

LAMPIRAN

1.1 Perhitungan

1.1.1 Perhitungan Berat Adsorben (Bentonit)

Perbandingan Minyak Jahe : Adsorben = 1 : 4

Volume Minyak Jahe = 20 ml

$$\begin{aligned}\text{Volume Adsorben} &= \frac{1}{4} \times 20 \text{ ml} \\ &= 5 \text{ ml}\end{aligned}$$

Berat Adsorben :

$$\rho = \frac{m}{v}$$

$$0,86 = \frac{m}{5}$$

$$m = 4,3 \text{ gram}$$

1.2 Foto



Gambar. Adsorpsi pada suhu 60 °C

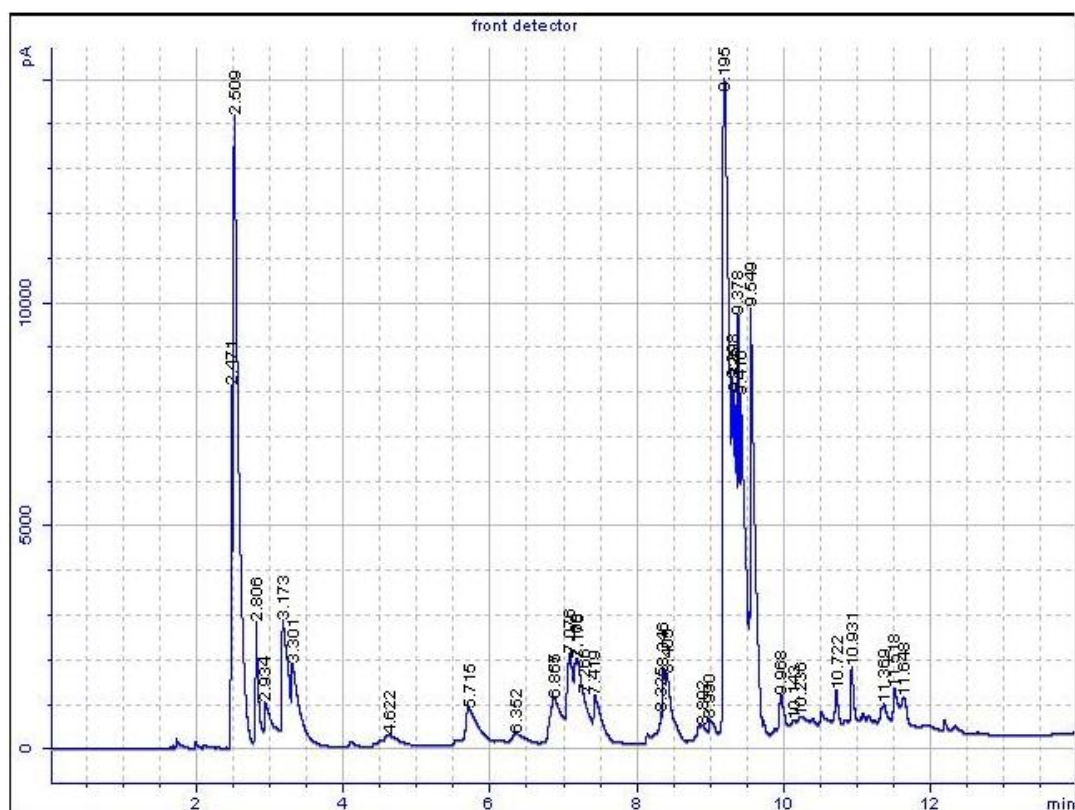


Gambar. Adsorpsi pada suhu 40 °C

1.3 Hasil Analisa GC

1.3.1 Suhu 40 °C Waktu 10 Menit

Sample name:	*Reprocessed: --Suhu 40°C Waktu 10 menit
Sample note:	vassel-1
Submission time:	Monday, July 13, 2015 10:00:12 AM
Operator:	
Injection date:	Monday, July 13, 2015 10:06:01 AM
GC Description:	GC1 - SN: CN10713006
Signal description:	FID1 A, front detector
Method:	Atsiri / minyak terbang
Method last saved:	Tuesday, July 14, 2015 11:10:08 AM

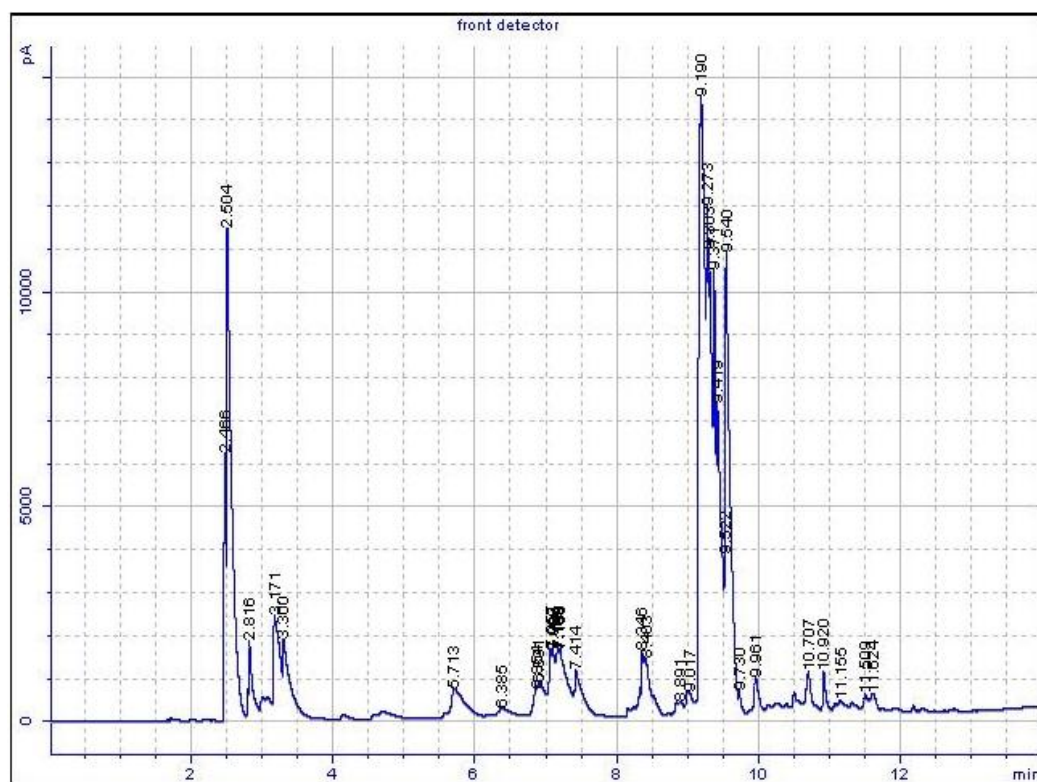


Signal	Retention Time [min]	Type	Width [min]	Area [pA*s]	Area %
1	2.471	PV S	0.022	11897.45663	2.72233
1	2.509	VV S	0.081	69066.12027	15.80346
1	2.806	VV S	0.041	6575.70812	1.50463
1	2.934	VV S	0.081	3751.27464	0.85835
1	3.173	PV S	0.068	13081.40255	2.99324
1	3.301	VB S	0.111	10548.88331	2.41376
1	4.622	BB	0.183	4019.88050	0.91981
1	5.715	PP	0.144	9604.01137	2.19755
1	6.352	PB	0.110	1807.03750	0.41348
1	6.857	BV	0.044	3725.78697	0.85252
1	6.865	VV	0.076	6383.79037	1.46072
1	7.076	VV	0.067	10872.76445	2.48787
1	7.160	VV	0.024	3616.82342	0.82759
1	7.175	VV	0.051	8137.89639	1.86208
1	7.266	VV	0.059	5295.56998	1.21171
1	7.419	VB	0.091	7600.97769	1.73923
1	8.325	VV	0.032	1697.58519	0.38844
1	8.346	VV S	0.033	4433.40239	1.01443
1	8.405	VB S	0.101	9188.52946	2.10249
1	8.892	VV	0.065	1630.23340	0.37302
1	8.990	VV	0.071	2441.22651	0.55859
1	9.195	VV S	0.101	89412.01107	20.45893
1	9.298	VV S	0.028	13275.03680	3.03755
1	9.325	VV S	0.042	19545.61912	4.47236
1	9.378	VV S	0.032	17942.81926	4.10561
1	9.416	VV S	0.077	35243.10176	8.06420
1	9.549	VV S	0.077	44384.35747	10.15587
1	9.968	VV	0.057	3815.14611	0.87297
1	10.143	VV	0.060	1032.70785	0.23630
1	10.236	VV	0.094	2159.91590	0.49422
1	10.722	BP	0.038	1940.54452	0.44403
1	10.931	VV	0.036	3432.99495	0.78553
1	11.369	VV	0.054	2180.76708	0.49900
1	11.518	VV	0.055	3650.61939	0.83532
1	11.648	VV	0.066	3639.70120	0.83282

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1.3.2 Suhu 60 °C Waktu 10 Menit

Sample name:	*Reprocessed: -Suhu 60 °C Waktu 10 menit
Sample note:	vasel -2
Submission time:	Monday, July 13, 2015 10:06:40 AM
Operator:	
Injection date:	Monday, July 13, 2015 10:26:44 AM
GC Description:	GC1 - SN: CN10713006
Signal description:	FID1 A, front detector
Method:	Atsiri / minyak terbang
Method last saved:	Tuesday, July 14, 2015 11:11:45 AM

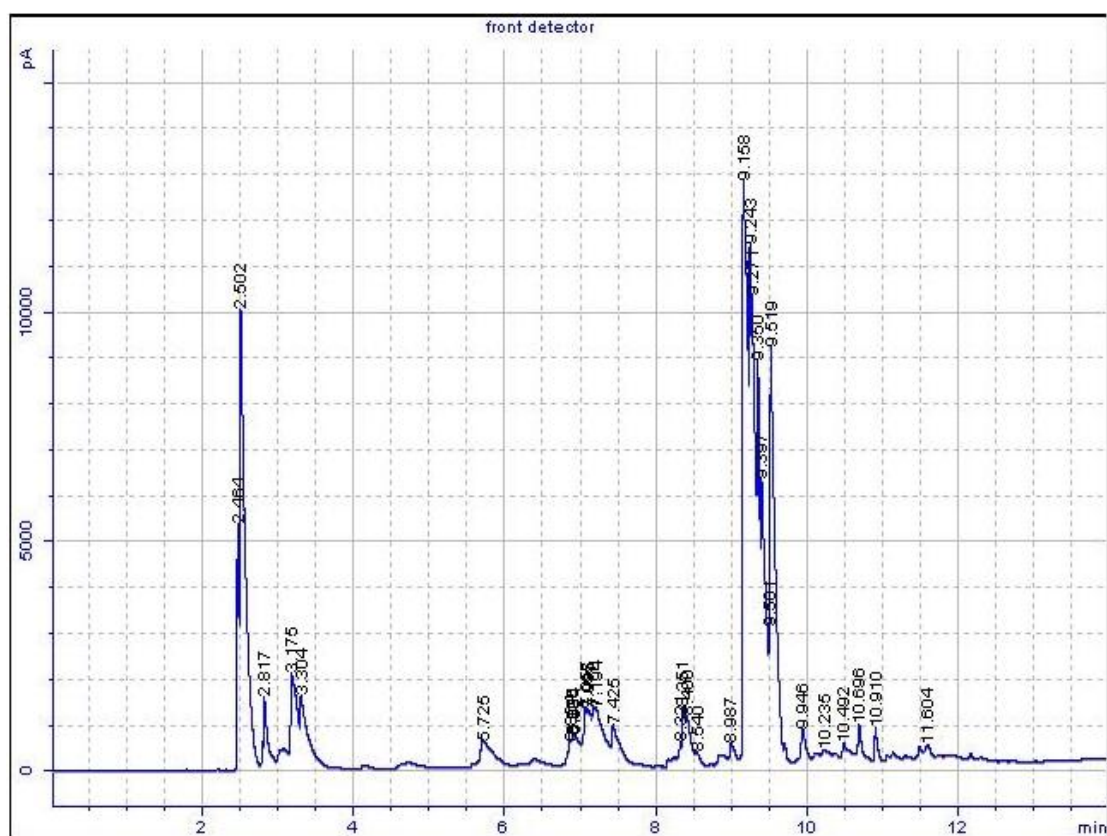


Signal	Retention Time [min]	Type	Width [min]	Area [pA*s]	Area %
1	2.466	PV S	0.023	9390.56336	2.27144
1	2.504	VV S	0.085	58060.49627	14.04397
1	2.816	VP S	0.040	5156.13787	1.24719
1	3.171	BV S	0.070	11344.38727	2.74404
1	3.300	VB S	0.098	9257.97102	2.23936
1	5.713	BB	0.149	8474.86165	2.04994
1	6.385	PB	0.088	1028.38208	0.24875
1	6.854	BV	0.038	1916.85262	0.46366
1	6.891	VV	0.077	4871.17549	1.17826
1	7.057	VV	0.036	4292.22710	1.03823
1	7.090	VV	0.033	4033.82991	0.97572
1	7.160	VV	0.026	3205.16278	0.77528
1	7.169	VV	0.010	1178.66227	0.28510
1	7.186	VV	0.088	11222.50823	2.71456
1	7.414	VB	0.087	7188.85732	1.73888
1	8.346	VV S	0.027	2573.13173	0.62240
1	8.403	VB S	0.072	4387.18145	1.06119
1	8.891	VV	0.059	1393.14078	0.33698
1	9.017	VV	0.076	3268.39975	0.79058
1	9.190	VV S	0.097	83413.33073	20.17644
1	9.273	VV S	0.029	20449.67317	4.94647
1	9.303	VV S	0.054	34658.61230	8.38340
1	9.371	VV S	0.040	24635.85337	5.95904
1	9.419	VV S	0.075	32309.22216	7.81512
1	9.522	VV S	0.016	3560.51985	0.86124
1	9.540	VV S	0.074	47780.41536	11.55737
1	9.730	VB S	0.041	1232.05104	0.29801
1	9.961	VB	0.053	3368.60695	0.81482
1	10.707	BP	0.042	2654.99111	0.64220
1	10.920	PB	0.034	2238.69822	0.54151
1	11.155	VV	0.074	1333.34229	0.32252
1	11.509	BV	0.050	1454.15472	0.35174
1	11.624	VV	0.065	2086.13560	0.50460

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1.3.3 Suhu 40 °C Waktu 30 Menit

Sample name:	*Reprocessed: --Suhu 40 °C Waktu 30 menit
Sample note:	vasel -3
Submission time:	Monday, July 13, 2015 10:06:43 AM
Operator:	
Injection date:	Monday, July 13, 2015 10:45:11 AM
GC Description:	GC1 -SN: CN10713006
Signal description:	FID1 A, front detector
Method:	Atsiri / minyak terbang
Method last saved:	Tuesday, July 14, 2015 11:12:42 AM

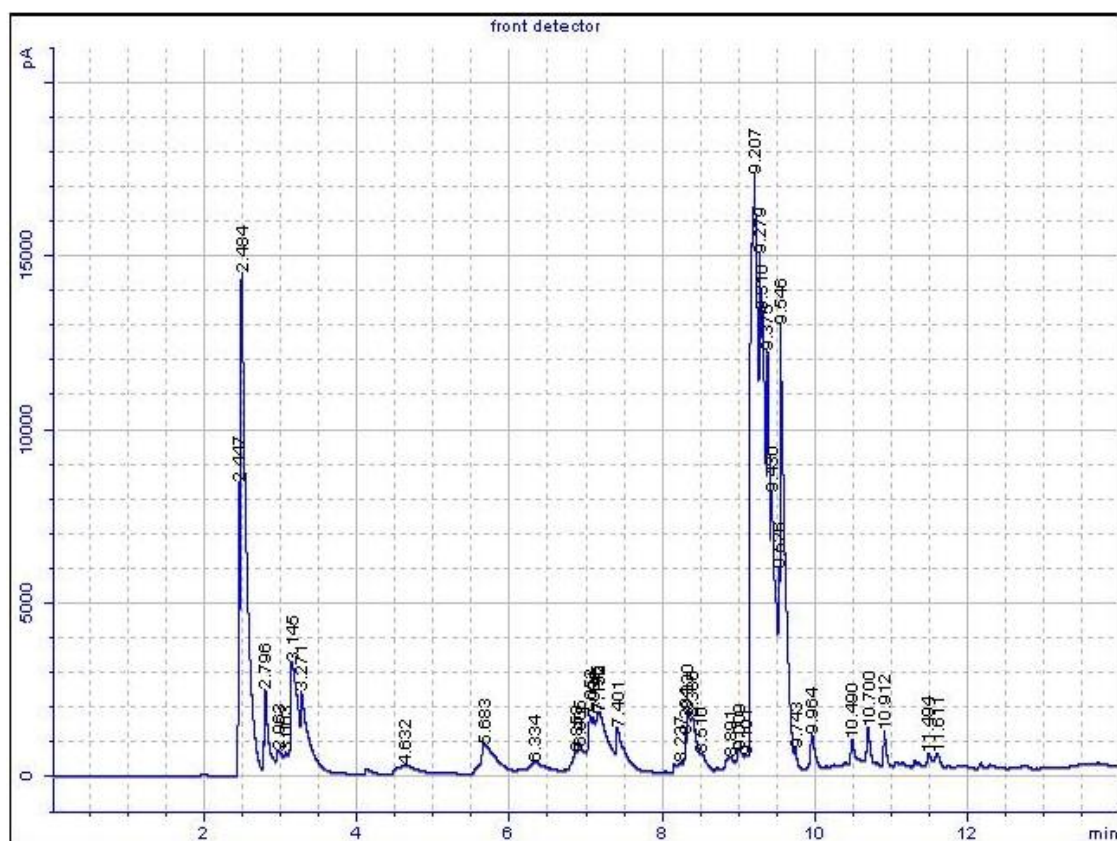


Signal	Retention Time [min]	Type	Width [min]	Area [pA*s]	Area %
1	2.464	BV S	0.024	8331.11726	2.32216
1	2.502	VV S	0.086	51597.97836	14.38205
1	2.817	VV S	0.075	9181.41093	2.55916
1	3.175	VV S	0.096	11793.17846	3.28715
1	3.304	VB S	0.110	10185.19057	2.83895
1	5.725	BB	0.144	6962.45583	1.94067
1	6.864	BV	0.034	1468.00505	0.40918
1	6.895	VV	0.024	1144.06078	0.31889
1	6.904	VV	0.060	3275.69490	0.91304
1	7.057	VV	0.044	4405.62226	1.22799
1	7.095	VV	0.039	3700.12523	1.03135
1	7.168	VV	0.021	2052.44343	0.57208
1	7.194	VV	0.089	9228.91429	2.57240
1	7.425	VB	0.087	5850.49969	1.63073
1	8.321	VV	0.032	1305.51174	0.36389
1	8.351	VV	0.035	3242.77106	0.90387
1	8.400	VV	0.060	5456.94732	1.52103
1	8.540	VP	0.048	1205.72453	0.33608
1	8.987	PP	0.051	1345.78628	0.37511
1	9.158	VV S	0.055	57387.64320	15.99582
1	9.243	VV S	0.029	19368.03624	5.39851
1	9.271	VV S	0.057	34777.48741	9.69363
1	9.350	VV S	0.042	21997.22014	6.13135
1	9.397	VV S	0.073	26667.01260	7.43297
1	9.501	VV S	0.016	2807.25894	0.78248
1	9.519	VB S	0.076	41280.09542	11.50612
1	9.946	VV	0.054	3229.90698	0.90028
1	10.235	VV	0.099	2145.46256	0.59801
1	10.492	VV	0.046	1487.72692	0.41468
1	10.696	BB	0.049	2895.51872	0.80708
1	10.910	BB	0.033	1674.26171	0.46667
1	11.604	VV	0.054	1315.37526	0.36664

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1.3.4 Suhu 60 °C Waktu 30 Menit

Sample name: *Reprocessed: --Suhu 60 °C Waktu 30 menit
Sample note: vasel -4
Submission time: Monday, July 13, 2015 10:57:45 AM
Operator:
Injection date: Monday, July 13, 2015 11:02:33 AM
GC Description: GC1 - SN: CN10713006
Signal description: FID1 A, front detector
Method: Atsiri / minyak terbang
Method last saved: Tuesday, July 14, 2015 11:14:05 AM

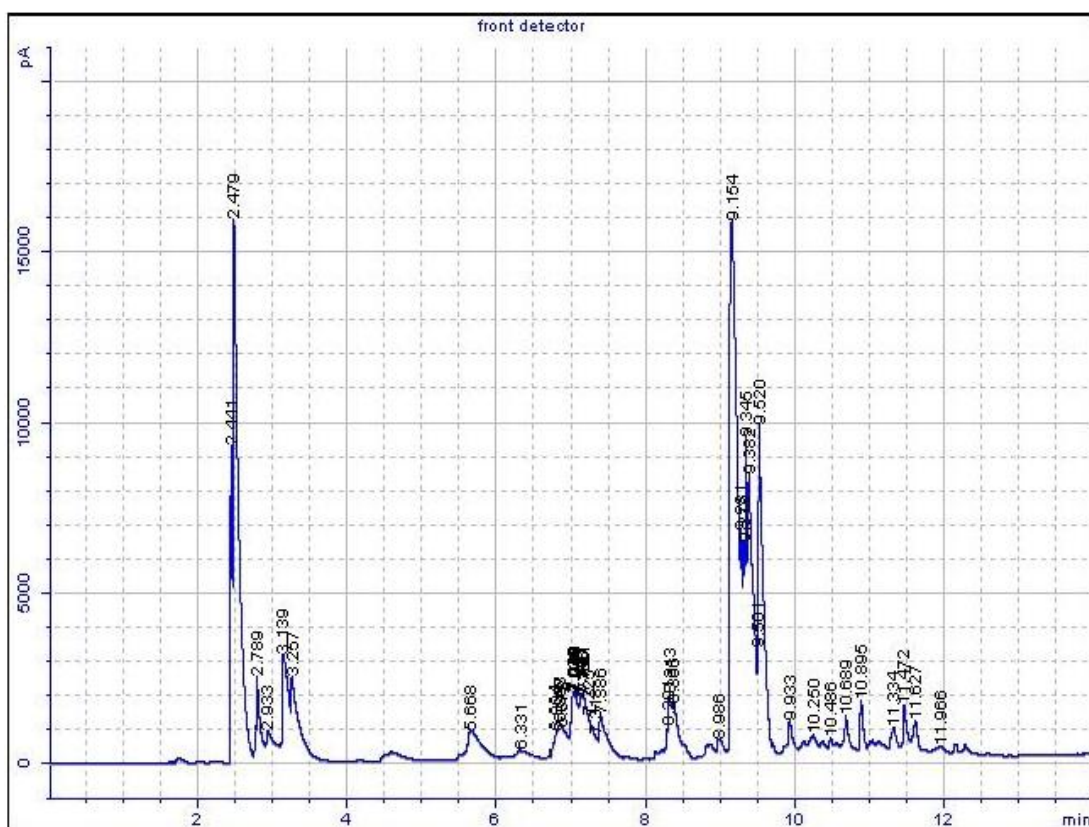


Signal	Retention Time [min]	Type	Width [min]	Area [pA*s]	Area %
1	2.447	PV S	0.022	12005.64705	2.20529
1	2.484	VV S	0.088	75963.47280	13.95355
1	2.796	VV S	0.045	8549.36155	1.57041
1	2.963	VV S	0.089	3495.08992	0.64200
1	3.063	VV S	0.061	2169.84432	0.39857
1	3.145	VV S	0.099	18974.47074	3.48538
1	3.271	VB S	0.111	15547.73952	2.85593
1	4.632	BB	0.182	3634.09918	0.66754
1	5.683	BB	0.154	10565.54731	1.94076
1	6.334	PB	0.118	2148.87357	0.39472
1	6.858	BV	0.041	1811.78925	0.33280
1	6.905	VV	0.074	4315.83555	0.79277
1	7.052	VV	0.040	5251.78971	0.96469
1	7.081	VV	0.028	3462.78639	0.63607
1	7.145	VV	0.019	2483.90181	0.45626
1	7.152	VV	0.012	1487.28344	0.27320
1	7.170	VV	0.091	12845.83114	2.35962
1	7.401	VB	0.089	8820.37082	1.62019
1	8.237	VV	0.049	1132.40726	0.20801
1	8.304	VV	0.026	1880.96892	0.34551
1	8.330	VV	0.032	4275.41172	0.78534
1	8.386	VV	0.065	8693.17512	1.59683
1	8.510	VB	0.060	2661.37712	0.48886
1	8.891	VV	0.064	2035.78058	0.37395
1	9.009	VV	0.066	3287.64401	0.60390
1	9.101	VV	0.030	1044.88938	0.19193
1	9.207	VV S	0.103	106060.37004	19.48198
1	9.279	VV S	0.031	27774.17769	5.10177
1	9.310	VV S	0.053	42363.18882	7.78160
1	9.375	VV S	0.046	33402.25295	6.13558
1	9.430	VV S	0.071	34150.67025	6.27306
1	9.526	VV S	0.018	6211.99586	1.14107
1	9.546	VV S	0.077	59138.23531	10.86296
1	9.743	VB S	0.039	1440.51589	0.26461
1	9.964	BB	0.054	4005.75255	0.73581
1	10.490	VV	0.045	2389.22378	0.43887
1	10.700	VB	0.043	3243.32218	0.59576
1	10.912	BP	0.030	2344.39771	0.43064
1	11.494	VV	0.049	1506.43464	0.27671
1	11.611	VP	0.056	1826.41130	0.33549

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1.3.5 Minyak Jahe Murni

Sample name:	*Reprocessed: --Minyak Jahe Murni
Sample note:	vasel -9
Submission time:	Monday, July 13, 2015 12:09:48 PM
Operator:	
Injection date:	Monday, July 13, 2015 12:29:55 PM
GC Description:	GC1 - SN: CN10713006
Signal description:	FID1 A, front detector
Method:	Atsiri / minyak terbang
Method last saved:	Tuesday, July 14, 2015 11:17:27 AM



Signal	Retention Time [min]	Type	Width [min]	Area [pA*s]	Area %
1	2.441	BV S	0.022	13594.03614	3.02162
1	2.479	VV S	0.067	81322.05389	18.07587
1	2.789	VV S	0.037	6545.70278	1.45495
1	2.933	VB S	0.071	2264.59553	0.50336
1	3.139	VV S	0.066	14426.04241	3.20655
1	3.257	VB S	0.103	13183.41872	2.93035
1	5.668	BB	0.115	8039.33442	1.78694
1	6.331	BB	0.105	1638.13992	0.36412
1	6.804	BV	0.038	2449.61391	0.54449
1	6.837	VV	0.026	2064.90468	0.45898
1	6.848	VV	0.023	1345.01437	0.29896
1	6.872	VV	0.048	3585.04906	0.79687
1	7.019	VV	0.033	4592.74664	1.02085
1	7.030	VV	0.008	1065.59115	0.23685
1	7.045	VV	0.008	1060.67191	0.23576
1	7.050	VV	0.028	4383.30263	0.97430
1	7.121	VV	0.023	3327.12020	0.73954
1	7.140	VV	0.009	1196.42049	0.26593
1	7.151	VV	0.015	2188.26089	0.48640
1	7.165	VV	0.036	5302.21982	1.17855
1	7.225	VV	0.067	4878.37351	1.08434
1	7.318	VV	0.027	1421.05287	0.31586
1	7.386	VB	0.084	8207.07011	1.82423
1	8.291	VV	0.021	1154.75992	0.25667
1	8.313	VV S	0.030	3856.90394	0.85729
1	8.366	VV S	0.055	6185.66657	1.37492
1	8.986	BV	0.057	1583.52842	0.35198
1	9.154	VV S	0.078	101954.43265	22.66194
1	9.281	VV S	0.028	10963.77592	2.43698
1	9.313	VV S	0.022	9909.75790	2.20269
1	9.345	VV S	0.031	17053.55700	3.79058
1	9.382	VV S	0.060	39251.75721	8.72469
1	9.501	VV S	0.013	2873.37209	0.63868
1	9.520	VB S	0.054	42765.47267	9.50570
1	9.933	VB	0.048	3386.68421	0.75278
1	10.250	VV	0.074	2534.00262	0.56325
1	10.486	VV	0.037	1017.96607	0.22627
1	10.689	VV	0.052	3889.69036	0.86458
1	10.895	VV	0.036	4317.35684	0.95964
1	11.334	VV	0.051	2397.77830	0.53297
1	11.472	PB	0.035	3022.96176	0.67193
1	11.627	BP	0.043	2374.98661	0.52790
1	11.966	BP	0.096	1317.66113	0.29288

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