87.4	70.4	70.1	101.3	25.6	409.7	331.8
129	10/02/2025	19:57:35	88	58.1	61.9	100.5	30.7	407.6	331.7
130	10/02/2025	19:57:40	88	59	60.7	101.3	29.9	414.6	331.9
131	10/02/2025	19:57:45	88.1	56.9	60.9	102.2	31.4	431.6	332.5
132	10/02/2025	19:57:50	88.8	59.3	61.3	102.8	28.1	470.3	332.9
133	10/02/2025	19:57:55	89.6	66.8	62.9	103.5	28.5	509.2	334.8
134	10/02/2025	19:58:00	89.6	65	73.8	104.5	29.5	565.4	337.4
135	10/02/2025	19:58:05	91.1	57.5	65.8	105.7	29.7	601.1	342.2
136	10/02/2025	19:58:10	92.3	88.9	103.2	105.7	26.1	621.9	346.4
137	10/02/2025	19:58:15	92.8	102	103.2	105.7	27.6	624.7	348.8
138	10/02/2025	19:58:20	94	102	103.2	105.7	11.3	621.5	352
139	10/02/2025	19:58:25	94.4	102	103.2	96.4	27.2	612.9	355.3
140	10/02/2025	19:58:30	95.2	102	103.2	96.4	-9.8	550.3	357.2
141	10/02/2025	19:58:35	95.1	102.3	103.2	96.4	30.3	530.9	358.6
142	10/02/2025	19:58:40	95.3	102.3	103.2	96.4	24.4	516.1	356.7
143	10/02/2025	19:58:45	94.7	102.3	103.2	96.4	32.1	458.5	352
144	10/02/2025	19:58:50	95.3	102.3	103.2	106.4	29.1	439.4	347.7
145	10/02/2025	19:58:55	96.1	102.3	103.2	106.4	10.6	425.1	346.1
146	10/02/2025	19:59:00	96.1	102	103.2	106.4	-22	416.7	344
147	10/02/2025	19:59:05	96.3	107.5	103.2	104.2	-2.8	410.2	341.4
148	10/02/2025	19:59:10	97.5	102.5	103.2	104.2	24.6	407.2	338.5
149	10/02/2025	19:59:15	98.7	102.5	103.2	104.2	-26.1	417.1	339.2
150	10/02/2025	19:59:20	99.3	102.5	103.2	104.2	-30.1	419.7	341.5
151	10/02/2025	19:59:25	100.3	102.5	103.2	104.2	-33.5	417.3	341.5
152	10/02/2025	19:59:30	100.5	102.5	103.2	104.2	-22.3	406.8	338.2
Rata- rata		00:12:34	100.5	102.5	103.2	104.2	32.3	501.5	663.2421

Tabel L. 10 Viskositas 523.50 Ns/m²

No	Tanggal	Waktu	Temperatur didih, TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	18:40:00	27.1	26.3	27.9	26.5	35.4	498.1	291
2	11/02/2025	18:40:04	27.2	26	28.2	26.5	34	698.7	321.9
3	11/02/2025	18:40:09	27.3	25.8	28.5	26.7	33.2	748.9	348.2
4	11/02/2025	18:40:14	27.4	26.1	28.6	26.7	32.5	738.2	354.3
5	11/02/2025	18:40:19	27.6	26.5	30.2	27	32.5	713.8	355.2
6	11/02/2025	18:40:24	27.8	26.8	31.1	27.7	32.2	693.9	355.2
7	11/02/2025	18:40:29	28	27	31.7	28.2	31.9	690.8	356.2
8	11/02/2025	18:40:34	28.3	27.3	31.7	28.7	31.7	687.4	363.6
9	11/02/2025	18:40:39	28.6	27.7	31.6	28.8	31.7	730.8	385.3
10	11/02/2025	18:40:44	28.9	28	31.8	28.7	31.8	765.7	432.3
11	11/02/2025	18:40:49	29.3	28.2	32.5	29.1	32	787.9	549.9
12	11/02/2025	18:40:54	29.5	28.5	32.6	29.4	32.2	811.5	625.3
13	11/02/2025	18:40:59	29.8	28.7	34	29.6	32.5	823.6	664.3
14	11/02/2025	18:41:04	30.2	29.2	35	30.5	33	834.7	689.9
15	11/02/2025	18:41:09	30.5	27.2	45.3	31.9	33.5	840.9	697.1
16	11/02/2025	18:41:14	30.8	27.3	45.3	31.9	35.1	855.9	694.5
17	11/02/2025	18:41:19	31	27.7	46.1	32.9	35.1	858	691.8
18	11/02/2025	18:41:24	31.2	27.9	45.5	32.9	35.4	862	687.1
19	11/02/2025	18:41:29	31.5	28.3	45.3	34	35.7	869.8	681.5
20	11/02/2025	18:41:34	31.8	32.6	39.1	33.2	35.5	863.3	676.5
21	11/02/2025	18:41:39	32.1	32.6	42	33.2	35.4	844.6	666.7
22	11/02/2025	18:41:44	32.5	33.7	44	33.4	35.7	859.8	666.1
23	11/02/2025	18:41:49	32.8	33	53.2	35.8	36	879.5	679.6
24	11/02/2025	18:41:54	33.3	33.3	43.8	34.8	37.5	883	677.4
25	11/02/2025	18:41:59	33.6	33.3	45.9	35	37.5	857.2	664.1
26	11/02/2025	18:42:04	34	33.8	48.6	35.3	37.8	843.8	653.8
27	11/02/2025	18:42:09	34.4	33.8	48.6	35.3	37.1	851.6	654.9
28	11/02/2025	18:42:14	34.8	32.4	61.8	38.2	38.2	857.2	659
29	11/02/2025	18:42:19	35.2	33.2	58.8	37.6	38.2	814.8	659.6
30	11/02/2025	18:42:24	35.5	37.6	54	37.6	38.4	781.6	662.8
31	11/02/2025	18:42:29	36	33	63	39.1	39.3	775	669.4
32	11/02/2025	18:42:34	36.4	36.4	49	37.8	39.3	773.7	675.9
33	11/02/2025	18:42:39	37.2	38.1	46.8	38.5	41.2	757.9	678.3
34	11/02/2025	18:42:44	38	37.3	45.1	38.5	41.2	775.7	675.4
35	11/02/2025	18:42:49	38.7	40.9	45.1	38	42.1	782.7	670.8
36	11/02/2025	18:42:54	39.5	36.8	45.8	40	42.1	776.6	668.1
37	11/02/2025	18:42:59	40.3	33.1	46.9	43	42.6	764.7	666.4
38	11/02/2025	18:43:04	40.8	35.9	42.3	43	42.6	776.8	661.1
39	11/02/2025	18:43:09	41.5	36.6	48	43.9	41.5	758.9	654.2

40	11/02/2025	18:43:14	42.2	37.4	44.1	44.6	42.1	756.6	647.9
41	11/02/2025	18:43:19	42.8	38.5	48.1	43.9	42.1	728.6	644.1
42	11/02/2025	18:43:24	43.3	38.5	46.9	43.9	41.9	726.4	640.3
43	11/02/2025	18:43:29	43.8	38.9	50.9	44.3	41.9	724.8	639.3
44	11/02/2025	18:43:34	44.1	39.3	46	44.8	41.8	708.6	638.2
45	11/02/2025	18:43:39	44.5	40.7	46.7	45.1	41.6	705.9	634.8
46	11/02/2025	18:43:44	45	40.8	45.7	45.4	41.5	716.4	632.1
47	11/02/2025	18:43:49	45.6	41.1	50.1	45.5	41.2	687.3	627.9
48	11/02/2025	18:43:54	46.2	41.5	47.5	45.6	41.1	682.1	630.5
49	11/02/2025	18:43:59	46.7	41.7	41.8	46	41.3	695.5	632.1
50	11/02/2025	18:44:04	47.2	41.6	41	46.8	39.7	687.1	637.6
51	11/02/2025	18:44:09	47.5	41.6	40.9	48.4	39.7	670.3	635.8
52	11/02/2025	18:44:14	48	42.9	41.8	48.4	40.9	670.8	634.1
53	11/02/2025	18:44:19	48.5	42.2	41.5	49.1	41.4	672.7	632.7
54	11/02/2025	18:44:24	49	42.1	41.5	50	40.3	676.5	632
55	11/02/2025	18:44:29	49.4	42	42.3	51.1	40.3	668.9	632.2
56	11/02/2025	18:44:34	42.1	42.6	43	51.1	40.2	657.2	625.2
57	11/02/2025	18:44:39	42.2	43.8	43.5	51.7	38.9	656.5	624.6
58	11/02/2025	18:44:44	42.3	43.6	41.7	51.7	38.9	660.6	634.8
59	11/02/2025	18:44:49	42.4	45	42.6	51.6	39	662.1	625.8
60	11/02/2025	18:44:54	42.6	46	42.7	51.6	39.1	650.5	616
61	11/02/2025	18:44:59	42.8	46	42.7	52	38.8	647.9	612.1
62	11/02/2025	18:45:04	43	46.7	43.5	52.5	37.7	662.3	623.4
63	11/02/2025	18:45:09	43.3	46.8	46.2	53.1	37.7	666	623.2
64	11/02/2025	18:45:14	43.6	48.3	48.2	53.6	37.8	661.3	620.7
65	11/02/2025	18:45:19	43.9	47.7	49.9	54.2	37	640	593.9
66	11/02/2025	18:45:24	44.3	47.6	51.7	54.7	36.9	631.4	598.5
67	11/02/2025	18:45:29	44.5	49.6	51.7	55	37	631.4	599.6
68	11/02/2025	18:45:34	44.8	48.8	54.3	55.6	35.9	626.2	590.2
69	11/02/2025	18:45:39	45.2	47.4	55	57.2	35.3	616.1	566.1
70	11/02/2025	18:45:44	45.5	47.4	52.2	58	35.9	602.3	547.9
71	11/02/2025	18:45:49	45.8	47.4	50.3	58.8	35.9	574.3	527.9
72	11/02/2025	18:45:54	46	47.3	53.1	59.9	37	558.1	511.4
73	11/02/2025	18:45:59	46.2	46.9	50.8	61.7	37	554.4	500.9
74	11/02/2025	18:46:04	46.5	46.8	62.2	61.7	38	543.2	499.2
75	11/02/2025	18:46:09	46.8	44.6	62.9	65.1	34.7	514.6	494.3
76	11/02/2025	18:46:14	42.1	48.8	63.8	65.7	33.2	499.4	491.8
77	11/02/2025	18:46:19	42.2	45.1	64.8	67.1	33.5	491.3	496
78	11/02/2025	18:46:24	42.3	44.7	65.9	68.8	33.5	480.8	484.8
79	11/02/2025	18:46:29	42.4	47.6	67.1	67.7	33.6	473.7	481.3
80	11/02/2025	18:46:34	42.6	44.3	67.9	70.7	34	492.7	485.8
81	11/02/2025	18:46:39	42.8	47.5	68.9	69.3	34.4	542.5	498.6

82	11/02/2025	18:46:44	43	45.4	69.9	71.3	34.5	538.6	499.5
83	11/02/2025	18:46:49	43.3	47.3	71	72.3	34.7	519.4	499.5
84	11/02/2025	18:46:54	43.6	48.2	72	72.3	34.7	502.4	493.7
85	11/02/2025	18:46:59	43.9	48.9	72.8	74.3	34.6	487.7	488.6
86	11/02/2025	18:47:04	44.3	47.4	73.3	75.5	34.7	478.9	489.7
87	11/02/2025	18:47:09	44.5	49.1	73.7	73.4	34.7	476.8	490.2
88	11/02/2025	18:47:14	44.8	52.4	73.7	75.7	34.8	478.1	488.7
89	11/02/2025	18:47:19	45.2	50.3	73.7	75.7	34.8	476.8	488.1
90	11/02/2025	18:47:24	45.5	53.1	73.7	73.8	34.9	473.5	488.7
91	11/02/2025	18:47:29	45.8	53.9	73.7	75.1	35.1	471.8	488.6
92	11/02/2025	18:47:34	46	54	73.7	77.1	35.2	512.3	491.9
93	11/02/2025	18:47:39	46.2	53.6	73.7	77.5	35.2	492.6	491.1
94	11/02/2025	18:47:44	46.5	50.5	73.7	79.8	35.3	481.7	492.7
95	11/02/2025	18:47:49	46.8	47.9	73.7	83.3	35.4	477.7	494.1
96	11/02/2025	18:47:54	47.1	52.9	73.7	81.1	35.5	490.8	499.5
97	11/02/2025	18:47:59	47.5	53.1	73.7	82	35.6	511	505.1
98	11/02/2025	18:48:04	47.8	51.9	73.7	82.9	35.7	522.5	505.1
99	11/02/2025	18:48:09	48.3	51.8	73.7	82.9	35.6	498.1	504.8
100	11/02/2025	18:48:14	48.6	51.9	73.7	83.2	35.7	485.2	505.2
101	11/02/2025	18:48:19	49	51.9	73.7	85.3	35.8	487.9	506.4
102	11/02/2025	18:48:24	49.4	51.3	73.7	86	36.1	491.7	508.2
103	11/02/2025	18:48:29	49.8	51.8	73.7	86.8	36.3	486.4	506
104	11/02/2025	18:48:34	50.2	52.9	73.7	85.6	37.9	502.7	506
105	11/02/2025	18:48:39	50.5	57	73.7	86.1	37.3	536.7	512.4
106	11/02/2025	18:48:44	51	54	73.7	87.8	37.3	569.2	518.3
107	11/02/2025	18:48:49	51.4	53.9	73.7	90	37.3	566.9	520.5
108	11/02/2025	18:48:54	52.2	54.5	74.7	90	37.3	570.4	523.2
109	11/02/2025	18:48:59	53	53.6	74.7	90.8	37.2	572.2	526.9
110	11/02/2025	18:49:04	53.7	52.4	74.8	92.3	37.3	580.4	527.9
111	11/02/2025	18:49:09	54.5	52.4	74.7	93.1	37.3	582	530.5
112	11/02/2025	18:49:14	55.3	52.7	73.7	94.5	37.3	590.5	532.4
113	11/02/2025	18:49:19	55.8	53.9	77.7	95.1	37.1	592.8	527.5
114	11/02/2025	18:49:24	56.5	54.7	78.7	95.7	37	595	528.2
115	11/02/2025	18:49:29	57.2	54.7	77.3	97.5	37.3	598.8	532.5
116	11/02/2025	18:49:34	57.8	71.3	77.8	101.1	37.4	599.6	535.2
117	11/02/2025	18:49:39	58.3	74.7	77.7	101.3	37.6	602.7	536.8
118	11/02/2025	18:49:44	58.8	52	78.3	26.1	66.4	380.7	458.1
119	11/02/2025	18:49:49	59.1	48.4	78.3	26.1	58.6	409.9	463.9
120	11/02/2025	18:49:54	59.5	52.1	78.3	27.5	48.3	438	479.8
121	11/02/2025	18:49:59	60	51.7	78.3	27.5	43.1	463.4	500.4
122	11/02/2025	18:50:04	60.6	50.4	78.3	27	43	480.4	508.5
123	11/02/2025	18:50:09	61.2	52.3	78.3	28.9	41	508.6	541.1

124	11/02/2025	18:50:14	61.7	49.5	78.5	29.7	39.8	539.5	573.9
125	11/02/2025	18:50:19	62.2	50	78.5	31.1	39.8	564.4	592.5
126	11/02/2025	18:50:24	62.5	52.9	78.5	29.3	39.9	584	603.7
127	11/02/2025	18:50:29	63	53.7	78.5	30.1	40.3	598.8	612.6
128	11/02/2025	18:50:34	63.5	49.7	78.2	30.1	40.9	619.2	620.1
129	11/02/2025	18:50:39	64	51.7	78.5	33.6	42.7	629.6	623
130	11/02/2025	18:50:44	64.4	54.4	78.53	32	41.6	641.4	622.6
131	11/02/2025	18:50:49	64.8	54.4	78.5	32.4	43.4	660.8	627.5
132	11/02/2025	18:50:54	65.2	54	78.5	33.8	44.1	649.2	626
133	11/02/2025	18:50:59	65.5	54	78.5	35.7	44.7	655.7	628.4
134	11/02/2025	18:51:04	66	58.6	78.7	37	44.7	648.5	628.4
135	11/02/2025	18:51:09	66.3	54.5	78.9	35.9	44.7	646.5	625.9
136	11/02/2025	18:51:14	66.5	58.3	78.9	37.2	44.6	645.2	619.8
137	11/02/2025	18:51:19	66.9	60.8	79.9	40.5	44.6	643.4	617.5
138	11/02/2025	18:51:24	67.3	59.7	79.9	41.2	44.8	640.5	618.5
139	11/02/2025	18:51:29	67.5	59	79.9	40.3	44.7	632.3	612
140	11/02/2025	18:51:34	68.1	58.3	79.9	39.7	44.8	638.2	607.2
141	11/02/2025	18:51:39	68.7	62.3	79.9	41.4	44.9	650	605.1
142	11/02/2025	18:51:44	69.3	57.8	79.9	42.5	44.8	661.6	605.8
143	11/02/2025	18:51:49	69.7	55.5	79.9	45.1	44.9	671.6	605.8
144	11/02/2025	18:51:54	70.3	56.1	79.9	43.8	45	691.1	611
145	11/02/2025	18:51:59	70.9	59.3	62.2	44.8	45.3	693	613.5
146	11/02/2025	18:52:04	71.3	58.4	62.9	44.2	45.4	696	617.4
147	11/02/2025	18:52:09	72.2	57	63.8	47.7	45.4	718.8	625.6
148	11/02/2025	18:52:14	72.9	57	64.8	47.7	45.4	739.3	634.5
149	11/02/2025	18:52:19	73.8	56.5	65.9	48.4	46.7	761	644.1
150	11/02/2025	18:52:24	74.8	57.5	67.1	49.1	48.1	777.9	645
151	11/02/2025	18:52:29	75.9	57.5	67.9	50	49.8	813.2	647.5
152	11/02/2025	18:52:34	77.1	55.7	67.9	50.1	52	847.5	657.4
153	11/02/2025	18:52:39	77.9	56.4	67.9	50.7	52	868.9	660.3
154	11/02/2025	18:52:44	78.9	56.3	67.9	51.2	52.2	885.6	668.4
155	11/02/2025	18:52:49	79.9	56.5	67.9	51.7	52.2	890.6	675.9
156	11/02/2025	18:52:54	81	57	67.9	51.8	51.8	893	680.9
157	11/02/2025	18:52:59	82	58.1	67.9	52	51.9	904.5	693.3
158	11/02/2025	18:53:04	82.8	58	67.9	52.5	50.9	909.7	713.7
159	11/02/2025	18:53:09	83.3	58.2	67.9	53.1	51.8	876.4	718.3
160	11/02/2025	18:53:14	83.7	59	62.2	53.5	52.4	836.8	712.4
161	11/02/2025	18:53:19	85.8	59.3	62.9	53.6	52.4	815.9	711.8
162	11/02/2025	18:53:24	86.7	58.9	63.8	54	52.5	793.7	714.6
163	11/02/2025	18:53:29	87.5	59	64.8	54.5	52.1	783.5	724.8
164	11/02/2025	18:53:34	88.2	62.2	65.9	54.4	36	764.9	798.5
165	11/02/2025	18:53:39	89.8	61.6	67.1	54.5	36	747.6	800.2

166	11/02/2025	18:53:44	91.5	62.5	67.9	54.7	35.9	739.2	800.2
167	11/02/2025	18:53:49	92.3	61.1	68.9	55.3	35.7	766.7	790.3
168	11/02/2025	18:53:54	92.9	61.1	69.9	55.8	35.6	888.6	759.7
169	11/02/2025	18:53:59	93.6	60.3	71	56.6	35.6	815.7	727.6
170	11/02/2025	18:54:04	94.6	58.9	72	60.4	35.7	751.8	685.5
171	11/02/2025	18:54:09	95.4	81.9	72.8	62.2	35.7	693.9	595.9
172	11/02/2025	18:54:14	96.3	79.7	73.3	64	35.8	667.3	631.7
173	11/02/2025	18:54:19	96.9	94.6	73.7	65.5	35.9	654.6	594.9
174	11/02/2025	18:54:24	96.9	94.6	75.8	67.7	36	679.7	611.6
175	11/02/2025	18:54:29	97.1	94.6	76.7	67.7	45.7	666.8	612.6
176	11/02/2025	18:54:34	97	94.6	77.5	102.8	38.6	678.3	655.2
177	11/02/2025	18:54:39	97.3	94.6	78.2	113.9	36.4	674.3	682.4
178	11/02/2025	18:54:44	97.9	94.6	79.8	101.2	36.3	657.9	638.1
179	11/02/2025	18:54:49	98.2	94.6	81.5	97.5	36.3	651	642.9
180	11/02/2025	18:54:54	98.5	94.6	82.3	89.3	36.4	650.6	626.6
181	11/02/2025	18:54:59	99.2	94.6	82.9	103.5	36.5	650.6	639.9
182	11/02/2025	18:55:04	99.9	94.6	82.9	97.4	36.7	651.5	622.5
183	11/02/2025	18:55:09	100.6	94.6	90.8	93.4	36.8	652.5	605.8
184	11/02/2025	18:55:14	101.1	94.6	90.8	96.8	36.8	649.6	604.3
185	11/02/2025	18:55:19	101.7	94.6	90.8	107.2	36.9	648.9	612.1
186	11/02/2025	18:55:24	102.4	100.6	90.8	117.9	37	651	624.6
187	11/02/2025	18:55:29	102.7	100.6	90.8	106.9	37.1	655.4	625.5
188	11/02/2025	18:55:34	102.9	100.6	90.8	119	37.1	655	646.2
189	11/02/2025	18:55:39	102.8	100.6	90.8	136.1	37.2	658.6	646.4
190	11/02/2025	18:55:44	102.2	100.5	100.4	121.9	37.2	658.6	624.7
191	11/02/2025	18:55:49	102.2	100.6	100.8	166.5	37.2	664	644.7
192	11/02/2025	18:55:54	102.6	102.8	103.9	163.1	37.2	662.4	656.7
Rata- rata		00:15:54	102.6	102.8	103.9	63.0640	58.0177	665.4734	592.2906

Tabel L. 11 viskositas 523.50 Ns/m²

No	Tanggal	Waktu	Temperatur didih, TD (°C)				T _{angin} (°C)	T _{api} (°C)	T _{tungku} (°C)
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	18:04:48	31	27.4	10.8	28.4	66.8	408.2	420.8
2	11/02/2025	18:04:52	31.7	27.4	11.1	28.3	60.6	443.8	445
3	11/02/2025	18:04:57	30.7	27.6	10	28.3	53.9	458	451.3
4	11/02/2025	18:05:02	30.5	26.8	6	28.3	46.8	486.3	485.8
5	11/02/2025	18:05:07	36.6	31.5	21.6	28.9	42.8	468	476.3
6	11/02/2025	18:05:12	42.2	29.8	8.4	28.9	39.7	458.7	482.4
7	11/02/2025	18:05:17	34.8	29.2	16.8	29.2	42.4	480	485.9
8	11/02/2025	18:05:22	33.9	35.6	26.3	31.6	38.7	500.1	523

9	11/02/2025	18:05:27	36	32.3	21	31.6	37.8	534.7	574.6
10	11/02/2025	18:05:32	38	35.4	19.3	31.6	37.1	573	595
11	11/02/2025	18:05:37	38.6	37	25	31.8	37	588.6	603.6
12	11/02/2025	18:05:42	39.4	38.5	28.9	32.9	36.9	629.1	613.2
13	11/02/2025	18:05:47	40.1	40	17.4	31.7	36.6	660.6	639.1
14	11/02/2025	18:05:52	53.2	29.3	-4.6	31.7	36.4	687.5	651.2
15	11/02/2025	18:05:57	50	33.9	14.6	34.3	36.3	708.4	642.4
16	11/02/2025	18:06:02	56.2	32.9	8.3	34.3	36.2	745.1	647.2
17	11/02/2025	18:06:07	50.7	38	12.7	34.4	36.3	771.9	652
18	11/02/2025	18:06:12	52.1	39.9	13.4	35	36.5	777	655.5
19	11/02/2025	18:06:17	52.1	37.4	8.3	35	36.7	780.6	650.3
20	11/02/2025	18:06:22	57.4	36.7	0.6	34.9	37	770.4	646.4
21	11/02/2025	18:06:27	60.3	35.6	-2.9	34.9	37.1	766.9	645.4
22	11/02/2025	18:06:32	60.3	35.5	12.4	37.8	37.3	749.4	652.6
23	11/02/2025	18:06:37	46.9	38.8	7.3	37.8	39	729.2	650.1
24	11/02/2025	18:06:42	36	49.5	1.5	36.3	38.3	714.1	635.1
25	11/02/2025	18:06:47	38.5	40.4	-39.6	35.4	35.8	715.2	636.8
26	11/02/2025	18:06:52	64	41.1	10	37.4	38.1	714.9	619.9
27	11/02/2025	18:06:57	46.3	47	55.3	40.3	40.4	693.7	610.7
28	11/02/2025	18:07:02	48.6	46	57.6	45.5	36.5	667.5	614.2
29	11/02/2025	18:07:07	57.1	40.6	15.7	44.8	37.4	623.9	585.8
30	11/02/2025	18:07:12	47.6	45	42	40.8	40.1	599.2	572.8
31	11/02/2025	18:07:17	48.9	43	32.1	41.8	40.2	583.7	568.1
32	11/02/2025	18:07:22	47.4	45.1	33.2	42.3	40.4	578	574.9
33	11/02/2025	18:07:27	50.1	46.6	31.1	42.2	40.5	610.8	589.9
34	11/02/2025	18:07:32	53.4	44.4	38.2	43.2	40.5	630.3	597.8
35	11/02/2025	18:07:37	55.7	44.3	30.1	44.8	40.1	626.9	590.4
36	11/02/2025	18:07:42	53.7	47.7	36.4	44.8	40	622	588.1
37	11/02/2025	18:07:47	54.8	46.1	32.3	44.8	40	618.4	585.6
38	11/02/2025	18:07:52	51.5	43.3	32.1	44.6	35.8	615.4	583.5
39	11/02/2025	18:07:57	65.7	43.6	25.7	45.2	35.8	616.6	589.6
40	11/02/2025	18:08:02	57.6	42.9	26.9	45.1	35.9	615.8	604.9
41	11/02/2025	18:08:07	64.4	44.5	22.5	43.9	36.2	612.6	594.8
42	11/02/2025	18:08:12	60.8	47.5	31.4	45.7	36.3	611	577.5
43	11/02/2025	18:08:17	62.8	46.1	29.7	46.5	36.3	609.5	590.3
44	11/02/2025	18:08:22	62.1	49.4	41.2	47.6	36.5	606.5	577.7
45	11/02/2025	18:08:27	61.6	53	32.9	48	36.6	606.5	563.4
46	11/02/2025	18:08:32	67.5	48.8	36.4	49	36.6	607.1	557.6
47	11/02/2025	18:08:37	68.9	49.4	36.5	49	36.6	610.8	559.2
48	11/02/2025	18:08:42	68.1	51.4	51.9	45.5	36.7	679.3	574.4
49	11/02/2025	18:08:47	44.3	62.5	50.9	53.6	39.3	712.3	584.8
50	11/02/2025	18:08:52	58.4	48	39.4	51	36.6	658.8	595.3

51	11/02/2025	18:08:57	59.8	56.8	46.6	51	36.5	633.1	584
52	11/02/2025	18:09:02	60.1	57.1	48.6	51	36.5	628.2	558.1
53	11/02/2025	18:09:07	61.9	53.6	43.9	56.3	36.5	624.8	543.7
54	11/02/2025	18:09:12	59.8	52.9	40.3	57.2	36.6	626.2	556.5
55	11/02/2025	18:09:17	62.7	54.1	35.3	56.5	37.6	630.1	567.4
56	11/02/2025	18:09:22	64.7	54.4	39.3	55.9	37	632.5	574.5
57	11/02/2025	18:09:27	66	55.4	45.8	57.5	36.9	630.1	573.5
58	11/02/2025	18:09:32	68	55.3	42.8	56.5	36.8	626.6	584.7
59	11/02/2025	18:09:37	67.2	50	33.4	55.9	36.9	624.7	608.8
60	11/02/2025	18:09:42	67.4	53.5	42.8	58	36.9	638.1	590.5
61	11/02/2025	18:09:47	68	55.1	43.7	58.1	36.7	642.3	588.9
62	11/02/2025	18:09:52	67.3	54.8	42.1	58.2	36.7	636.6	588.6
63	11/02/2025	18:09:57	72.2	53.3	33.4	56.3	36.7	630.1	599.5
64	11/02/2025	18:10:02	73.7	50.2	28.2	57.3	36.8	622.1	591.4
65	11/02/2025	18:10:07	72.6	49.5	33.4	57.3	36.8	617	584.4
66	11/02/2025	18:10:12	73.4	53.6	37.3	56.9	36.8	617	579.8
67	11/02/2025	18:10:17	74.3	54.4	28.4	59.1	36.9	618.4	581.7
68	11/02/2025	18:10:22	80.8	52.6	33.7	60.5	36.9	616.6	560.4
69	11/02/2025	18:10:27	81.6	54.4	35.6	62	36.9	615.9	551
70	11/02/2025	18:10:32	81.6	53.4	34.3	62	37	614.1	554.4
71	11/02/2025	18:10:37	81.3	52.9	44	64.3	37.1	610.6	570.6
72	11/02/2025	18:10:42	72	57.2	39.4	62.5	37.4	610.6	574.6
73	11/02/2025	18:10:47	70.8	58	44	64.2	37.5	609.4	573.3
74	11/02/2025	18:10:52	72.8	58	41.3	64.2	37.6	609.4	571.5
75	11/02/2025	18:10:57	70.7	58.5	42.9	64.2	37.6	605.7	565.1
76	11/02/2025	18:11:02	72	56.7	39.8	63.8	37.7	613.4	569.9
77	11/02/2025	18:11:07	73.8	56.6	38	66.4	37.9	611.4	574.3
78	11/02/2025	18:11:12	75.6	57.5	37.4	65.7	38.1	608.4	579.2
79	11/02/2025	18:11:17	77.4	60.5	44.2	68.6	38.1	604.4	548
80	11/02/2025	18:11:22	77.4	59.4	45.4	68.5	38.3	605.1	560.4
81	11/02/2025	18:11:27	86.7	54.2	33	65.5	38.3	604.5	560.2
82	11/02/2025	18:11:32	88	54	35.7	67	38.4	604.5	548.8
83	11/02/2025	18:11:37	93	55.9	31.7	67.9	38.4	603.8	548.2
84	11/02/2025	18:11:42	94.7	55.1	31.4	67	38.6	611.8	553
85	11/02/2025	18:11:47	94.7	56.2	35.9	67.6	38.8	749.3	564.8
86	11/02/2025	18:11:52	90.8	56.2	34.2	69.1	38.9	789.2	589
87	11/02/2025	18:11:57	96.2	55.9	36.6	70.6	38.7	700.6	570.3
88	11/02/2025	18:12:02	90.5	54.5	36.1	69.4	39.4	659	586.9
89	11/02/2025	18:12:07	95.1	60.1	55.6	67.9	39.3	638.6	578.1
90	11/02/2025	18:12:12	96.1	60.3	37	70.4	39.1	629.4	570
91	11/02/2025	18:12:17	97.4	57.7	30.2	69.8	39	624.3	578.3
92	11/02/2025	18:12:22	102	60.9	35.1	70.5	39.1	622.2	571.9

93	11/02/2025	18:12:27	102.9	57.5	33	73.5	38.9	668.7	567.8
94	11/02/2025	18:12:32	90.5	64.1	43.4	74.6	38.6	652.1	567.8
95	11/02/2025	18:12:37	88.7	66.2	49.4	77	38.5	635.1	565.2
96	11/02/2025	18:12:42	95	60.3	30.2	73.5	38.5	627.6	560.3
97	11/02/2025	18:12:47	105.7	61.7	34.4	76.1	38.5	662.8	567.9
98	11/02/2025	18:12:52	83	73.9	76.9	72.9	38.7	647.9	573.9
99	11/02/2025	18:12:57	87.4	72.8	74.1	72.8	39.1	641	578.1
100	11/02/2025	18:13:02	84	77.6	77.5	73.5	39.2	633.4	582.5
101	11/02/2025	18:13:07	82.2	76.2	81	75.4	39.5	623.5	577.1
102	11/02/2025	18:13:12	82	74.7	79.2	75.4	39.9	618	577.9
103	11/02/2025	18:13:17	106.6	65.3	24.1	77.6	39.3	686.8	565.5
104	11/02/2025	18:13:22	99	64.6	27	75.4	40.7	655.4	591.7
105	11/02/2025	18:13:27	96.7	65.7	77.7	79.5	39.9	637	579.9
106	11/02/2025	18:13:32	96.7	66.9	79.4	81.3	39.8	627.6	581.9
107	11/02/2025	18:13:37	99.1	67.8	76.3	81.3	39.8	632.8	564.4
108	11/02/2025	18:13:42	87.1	80.8	77.2	80	40.1	617.8	570.3
109	11/02/2025	18:13:47	87.8	80.8	78.8	80	40.4	613.5	571.6
110	11/02/2025	18:13:52	89.8	80.1	82.2	79.9	40.5	649.9	576.5
111	11/02/2025	18:13:57	91.4	81.3	83.5	80	40.6	629.7	576.5
112	11/02/2025	18:14:02	103.9	74.2	83.5	82	40.4	620.7	568.1
113	11/02/2025	18:14:07	103.9	71.6	83.5	84.5	40.1	621.1	571.5
114	11/02/2025	18:14:12	103.5	72	83.5	84.4	40	620	577.6
115	11/02/2025	18:14:17	96.2	74.3	83.5	87.5	39.9	657.5	581.4
116	11/02/2025	18:14:22	109.4	69.8	85.6	83.8	39.9	683.2	593.8
117	11/02/2025	18:14:27	115.3	69.6	85.6	82.7	39.9	644	597.7
118	11/02/2025	18:14:32	110.2	77.6	85.6	79.2	40.6	623.7	598.9
119	11/02/2025	18:14:37	134.1	67.3	85.6	80.6	39.9	617.8	601.5
120	11/02/2025	18:14:42	132.5	67.9	85.6	79.7	40.7	619.2	602.5
121	11/02/2025	18:14:47	97.3	88	85.6	79	41.4	620.4	611.6
122	11/02/2025	18:14:52	161.7	86.7	86	76.1	40.8	620.4	606.5
123	11/02/2025	18:14:57	120.6	85.8	86	75.3	42.1	623.7	612.7
124	11/02/2025	18:15:02	169	56.3	86	81.5	40.7	628.4	622.3
125	11/02/2025	18:15:07	119.6	73.7	86	82.5	40.7	635.4	623.4
126	11/02/2025	18:15:12	111.1	76.8	89.4	81.1	40.7	648.3	620.9
127	11/02/2025	18:15:17	103.5	64.2	89.4	78.3	40.5	658.3	619.2
128	11/02/2025	18:15:22	103.5	51.1	89.4	79.8	40.1	675.2	629.6
129	11/02/2025	18:15:27	103.5	77.5	89.4	84.4	41.1	685.2	637
130	11/02/2025	18:15:32	103.5	60.9	89.4	84.4	43.9	689.6	625.3
131	11/02/2025	18:15:37	103.5	63.9	90.1	79.3	44.9	708.5	627.1
132	11/02/2025	18:15:42	103.5	65.2	90.1	85.1	43.7	726.4	625.2
133	11/02/2025	18:15:47	103.5	69.7	90.1	87.1	44	767.8	629.2
134	11/02/2025	18:15:52	103.5	80.3	90.1	87.4	46.2	799.5	634.2

135	11/02/2025	18:15:57	103.5	74.9	90.1	90.4	45.6	836.2	633.9
136	11/02/2025	18:16:02	103.5	93.3	93.3	87.7	47	867.3	640.2
137	11/02/2025	18:16:07	103.5	78.3	93.3	87.7	45.8	888.8	641.6
138	11/02/2025	18:16:12	103.5	79.3	93.3	85.6	46.5	900.9	643.4
139	11/02/2025	18:16:17	103.5	77.6	93.3	89.9	48.4	905.3	649.2
140	11/02/2025	18:16:22	103.5	91.6	54.1	90.7	48.4	911.1	661
141	11/02/2025	18:16:27	107.1	96.1	95.7	87.3	48.4	917.2	659.8
142	11/02/2025	18:16:32	107.1	89.7	95.7	91.3	48.4	917.7	673
143	11/02/2025	18:16:37	107.1	89.3	95.7	86.6	47.7	910.2	668.1
144	11/02/2025	18:16:42	107.1	83.8	95.7	84.6	47.5	899.2	678.3
145	11/02/2025	18:16:47	100.1	95.4	95.7	33.6	52.8	887.8	693
146	11/02/2025	18:16:52	100.1	95.4	95.7	96.7	38.3	882.4	720
147	11/02/2025	18:16:57	100.1	95.4	99.7	100.6	47.9	867.4	740.7
148	11/02/2025	18:17:02	100.1	99.3	99.7	94.5	47.9	858.8	740.5
149	11/02/2025	18:17:07	100.1	99.3	104.2	124.2	42.9	850	735.5
150	11/02/2025	18:17:12	100.1	100.5	105.7	108.1	48.7	830.8	723.4
Rata- rata		00:12:24	100.1	100.5	105.7	108.1	40.02667	661.816	593.7067

Tabel L. 12 viskositas 523.50 Ns/m²

No	Tanggal	Waktu	Temperatur didih, TD (°C)				T _{angin} °C	T _{api} °C	T _{tungku} °C
			TD ₁	TD ₂	TD ₃	TD ₄			
1	11/02/2025	19:38:00	31.4	28.7	27.8	28.3	68.6	397.5	29.9
2	11/02/2025	19:38:04	31.4	28.7	28.2	30	68.6	394	30
3	11/02/2025	19:38:09	31.5	28.8	29.4	28.6	54.9	456.8	30
4	11/02/2025	19:38:14	31.5	28.9	29.5	28.7	45.1	583	30.1
5	11/02/2025	19:38:19	31.5	28.7	29.5	28.9	41.8	655.8	30.1
6	11/02/2025	19:38:24	31.6	21.2	24	30	39.1	693.7	30.1
7	11/02/2025	19:38:29	31.7	28.8	30.3	28.9	38.1	769.1	30.1
8	11/02/2025	19:38:34	32.4	20.9	28.2	29.5	37.4	878.5	30
9	11/02/2025	19:38:39	31.8	29.4	30.7	29.5	37.2	840.8	30
10	11/02/2025	19:38:44	31.8	30.6	31.3	29.6	36.9	752.9	31.2
11	11/02/2025	19:38:49	31.9	30.6	34.5	29.9	36.7	723.7	104.9
12	11/02/2025	19:38:54	32.6	32.3	35.8	31.3	36.6	705.8	371.7
13	11/02/2025	19:38:59	34.2	33.7	34.7	33	36.5	700.8	556.9
14	11/02/2025	19:39:04	36.8	37	38.2	34.7	36.5	680	625.3
15	11/02/2025	19:39:09	39.2	34.5	38.2	33.7	36.4	679.4	665
16	11/02/2025	19:39:14	40.9	40.1	39.3	35	36.4	672.1	675.9
17	11/02/2025	19:39:19	42.4	41.9	41.4	34	36.3	666.6	667.2
18	11/02/2025	19:39:24	44	44.7	41.6	35	36.3	665.1	646.1

19	11/02/2025	19:39:29	44.7	45.6	44.3	39.2	36.2	658.3	638.8
20	11/02/2025	19:39:34	46.8	47.3	44.9	37.3	36.2	657.2	629.8
21	11/02/2025	19:39:39	46.7	47.3	46.6	37.3	36.2	659.1	625.5
22	11/02/2025	19:39:44	47.1	42.3	46.6	39.4	36.1	653	625.5
23	11/02/2025	19:39:49	48.9	34.3	38.8	40.2	36.1	650.7	623
24	11/02/2025	19:39:54	49.7	34.3	38	41.6	36.1	649	620.7
25	11/02/2025	19:39:59	49.7	34.3	34.3	42.8	36.1	649	620
26	11/02/2025	19:40:04	50	34.3	37.4	43.5	36	648.3	624.7
27	11/02/2025	19:40:09	50.9	34.9	38	43.5	36	645.9	622.3
28	11/02/2025	19:40:14	51.7	35.6	40.7	43.6	36	645	622.2
29	11/02/2025	19:40:19	52.3	36.1	40.8	43.7	36	648	624.3
30	11/02/2025	19:40:24	52.3	33.2	38.9	45.8	36	648	628.3
31	11/02/2025	19:40:29	52.3	35.6	37.9	46.6	36	644.5	623
32	11/02/2025	19:40:34	53.6	38.4	40.7	46.4	36.1	639.6	614.3
33	11/02/2025	19:40:39	53.6	40.1	39.2	47.8	36.1	641.7	607.8
34	11/02/2025	19:40:44	53.6	52.5	50	53.1	36	643	607.2
35	11/02/2025	19:40:49	54	54.5	51.5	46	36.1	640.4	602.2
36	11/02/2025	19:40:54	54.7	56.3	51.3	47.5	36	637.5	594.7
37	11/02/2025	19:40:59	56.4	56.3	52.7	47.7	36	635.2	591.6
38	11/02/2025	19:41:04	57.6	43.1	41.5	50.3	36	629.6	586.5
39	11/02/2025	19:41:09	58.1	57.2	51.6	49.5	36.1	628.1	578.6
40	11/02/2025	19:41:14	58.7	49.1	48.1	50.5	36.1	624	568.3
41	11/02/2025	19:41:19	59.6	58.9	55.4	49.8	36.2	677.2	587.7
42	11/02/2025	19:41:24	59.7	46.9	47.5	49.7	36.3	707.8	608.8
43	11/02/2025	19:41:29	61.2	63.2	56.2	51.1	36.3	654.5	588.7
44	11/02/2025	19:41:34	61.2	64.1	57.1	50.9	36.3	639.6	570.7
45	11/02/2025	19:41:39	61.2	68.3	58.1	50.9	36.3	625.7	559.3
46	11/02/2025	19:41:44	61.3	69.9	60.4	51.3	36.4	662.3	579.4
47	11/02/2025	19:41:49	61.7	66.3	62.3	53.2	36.4	751	638.3
48	11/02/2025	19:41:54	63.3	53.6	50.6	55.8	36.3	733.3	638.9
49	11/02/2025	19:41:59	64.7	67	53	59.8	36.2	683.3	610
50	11/02/2025	19:42:04	64.5	71	59.3	61.4	36.2	689.9	593.9
51	11/02/2025	19:42:09	64.7	43.1	46.6	59.3	36.2	673.4	593.2
52	11/02/2025	19:42:14	65.5	48.2	50.5	59.3	36.3	707.3	602.3
53	11/02/2025	19:42:19	64.8	42.5	47.5	62.3	36.3	706.8	606.1
54	11/02/2025	19:42:24	66.9	47.2	55.5	60.7	36.4	712	607.2
55	11/02/2025	19:42:29	66.9	45.5	52.2	61.8	36.4	699.7	595.6
56	11/02/2025	19:42:34	66.8	49	50.9	62.7	36.4	707.2	595.9
57	11/02/2025	19:42:39	66.6	45.7	49.8	62.9	36.4	677	576.4
58	11/02/2025	19:42:44	66.9	45	50.5	63.2	36.4	657.5	558.6
59	11/02/2025	19:42:49	67.6	42.6	52.1	64.2	36.4	728.4	597.3
60	11/02/2025	19:42:54	68.1	46.6	55.1	65	36.4	714.3	600.1

61	11/02/2025	19:42:59	68.9	76.7	67.8	58.7	36.4	721.8	606.1
62	11/02/2025	19:43:04	68.3	76.7	67	60.3	36.4	710	608.4
63	11/02/2025	19:43:09	68.4	76.9	67	60.8	36.4	698.6	606.1
64	11/02/2025	19:43:14	68.9	77.6	67.8	64	36.4	756	631.2
65	11/02/2025	19:43:19	69.2	72.8	68.6	61.5	36.4	770.4	637.8
66	11/02/2025	19:43:24	69.4	78.8	68.6	62.5	36.4	719	629.3
67	11/02/2025	19:43:29	69.7	67.4	69.4	85.3	36.5	703.2	624.8
68	11/02/2025	19:43:34	70.7	68.7	69.8	62.8	36.5	685.9	612.5
69	11/02/2025	19:43:39	71.2	80	69.8	64.3	36.5	679.2	605.9
70	11/02/2025	19:43:44	71.2	76.1	69.8	65.2	36.5	672.9	603.3
71	11/02/2025	19:43:49	72.8	80.2	71.5	64.5	36.6	673.5	603.9
72	11/02/2025	19:43:54	73.5	80.6	63.3	75.1	36.6	674.2	601.5
73	11/02/2025	19:43:59	74.1	78.8	67.5	75.3	36.6	678.9	601.1
74	11/02/2025	19:44:04	75	73.6	70.3	67.3	36.6	676.2	604.1
75	11/02/2025	19:44:09	78.4	34.4	64.8	72.2	36.6	674.1	604.6
76	11/02/2025	19:44:14	79.6	13.7	47.1	78.3	36.7	677.8	606.3
77	11/02/2025	19:44:19	80.7	27.5	67.8	74.3	36.7	683	618.1
78	11/02/2025	19:44:24	80.6	18.8	48	72.7	36.7	689.9	622
79	11/02/2025	19:44:29	83.3	47.7	57.3	72.1	36.8	682.5	615.5
80	11/02/2025	19:44:34	75.6	77.3	74	69.2	36.8	687.2	616.5
81	11/02/2025	19:44:39	81.8	10.6	76.2	77.5	36.9	707.1	626.9
82	11/02/2025	19:44:44	79	67.4	76.9	74.5	36.9	759.3	643.3
83	11/02/2025	19:44:49	81.5	9.4	19.1	75.1	37	808	653.4
84	11/02/2025	19:44:54	79.7	16.4	14.4	75.2	37	858.9	673.9
85	11/02/2025	19:44:59	78.6	30.2	49.2	79.7	36.6	911.1	703.1
86	11/02/2025	19:45:04	80.2	39.6	62	80.7	36.5	929	704.6
87	11/02/2025	19:45:09	83.6	40.1	17.3	78.6	36.3	860.2	693.7
88	11/02/2025	19:45:14	83	16.8	18.4	82.4	36.2	770.6	665.4
89	11/02/2025	19:45:19	83.3	38.9	6.2	80.5	36	680	647.4
90	11/02/2025	19:45:24	84.3	27.9	9.6	83.7	35.9	645.5	634.3
91	11/02/2025	19:45:29	79.4	42	31.8	92.8	35.9	651.6	653
92	11/02/2025	19:45:34	78.1	44	27.4	95.3	35.8	659.4	657.3
93	11/02/2025	19:45:39	84.6	62.9	136	93.8	35.8	663.2	670.1
94	11/02/2025	19:45:44	89.4	37.7	153	92.7	35.8	673.2	682.7
95	11/02/2025	19:45:49	92.8	18	75.2	82.9	35.9	707.5	682
96	11/02/2025	19:45:54	93.4	30.6	72.8	85.7	35.9	686.1	681.3
97	11/02/2025	19:45:59	90.4	-62.4	83.1	92.3	36	691	674
98	11/02/2025	19:46:04	85.8	-45.7	59.1	95	35.9	677.9	654.4
99	11/02/2025	19:46:09	85.2	-43.4	43.1	94.3	35.9	670.8	646.2
100	11/02/2025	19:46:14	88.3	-47.5	59	100.4	35.9	692.6	648.2
101	11/02/2025	19:46:19	90.5	73.5	59.4	97.3	35.9	734.6	662.2
102	11/02/2025	19:46:24	89.2	74.1	59.9	97.9	36	689.4	652.9

103	11/02/2025	19:46:29	91.8	75	55.1	97.2	36	668.2	645.3
104	11/02/2025	19:46:34	92.6	78.4	79.9	99.3	36	665.2	638.2
105	11/02/2025	19:46:39	92.6	79.6	33.2	105.5	36	657.4	622.8
106	11/02/2025	19:46:44	88.2	79.6	64.7	102.8	39.1	659.1	613
107	11/02/2025	19:46:49	91.2	79.6	83.8	102.1	39.2	656.7	608.8
108	11/02/2025	19:46:54	91.2	79.6	71.6	103.4	39.5	663.7	601.1
109	11/02/2025	19:46:59	91.2	79.6	82.6	104.1	39.6	652.3	596.2
110	11/02/2025	19:47:04	95.3	79.6	70.9	101.1	39.6	646.5	595.5
111	11/02/2025	19:47:09	95.6	79.6	74.7	104.6	39.6	643.3	593.6
112	11/02/2025	19:47:14	96.3	79.6	77.4	105.3	39.7	643.3	593.6
113	11/02/2025	19:47:19	92.9	79.6	72.6	100.3	39.5	637.7	587.7
114	11/02/2025	19:47:24	72.9	45.1	61.1	100.1	33.5	623.5	568.5
115	11/02/2025	19:47:29	96.5	11.1	26.6	86	39	613.8	556.4
116	11/02/2025	19:47:34	94.8	26.4	65.1	87.9	38.1	613.4	552.8
117	11/02/2025	19:47:39	94.8	38.2	69.4	84.2	38.1	617.2	555.2
118	11/02/2025	19:47:44	94.7	39.7	73.8	88.2	38	620.8	563.3
119	11/02/2025	19:47:49	94.7	51.8	65.7	88.1	37.9	679.3	610.8
120	11/02/2025	19:47:54	95.5	42.1	73.9	89.5	38	654.1	598.4
121	11/02/2025	19:47:59	91.9	79.4	86.6	86.5	38.1	679.2	609
122	11/02/2025	19:48:04	96.2	71.1	85.4	86.5	38.1	648.6	589.1
123	11/02/2025	19:48:09	94.4	84.8	94.2	85.5	38.2	718.5	619
124	11/02/2025	19:48:14	94.2	84.8	86.5	87.4	38.4	692.6	620
125	11/02/2025	19:48:19	96.3	90..1	92.4	94.1	38.3	664.9	586.1
126	11/02/2025	19:48:24	96.9	90..2	91.7	89.2	38.3	685	592.7
127	11/02/2025	19:48:29	99	95.6	82.8	94.1	38.4	727.2	613.1
128	11/02/2025	19:48:34	97.8	96.5	87.9	101.6	38.5	859.1	648.5
129	11/02/2025	19:48:39	100.2	96.5	66.9	98.4	37.5	823.4	643.7
130	11/02/2025	19:48:44	99.6	96.5	75.5	100.1	37.4	744.2	620.8
131	11/02/2025	19:48:49	100.5	99.9	69.5	102.4	37.1	697.7	599.2
132	11/02/2025	19:48:54	100.5	100.4	94.8	101.7	37	663	577.8
133	11/02/2025	19:48:59	100.5	101.5	103.1	104.1	37.1	647.5	565.8
Rata- rata		00:10:59	100.5	101.5	103.1	104.1	37.48346	682.7564	567.3496

Tabel L. 13 Pengukuran temperature udara

NO	Nilai	Satuan	Waktu	Tanggal
1	1.636	m/s	13:40:17	08/02/2025
2	1.626	m/s	13:40:18	08/02/2025
3	1.623	m/s	13:40:19	08/02/2025
4	1.643	m/s	13:40:20	08/02/2025
5	1.627	m/s	13:40:21	08/02/2025
6	1.631	m/s	13:40:22	08/02/2025

7	1.627	m/s	13:40:23	08/02/2025
8	1.555	m/s	13:40:24	08/02/2025
9	1.551	m/s	13:40:25	08/02/2025
10	1.564	m/s	13:40:26	08/02/2025
11	1.568	m/s	13:40:27	08/02/2025
12	1.572	m/s	13:40:28	08/02/2025
13	1.525	m/s	13:40:29	08/02/2025
14	1.468	m/s	13:40:30	08/02/2025
15	1.399	m/s	13:40:31	08/02/2025
16	1.364	m/s	13:40:32	08/02/2025
17	1.403	m/s	13:40:33	08/02/2025
18	1.405	m/s	13:40:34	08/02/2025
19	1.411	m/s	13:40:35	08/02/2025
20	1.523	m/s	13:40:36	08/02/2025
21	1.59	m/s	13:40:37	08/02/2025
22	1.496	m/s	13:40:38	08/02/2025
23	1.426	m/s	13:40:39	08/02/2025
24	1.426	m/s	13:40:40	08/02/2025
25	1.489	m/s	13:40:41	08/02/2025
26	1.661	m/s	13:40:42	08/02/2025
27	1.772	m/s	13:40:43	08/02/2025
28	1.79	m/s	13:40:44	08/02/2025
29	1.694	m/s	13:40:45	08/02/2025
30	1.949	m/s	13:40:46	08/02/2025
	1.6			

Tabel L. 14 Temperature awal

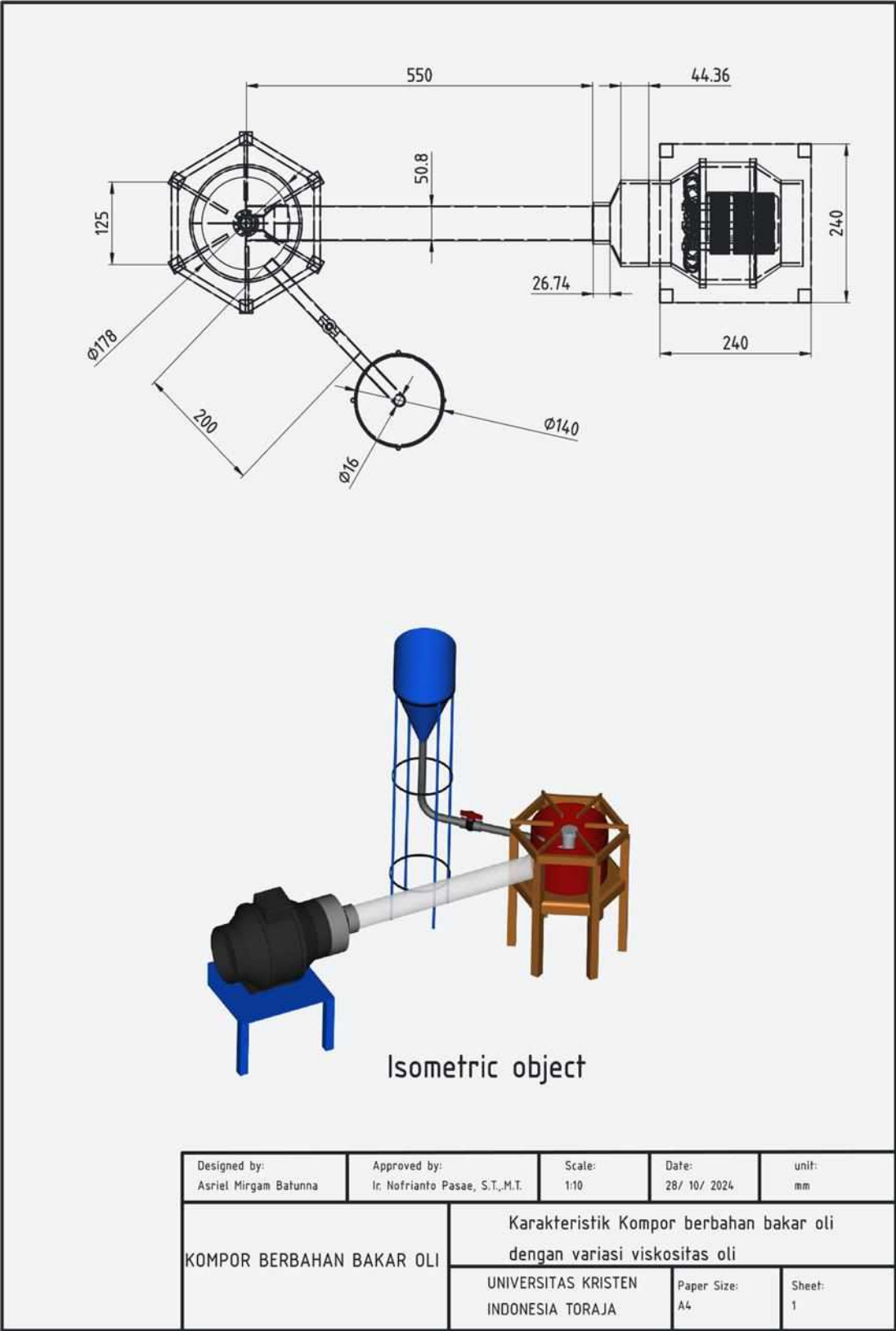
No	Tanggal	Waktu	Tin1	Tin2	Tin3	Tin4
1	10/02/2025	13:49:33	24.7	24.9	24.7	25.1
2	10/02/2025	13:49:37	24.7	24.9	24.7	25.1
3	10/02/2025	13:49:42	24.7	24.9	24.7	25.1
4	10/02/2025	13:49:47	24.8	24.9	24.8	25.1
5	10/02/2025	13:49:52	24.8	24.9	24.8	25.1
6	10/02/2025	13:49:57	24.8	24.9	24.8	25.1
7	10/02/2025	13:50:02	24.9	24.9	24.8	25.1
8	10/02/2025	13:50:07	24.8	24.9	24.8	25.1
9	10/02/2025	13:50:12	24.8	24.9	24.8	25.1
10	10/02/2025	13:50:17	24.8	24.9	24.8	25.2
11	10/02/2025	13:50:22	24.8	24.9	24.8	25.2
12	10/02/2025	13:50:27	24.8	24.9	24.8	25.2
13	10/02/2025	13:50:32	24.8	24.9	24.8	25.3
14	10/02/2025	13:50:37	24.8	24.9	24.8	25.3

15	10/02/2025	13:50:42	24.9	24.9	24.8	25.3
16	10/02/2025	13:50:47	24.9	24.9	24.9	25.1
17	10/02/2025	13:50:52	24.9	24.9	24.9	25.1
18	10/02/2025	13:50:57	24.9	24.9	24.9	25.3
19	10/02/2025	13:51:02	24.9	24.9	24.9	25.3
20	10/02/2025	13:51:07	24.9	24.9	24.9	25.2
21	10/02/2025	13:51:12	24.9	24.9	24.9	25.2
22	10/02/2025	13:51:17	24.9	24.9	24.9	25.2
23	10/02/2025	13:51:22	24.9	24.9	24.9	25.2
24	10/02/2025	13:51:27	25	24.9	24.9	25.2
25	10/02/2025	13:51:32	25	24.9	24.9	25.1
26	10/02/2025	13:51:37	24.9	25	24.9	25.1
27	10/02/2025	13:51:42	25	25	24.9	24.3
28	10/02/2025	13:51:47	25	25	25	24.3
29	10/02/2025	13:51:52	25	25	25	24.1
30	10/02/2025	13:51:57	25	25	25	24.1
31	10/02/2025	13:52:02	25	25	24.9	24.1
32	10/02/2025	13:52:07	25	25	24.9	24.3
33	10/02/2025	13:52:12	25	25	24.9	24.4
34	10/02/2025	13:52:17	25	25	25	24.4
35	10/02/2025	13:52:22	25.1	25.1	25.1	24.4
36	10/02/2025	13:52:27	25.1	25.1	25	24.4
37	10/02/2025	13:52:32	25.1	25.1	25	24.4
38	10/02/2025	13:52:37	25.1	25	25.1	25.1
39	10/02/2025	13:52:42	25.1	25	25	25.1
40	10/02/2025	13:52:47	25.1	25.1	25	25.1
41	10/02/2025	13:52:52	25.1	25	25	25.1
42	10/02/2025	13:52:57	25.1	25	25	25.5
43	10/02/2025	13:53:02	25.1	25	25	25.5
44	10/02/2025	13:53:07	25.1	25.1	25	25.5
45	10/02/2025	13:53:12	25.1	25.1	25.1	25.5
46	10/02/2025	13:53:17	25.2	25.1	25.1	25.1
47	10/02/2025	13:53:22	25.2	25.1	25.2	25.4
48	10/02/2025	13:53:27	25.2	25.1	25.1	25.4
49	10/02/2025	13:53:32	25.2	25.1	25.1	25.4
50	10/02/2025	13:53:37	25.2	25.1	25.2	25.1
51	10/02/2025	13:53:42	25.2	25.1	25.2	25.1
52	10/02/2025	13:53:47	25.2	25.1	25.2	25.1
53	10/02/2025	13:53:52	25.2	25.1	25.2	25.1
54	10/02/2025	13:53:57	25.2	25.1	25.2	25.1
55	10/02/2025	13:54:02	25.2	25.1	25.2	25.1
56	10/02/2025	13:54:07	25.2	25.1	25.2	24.4

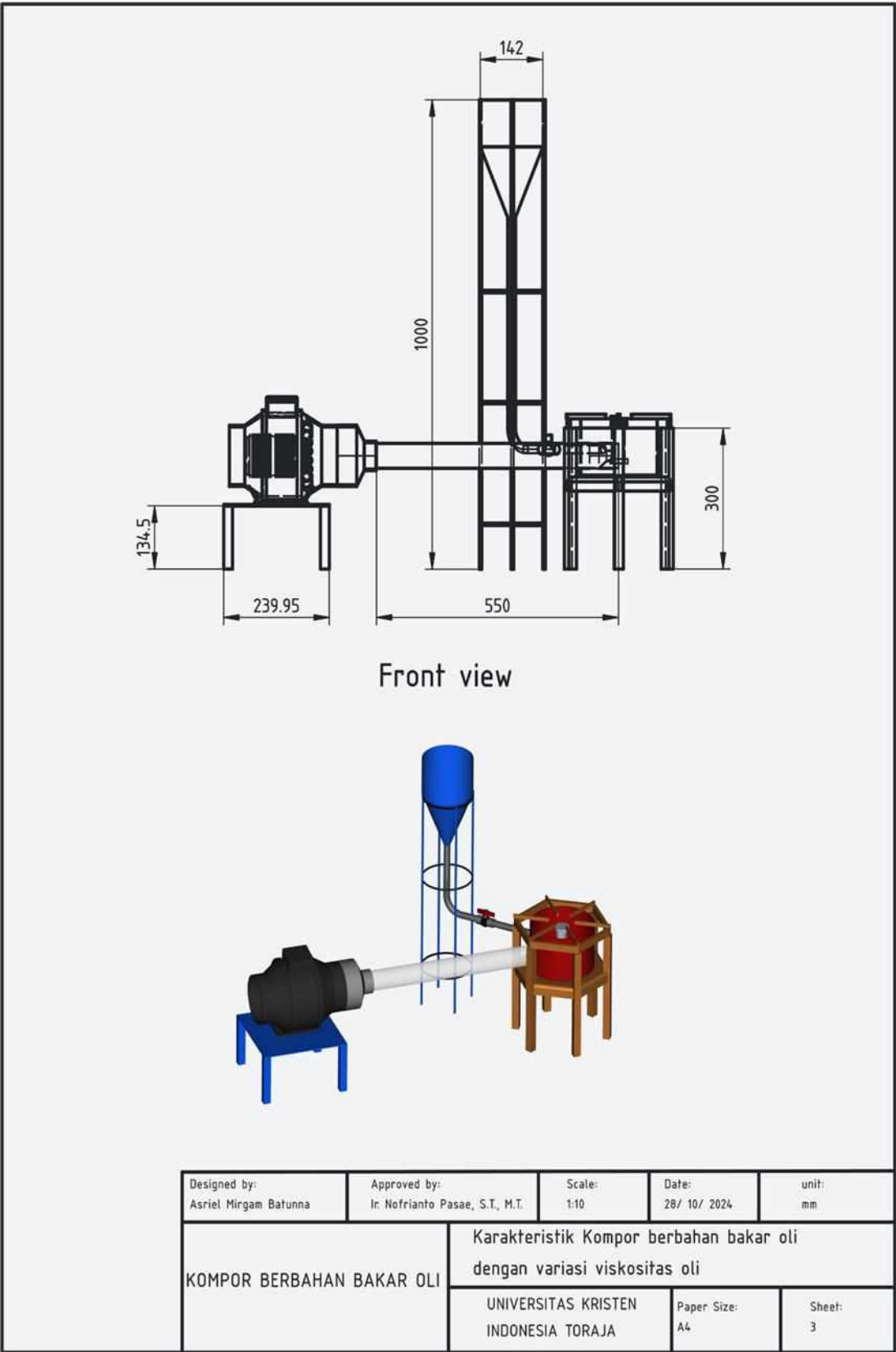
57	10/02/2025	13:54:12	25.2	25.2	25.2	24.4
58	10/02/2025	13:54:17	25.3	25.2	25.2	24.4
59	10/02/2025	13:54:22	25.3	25.3	25.3	24.4
60	10/02/2025	13:54:27	25.3	25.3	25.3	24.4
	Rata- rata		25.0	25.0	25.0	25.0

Tabel L. 15 Kecepatan Udara

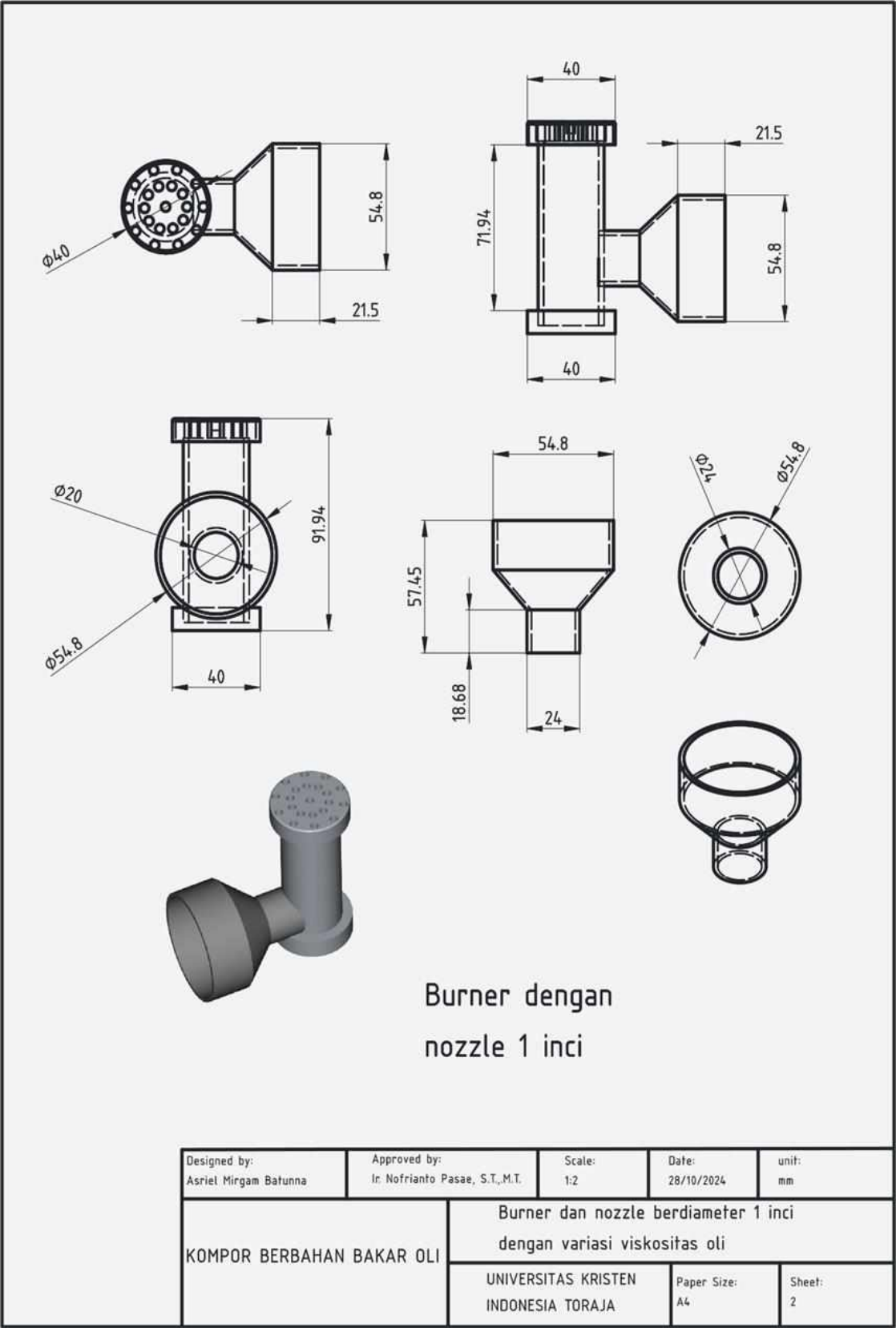
NO	Nilai	Satuan	Waktu	Tanggal
1	1.636	m/s	13:40:17	08/02/2025
2	1.626	m/s	13:40:18	08/02/2025
3	1.623	m/s	13:40:19	08/02/2025
4	1.643	m/s	13:40:20	08/02/2025
5	1.627	m/s	13:40:21	08/02/2025
6	1.631	m/s	13:40:22	08/02/2025
7	1.627	m/s	13:40:23	08/02/2025
8	1.555	m/s	13:40:24	08/02/2025
9	1.551	m/s	13:40:25	08/02/2025
10	1.564	m/s	13:40:26	08/02/2025
11	1.568	m/s	13:40:27	08/02/2025
12	1.572	m/s	13:40:28	08/02/2025
13	1.525	m/s	13:40:29	08/02/2025
14	1.468	m/s	13:40:30	08/02/2025
15	1.399	m/s	13:40:31	08/02/2025
16	1.364	m/s	13:40:32	08/02/2025
17	1.403	m/s	13:40:33	08/02/2025
18	1.405	m/s	13:40:34	08/02/2025
19	1.411	m/s	13:40:35	08/02/2025
20	1.523	m/s	13:40:36	08/02/2025
21	1.59	m/s	13:40:37	08/02/2025
22	1.496	m/s	13:40:38	08/02/2025
23	1.426	m/s	13:40:39	08/02/2025
24	1.426	m/s	13:40:40	08/02/2025
25	1.489	m/s	13:40:41	08/02/2025
26	1.661	m/s	13:40:42	08/02/2025
27	1.772	m/s	13:40:43	08/02/2025
28	1.79	m/s	13:40:44	08/02/2025
29	1.694	m/s	13:40:45	08/02/2025
30	1.949	m/s	13:40:46	08/02/2025
	1.6			



Gambar L.1 layout Diameter penelitian kompor bebahan bakar oli dua dimensi



Gambar L.2 Dimameter tampak depan.



Gambar L .3.Dimameter penelitian nozzle



Gambar L.4. Pemotongan Plat



Gambar L.5. Pengambilan Sampel Viskositas



Gambar.L.6. Pemasangan Alat Ukur Dan Pengambilan Data.



Gamabr L.7. Pengujian Burne