

LAMPIRAN

Lampiran 1. Kuantitas *Pyrolytic Oil*.

Persentase Campuran Katalis (%)	Pyrolytic-oil (ml)	Char (g)	Gas	Wax (g)
CaO 0%, Zeolit 100%	129	109	622,5	189,5
CaO 25%, Zeolit 75%	154	130,5	671	94,5
CaO 50%, Zeolit 50%	151	146	644	109
CaO 75%, Zeolit 25%	69	241,5	593,5	146
CaO 100%, Zeolit 0%	59	218	597,5	175,5
Persentase (%)				
CaO 0%, Zeolit 100%	12,3	10,4	59,3	18,0
CaO 25%, Zeolit 75%	14,7	12,4	63,9	9,0
CaO 50%, Zeolit 50%	14,4	13,9	61,3	10,4
CaO 75%, Zeolit 25%	6,6	23,0	56,5	13,9
CaO 100%, Zeolit 0%	5,6	20,8	56,9	16,7

Lampiran 2. Nilai Densitas *Pyrolytic Oil*.

Persentase Campuran Katalis (%)	Massa <i>Pyrolytic Oil</i> (g)	Volume (ml)	Nilai Densitas (g/ml)	Nilai Densitas (Kg/m ³)
CaO 0%, Zeolit 100%	28,7	30	0,9567	956,7
CaO 25%, Zeolit 75%	27,1	30	0,9033	903,3
CaO 50%, Zeolit 50%	25,1	30	0,8367	836,7
CaO 75%, Zeolit 25%	27,1	30	0,9033	903,3
CaO 100%, Zeolit 0%	27,7	30	0,9233	923,3

Lampiran 3. Nilai pH *Pyrolytic Oil*.

Persentase Campuran Katalis (%)	Pengujian Ke-1 (pH)	Pengujian Ke-2 (pH)	Rata-rata (pH)
CaO 0%, Zeolit 100%	4,5	5	4,55
CaO 25%, Zeolit 75%	5,4	6	5,45
CaO 50%, Zeolit 50%	5,7	6	5,70
CaO 75%, Zeolit 25%	7,5	7	7,45
CaO 100%, Zeolit 0%	5,6	6	5,65

Lampiran 4. Nilai Viskositas *Pyrolytic Oil*.

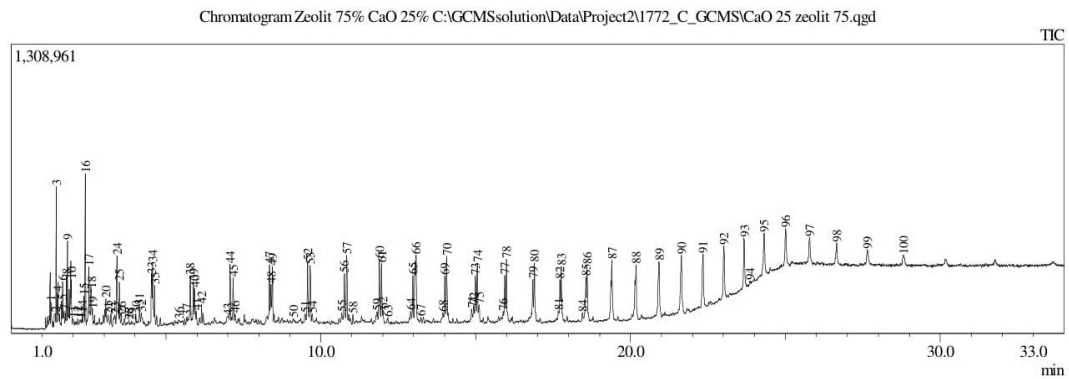
Persentase Campuran Katalis (%)	Pengujian Ke-1 (cp)	Pengujian Ke-2 (cp)	Nilai Viskositas (cp)
CaO 0%, Zeolit 100%	1,3	1,3	1,30
CaO 25%, Zeolit 75%	2,7	2,8	2,75
CaO 50%, Zeolit 50%	4,9	4,8	4,85
CaO 75%, Zeolit 25%	2,5	2,3	2,40
CaO 100%, Zeolit 0%	1,7	1,4	1,55

Lampiran 5. Nilai Kalor *Pyrolytic Oil*.

Persentase Campuran Katalis (%)	Massa <i>Pyrolytic Oil</i> (g)	Pengujian Ke-1 (cal/g)	Pengujian Ke-2 (cal/g)	Nilai Kalor (cal/g)	Nilai Kalor (MJ/Kg)
CaO 25%, Zeolit 75%	0,505	10323,383	10453,535	10388,459	43,496
CaO 50%, Zeolit 50%	0,706	10608,634	10650,304	10629,469	44,506
CaO 75%, Zeolit 75%	0,504	9392,793	10423,009	9907,901	41,484

Lampiran 6. Data Uji GCMS CaO 25% dan Zeolit Alam 75%.

Sample Information
 Analyzed by : Admin
 Analyzed : 6/4/2018 8:42:13 PM
 Sample Name : Zeolit 75% CaO 25%
 Sample ID : 16
 Injection Volume : 0.10
 Data File : C:\GCMSsolution\Data\Project2\1772_C_GCMS\CaO 25 zeolit 75.qgd
 Tuning File : C:\GCMSsolution\System\Tune1\Tuning 01082017.qgt

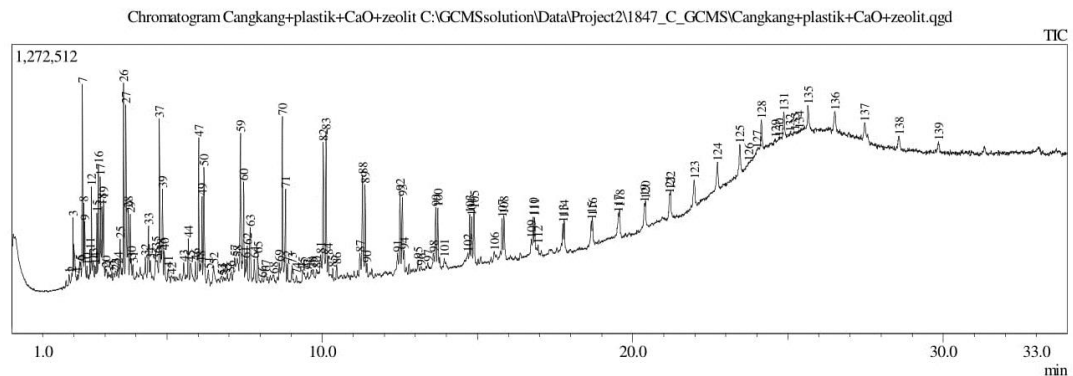


Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
1	1.293	1.208	1.342	498313	1.51	111121
2	1.422	1.342	1.442	207675	0.63	60676
3	1.457	1.442	1.475	533313	1.62	635955
4	1.492	1.475	1.583	430787	1.31	154781
5	1.635	1.583	1.650	159107	0.48	116866
6	1.668	1.650	1.692	234101	0.71	203968
7	1.708	1.692	1.733	95352	0.29	69069
8	1.784	1.733	1.800	279828	0.85	232493
9	1.818	1.800	1.850	392961	1.19	387111
10	1.941	1.850	1.975	796501	2.42	210842
11	2.004	1.975	2.042	85884	0.26	33697
12	2.151	2.042	2.183	124241	0.38	30802
13	2.258	2.183	2.275	103064	0.31	28809
14	2.298	2.275	2.325	86778	0.26	57649
15	2.350	2.325	2.375	208042	0.63	135544
16	2.393	2.375	2.425	705440	2.14	688552
17	2.510	2.425	2.550	514018	1.56	265883
18	2.589	2.550	2.608	394272	1.20	164602
19	2.625	2.608	2.650	98307	0.30	72164
20	3.059	3.000	3.100	255160	0.77	114877
21	3.128	3.100	3.183	131491	0.40	44152
22	3.220	3.192	3.275	102433	0.31	51944
23	3.350	3.275	3.383	193562	0.59	52155
24	3.416	3.383	3.475	632995	1.92	318888
25	3.500	3.475	3.533	278731	0.85	200650
26	3.558	3.533	3.592	98499	0.30	54948
27	3.655	3.592	3.700	105799	0.32	37377
28	3.800	3.700	3.875	145825	0.44	27200
29	3.892	3.875	3.992	93158	0.28	22799
30	4.025	3.992	4.058	117291	0.36	57133
31	4.143	4.058	4.175	254192	0.77	91983
32	4.208	4.175	4.275	201583	0.61	62625
33	4.536	4.492	4.550	334973	1.02	215891
34	4.569	4.550	4.617	489174	1.48	272062
35	4.633	4.617	4.667	222396	0.67	172935
36	5.408	5.383	5.583	145464	0.44	17007
37	5.674	5.633	5.692	88062	0.27	40323
38	5.782	5.692	5.817	502372	1.52	224016
39	5.885	5.817	5.908	394844	1.20	197664
40	5.927	5.908	5.958	290359	0.88	166022
41	5.982	5.958	6.025	96251	0.29	62097
42	6.150	6.117	6.175	148560	0.45	89525
43	7.000	6.942	7.033	104728	0.32	27690
44	7.066	7.033	7.100	416226	1.26	263337
45	7.167	7.133	7.208	354548	1.08	204797

Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
46	7.231	7.208	7.283	84058	0.26	41401
47	8.339	8.308	8.367	462680	1.40	257410
48	8.391	8.367	8.408	281668	0.85	169169
49	8.434	8.408	8.467	385301	1.17	249508
50	9.114	9.075	9.383	160898	0.49	20390
51	9.490	9.450	9.525	97872	0.30	39598
52	9.572	9.525	9.617	526409	1.60	274961
53	9.660	9.617	9.692	454027	1.38	258645
54	9.718	9.692	9.775	82901	0.25	39335
55	10.677	10.625	10.717	155381	0.47	48785
56	10.756	10.717	10.808	480294	1.46	227074
57	10.838	10.808	10.875	560132	1.70	309988
58	11.039	10.925	11.067	100879	0.31	38665
59	11.814	11.792	11.850	142118	0.43	54932
60	11.889	11.850	11.925	601127	1.82	293245
61	11.964	11.925	11.992	505400	1.53	274567
62	12.010	11.992	12.058	114182	0.35	62800
63	12.167	12.058	12.192	100688	0.31	28681
64	12.902	12.883	12.933	107632	0.33	51647
65	12.970	12.933	13.008	428285	1.30	212812
66	13.071	13.008	13.117	1046194	3.17	305943
67	13.234	13.117	13.258	97252	0.30	25457
68	13.942	13.925	13.967	85581	0.26	44753
69	14.004	13.967	14.033	431618	1.31	210514
70	14.065	14.033	14.100	560760	1.70	300573
71	14.873	14.833	14.900	98835	0.30	48574
72	14.935	14.900	14.958	144617	0.44	66138
73	14.992	14.958	15.017	380437	1.15	201587
74	15.049	15.017	15.083	512897	1.56	262840
75	15.113	15.083	15.158	164429	0.50	75787
76	15.888	15.775	15.908	161863	0.49	45815
77	15.940	15.908	15.967	404556	1.23	209620
78	15.991	15.967	16.092	565581	1.72	283691
79	16.847	16.817	16.867	350602	1.06	188055
80	16.894	16.867	16.975	519192	1.58	261283
81	17.675	17.633	17.692	84268	0.26	40076
82	17.719	17.692	17.742	350416	1.06	180744
83	17.762	17.742	17.833	472364	1.43	242156
84	18.444	18.408	18.475	93076	0.28	38823
85	18.557	18.475	18.575	456275	1.38	200444
86	18.595	18.575	18.625	449407	1.36	251692
87	19.399	19.300	19.467	870247	2.64	267444
88	20.173	20.083	20.250	858019	2.60	244734
89	20.920	20.825	21.008	850993	2.58	249040
90	21.641	21.567	21.742	789458	2.40	255330
91	22.338	22.267	22.417	731074	2.22	236512
92	23.015	22.950	23.083	609026	1.85	230375
93	23.668	23.600	23.742	620204	1.88	225326
94	23.850	23.742	24.092	122819	0.37	16750
95	24.311	24.225	24.375	567388	1.72	185291
96	25.008	24.950	25.092	462236	1.40	161700
97	25.781	25.708	25.875	404136	1.23	118095
98	26.653	26.583	26.717	293034	0.89	93692
99	27.650	27.592	27.733	236122	0.72	66500
100	28.815	28.775	28.883	130988	0.40	37560
				32954556	100.00	15577208

Lampiran 7. Data Uji GCMS CaO 50% dan Zeolit Alam 50%.

Sample Information
 Analyzed by : Admin
 Analyzed : 7/9/2018 10:01:49 AM
 Sample Name : Cangkang+plastik+CaO+zeolit
 Sample ID :
 Injection Volume : 0.10
 Data File : C:\GCMSsolution\Data\Project2\1847_C_GCMS\Cangkang+plastik+CaO+zeolit.qgd
 Tuning File : C:\GCMSsolution\System\Tune1\Tuning 01082017.qgt



Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
1	1.837	1.783	1.892	157882	0.28	54513
2	1.933	1.892	1.950	140796	0.25	56686
3	1.971	1.950	2.092	951806	1.70	302766
4	2.117	2.092	2.142	106056	0.19	48919
5	2.183	2.142	2.200	263347	0.47	104433
6	2.219	2.200	2.242	193258	0.34	102746
7	2.272	2.242	2.300	1303802	2.33	884563
8	2.316	2.300	2.333	434076	0.77	361830
9	2.351	2.333	2.392	485891	0.87	279744
10	2.422	2.392	2.458	216962	0.39	81894
11	2.514	2.492	2.542	250110	0.45	148350
12	2.565	2.542	2.592	619689	1.11	428297
13	2.623	2.592	2.658	268847	0.48	100369
14	2.675	2.658	2.717	214048	0.38	79010
15	2.739	2.717	2.758	438282	0.78	310272
16	2.786	2.758	2.817	869648	1.55	523761
17	2.852	2.817	2.875	749649	1.34	468016
18	2.907	2.875	2.925	640695	1.14	335278
19	2.956	2.925	2.992	778010	1.39	365284
20	3.017	2.992	3.083	234658	0.42	58670
21	3.107	3.083	3.200	191856	0.34	43873
22	3.287	3.250	3.317	104073	0.19	36044
23	3.348	3.317	3.375	124404	0.22	43933
24	3.424	3.375	3.442	160580	0.29	69970
25	3.492	3.442	3.533	409304	0.73	180766
26	3.599	3.567	3.642	1494103	2.67	867726
27	3.671	3.642	3.717	1391970	2.48	770567
28	3.748	3.717	3.775	511207	0.91	309822
29	3.810	3.775	3.833	505121	0.90	286591
30	3.847	3.833	3.875	134535	0.24	86420
31	3.898	3.875	3.933	110975	0.20	65448
32	4.302	4.175	4.350	221491	0.40	89281
33	4.402	4.350	4.433	522602	0.93	229254
34	4.462	4.433	4.500	170604	0.30	77670
35	4.633	4.575	4.650	297461	0.53	137420
36	4.683	4.650	4.717	279253	0.50	88176
37	4.756	4.717	4.792	1252161	2.23	714156
38	4.808	4.792	4.825	230042	0.41	129821
39	4.851	4.825	4.892	738401	1.32	406037
40	4.914	4.892	4.992	276326	0.49	131988
41	5.038	5.000	5.067	111501	0.20	56228
42	5.141	5.117	5.233	125449	0.22	30299
43	5.535	5.442	5.575	203227	0.36	77966
44	5.684	5.650	5.725	368963	0.66	187077
45	5.759	5.725	5.892	319833	0.57	79595

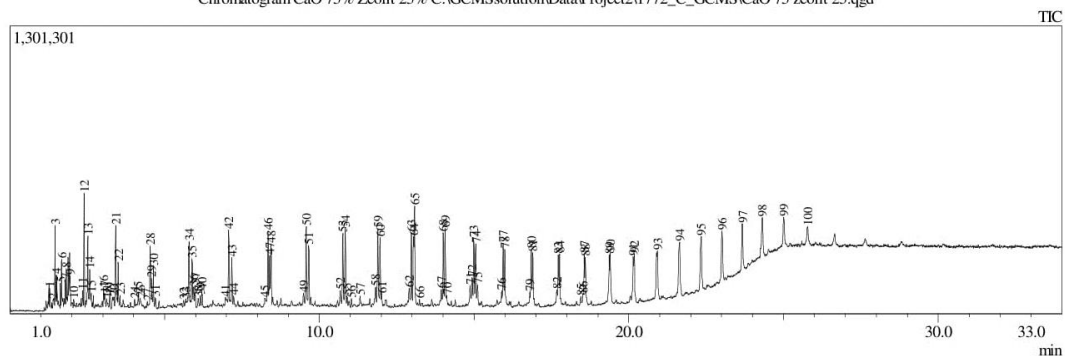
Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
46	5.918	5.892	5.958	182221	0.33	89559
47	6.020	5.958	6.050	1188396	2.12	636946
48	6.075	6.050	6.092	169899	0.30	82056
49	6.123	6.092	6.158	666690	1.19	379586
50	6.191	6.158	6.267	1060211	1.89	508641
51	6.328	6.275	6.392	168295	0.30	61717
52	6.500	6.442	6.600	407025	0.73	88547
53	6.762	6.600	6.792	312036	0.56	41426
54	6.817	6.792	6.908	195703	0.35	35425
55	6.938	6.908	6.983	150818	0.27	42947
56	7.048	6.983	7.108	260991	0.47	51679
57	7.178	7.108	7.208	492840	0.88	120091
58	7.263	7.208	7.308	566325	1.01	118848
59	7.365	7.308	7.400	1443024	2.57	668128
60	7.468	7.400	7.500	1035319	1.85	453291
61	7.535	7.500	7.558	269381	0.48	111750
62	7.581	7.558	7.625	328386	0.59	172196
63	7.680	7.625	7.733	647066	1.15	253115
64	7.813	7.775	7.875	278344	0.50	112829
65	7.925	7.875	7.975	331281	0.59	133314
66	8.067	7.975	8.100	116759	0.21	24010
67	8.183	8.100	8.208	208126	0.37	51913
68	8.433	8.350	8.467	194523	0.35	41781
69	8.616	8.575	8.642	234075	0.42	95257
70	8.715	8.642	8.750	1507333	2.69	736965
71	8.813	8.750	8.850	944842	1.69	418638
72	8.879	8.850	8.917	170283	0.30	87352
73	9.025	8.917	9.058	234803	0.42	81145
74	9.168	9.058	9.208	133034	0.24	35752
75	9.372	9.267	9.400	184294	0.33	59816
76	9.425	9.400	9.467	135588	0.24	46380
77	9.533	9.467	9.567	177875	0.32	47142
78	9.649	9.567	9.675	226899	0.40	55814
79	9.707	9.675	9.750	186542	0.33	57974
80	9.816	9.750	9.850	220918	0.39	57727
81	9.944	9.850	9.992	571846	1.02	120699
82	10.031	9.992	10.083	1395962	2.49	614409
83	10.124	10.083	10.158	1303213	2.32	662917
84	10.185	10.158	10.225	246759	0.44	111635
85	10.339	10.225	10.367	237336	0.42	57492
86	10.466	10.425	10.517	135093	0.24	62019
87	11.211	11.175	11.258	278803	0.50	103346
88	11.295	11.258	11.342	1003133	1.79	449135
89	11.380	11.342	11.417	792630	1.41	407761
90	11.438	11.417	11.483	107794	0.19	59131
91	12.425	12.375	12.458	276265	0.49	88984
92	12.502	12.458	12.542	828776	1.48	360763
93	12.580	12.542	12.608	712196	1.27	336590
94	12.631	12.608	12.675	218763	0.39	104467
95	13.085	12.942	13.142	229936	0.41	56353
96	13.167	13.142	13.317	140197	0.25	25536
97	13.398	13.317	13.433	155891	0.28	37656
98	13.582	13.433	13.617	323948	0.58	75967
99	13.653	13.617	13.692	621633	1.11	275460
100	13.723	13.692	13.758	558811	1.00	270092
101	13.930	13.900	14.033	168324	0.30	44219
102	14.687	14.658	14.717	116981	0.21	46553
103	14.750	14.717	14.783	453316	0.81	216616
104	14.812	14.783	14.842	407669	0.73	205597
105	14.889	14.842	14.942	540612	0.96	238576
106	15.537	15.483	15.583	112660	0.20	35723
107	15.794	15.758	15.825	361782	0.65	171625
108	15.851	15.825	15.925	439805	0.78	189836
109	16.735	16.700	16.758	146061	0.26	61812
110	16.791	16.758	16.817	354193	0.63	160850
111	16.843	16.817	16.875	311480	0.56	160236
112	16.949	16.875	16.983	158331	0.28	43563
113	17.747	17.717	17.767	203898	0.36	107815
114	17.793	17.767	17.833	222888	0.40	126093
115	18.660	18.583	18.683	302706	0.54	112460
116	18.703	18.683	18.733	237618	0.42	125760
117	19.533	19.467	19.558	278446	0.50	93354
118	19.573	19.558	19.617	160625	0.29	110542
119	20.375	20.333	20.392	247825	0.44	102316
120	20.408	20.392	20.450	196443	0.35	113690
121	21.183	21.125	21.200	231688	0.41	95851
122	21.213	21.200	21.250	169409	0.30	108416
123	21.981	21.925	22.075	490895	0.88	124775
124	22.730	22.642	22.792	442271	0.79	118124
125	23.450	23.375	23.533	488778	0.87	131089

Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
126	23.725	23.708	23.967	176912	0.32	15236
127	23.992	23.967	24.092	199630	0.36	32862
128	24.147	24.092	24.225	463075	0.83	138650
129	24.600	24.583	24.683	100755	0.18	27444
130	24.725	24.683	24.800	170708	0.30	26849
131	24.866	24.800	24.950	570201	1.02	132584
132	25.058	24.950	25.167	329658	0.59	31174
133	25.217	25.200	25.317	176003	0.31	32468
134	25.367	25.317	25.583	488382	0.87	32691
135	25.644	25.583	25.758	597001	1.07	129366
136	26.513	26.442	26.575	311366	0.56	84423
137	27.469	27.425	27.542	182856	0.33	58405
138	28.572	28.550	28.642	187767	0.33	62379
139	29.849	29.808	29.892	114399	0.20	42882
				5605501	100.00	24524602

Lampiran 8. Data Uji GCMS CaO 75% dan Zeolit Alam 25%.

Sample Information
 Analyzed by : Admin
 Analyzed : 6/4/2018 8:04:19 PM
 Sample Name : CaO 75% Zeolit 25%
 Sample ID : 15
 Injection Volume : 0.10
 Data File : C:\GCMSsolution\Data\Project2\1772_C_GCMS\CaO 75 zeolit 25.qgd
 Tuning File : C:\GCMSsolution\System\Tune1\Tuning 01082017.qgt

Chromatogram CaO 75% Zeolit 25% C:\GCMSsolution\Data\Project2\1772_C_GCMS\CaO 75 zeolit 25.qgd



Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
1	1.286	1.242	1.317	184854	0.60	79124
2	1.400	1.375	1.442	112098	0.36	32458
3	1.458	1.442	1.483	303680	0.98	368523
4	1.492	1.483	1.550	264482	0.86	145039
5	1.635	1.583	1.650	96383	0.31	107309
6	1.671	1.650	1.700	271616	0.88	213631
7	1.783	1.700	1.800	190469	0.62	119748
8	1.817	1.800	1.867	247549	0.80	169714
9	1.941	1.867	1.975	622850	2.02	136822
10	2.060	1.975	2.083	67631	0.22	30170
11	2.352	2.325	2.375	103648	0.34	73150
12	2.395	2.375	2.433	611096	1.98	515746
13	2.514	2.467	2.550	442280	1.43	312969
14	2.580	2.550	2.608	294393	0.95	164470
15	2.623	2.608	2.650	68541	0.22	60051
16	3.034	3.008	3.050	106074	0.34	83380
17	3.067	3.050	3.100	91401	0.30	59029
18	3.125	3.100	3.200	112919	0.37	38912
19	3.224	3.200	3.267	114855	0.37	58525
20	3.353	3.283	3.383	192665	0.62	49885
21	3.417	3.383	3.458	539051	1.75	372883
22	3.502	3.458	3.533	318734	1.03	206605
23	3.557	3.533	3.592	77586	0.25	53092
24	4.026	4.000	4.058	66077	0.21	36760
25	4.146	4.058	4.175	163003	0.53	60606
26	4.208	4.175	4.425	201290	0.65	44241
27	4.442	4.425	4.508	94588	0.31	30495
28	4.537	4.508	4.558	487565	1.58	283911
29	4.572	4.558	4.617	264304	0.86	136692
30	4.642	4.617	4.675	303488	0.98	190891
31	4.701	4.675	4.750	93440	0.30	51682
32	5.612	5.583	5.633	54804	0.18	31683
33	5.675	5.633	5.758	191358	0.62	36709
34	5.783	5.758	5.825	500842	1.62	298688
35	5.886	5.825	5.908	414503	1.34	221933
36	5.931	5.908	5.958	193255	0.63	93186
37	5.983	5.958	6.025	156258	0.51	101803
38	6.086	6.058	6.117	62803	0.20	35122
39	6.152	6.117	6.175	80631	0.26	50007
40	6.203	6.175	6.250	115417	0.37	72985
41	6.967	6.942	7.042	120574	0.39	32763
42	7.068	7.042	7.100	530759	1.72	337954
43	7.169	7.100	7.208	383373	1.24	212151
44	7.232	7.208	7.267	55628	0.18	38826
45	8.242	8.217	8.300	75730	0.25	24696

Peak#	R.Time	L.Time	F.Time	Area	Area%	Height
46	8.339	8.300	8.367	570280	1.85	329359
47	8.392	8.367	8.417	381246	1.24	220070
48	8.433	8.417	8.467	391845	1.27	272532
49	9.486	9.450	9.525	111640	0.36	50247
50	9.572	9.525	9.617	611185	1.98	352284
51	9.661	9.617	9.692	485342	1.57	267723
52	10.675	10.625	10.725	180028	0.58	69738
53	10.756	10.725	10.800	614746	1.99	329068
54	10.838	10.800	10.867	642898	2.08	353061
55	10.892	10.867	10.925	79344	0.26	46442
56	11.039	10.925	11.075	100429	0.33	34530
57	11.316	11.292	11.342	54923	0.18	38586
58	11.814	11.792	11.850	93486	0.30	59750
59	11.889	11.850	11.933	617938	2.00	334790
60	11.965	11.933	11.992	503345	1.63	300554
61	12.017	11.992	12.042	83830	0.27	48961
62	12.905	12.875	12.933	118733	0.39	65409
63	12.971	12.933	13.008	588432	1.91	317644
64	13.043	13.008	13.058	613591	1.99	305003
65	13.073	13.058	13.125	660611	2.14	442657
66	13.236	13.125	13.275	62509	0.20	28788
67	13.943	13.908	13.967	93895	0.30	56578
68	14.004	13.967	14.033	564209	1.83	314755
69	14.066	14.033	14.100	608961	1.97	339946
70	14.117	14.100	14.150	51238	0.17	40347
71	14.876	14.842	14.900	139764	0.45	74553
72	14.936	14.900	14.958	223628	0.73	114086
73	14.993	14.958	15.025	551643	1.79	293994
74	15.049	15.025	15.083	477140	1.55	272058
75	15.111	15.083	15.158	188517	0.61	89918
76	15.890	15.858	15.908	88056	0.29	52159
77	15.939	15.908	15.967	497947	1.61	270553
78	15.991	15.967	16.067	491130	1.59	244943
79	16.801	16.775	16.817	77005	0.25	50156
80	16.848	16.817	16.875	453823	1.47	245807
81	16.894	16.875	16.925	379598	1.23	232382
82	17.675	17.642	17.692	107174	0.35	57002
83	17.721	17.692	17.742	419607	1.36	218086
84	17.763	17.742	17.792	388850	1.26	225129
85	18.447	18.417	18.483	75709	0.25	34975
86	18.517	18.483	18.533	101461	0.33	46369
87	18.559	18.533	18.575	398230	1.29	229486
88	18.595	18.575	18.683	438270	1.42	214998
89	19.367	19.300	19.383	464303	1.51	213594
90	19.400	19.383	19.467	415044	1.35	223999
91	20.144	20.083	20.158	425199	1.38	200869
92	20.174	20.158	20.258	397317	1.29	213706
93	20.922	20.833	21.000	841738	2.73	216986
94	21.639	21.575	21.725	776161	2.52	234062
95	22.338	22.275	22.408	750581	2.43	239357
96	23.012	22.958	23.083	641416	2.08	221279
97	23.670	23.608	23.742	608552	1.97	206966
98	24.313	24.233	24.375	576828	1.87	174101
99	25.008	24.958	25.067	325808	1.06	123316
100	25.780	25.725	25.825	185748	0.60	65405
				30835476	100.00	16194135